

Internet Addiction Among Nursing Students and its Association with Demographic Characteristics

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Abstract

Background: Internet addiction (IA) has become a growing concern globally, affecting various populations, including Nursing students (NS). Understanding the prevalence and correlates of IA among NS is crucial for developing targeted interventions to mitigate its impact on academic performance and overall well-being.

Objective: This study aimed to assess IA among NS and explore its association with demographic characteristics, including gender, age, and marital status.

Methodology: A descriptive cross-sectional study design was carried out in a private nursing institute in central Karachi among 175 Nursing Students using a convenient sampling technique. The Young, Internet Addiction Scale (IAS) was used to calculate the addiction level of the students.

Result: Findings indicated a moderate level of IA among NS, with a significant proportion exhibiting signs of addiction. Although no significant associations were found between IA and gender, age, or marital status, the study revealed common risk factors such as excessive online duration, forming new online relationships, and prioritising online activities over other responsibilities.

Conclusion: The study revealed a moderate level of IA among NS, with a notable portion showing signs of addiction. Despite no significant correlations with gender, age, or marital status, common risk factors emerged, including prolonged online sessions, establishing online relationships, and prioritizing online activities over other duties.

Keywords: *Internet addiction, nursing students, demographic characteristics, prevalence, association, intervention.*

Introduction

Internet addiction (IA) occurs when someone excessively uses the internet and experiences negative emotions such as irritability or moodiness when they are unable to access it. The term was first introduced in 2000. The symptoms of Internet addiction (IA) include withdrawal, loss of control, obsession with online activities, increased online time, and persistent overuse of the internet. IA has long been seen as a broad-term professional with many applications, including gaming, gambling, social media, video games, and photography [1]. The Internet has undoubtedly brought us countless advantages in our daily lives, such as better communication and entertainment options and easier access to information [2]. Internet addiction is a significant concern in modern society, impacting various aspects of individuals' lives, including their education and professional development. In the context of nursing clinical learning environments, internet addiction can affect both students and educators. Clinical placement is the setting of the physical environment and personnel teaching for healthcare workers, including nurses and nursing students [3 {Thapur, 2023 #23, 4}]

Although It is believed that nurses provide front-line medical care, using the internet on computers, cell phones, and other devices, nursing students significantly contribute to improving clients' and families' health literacy. This is so because nurses are supposed to safeguard, promote, and enhance people's quality of life [5, 6]. With the advancement of technology, the internet has grown to play a significant role in every aspect of our lives today. It's clear that people in the modern era use the internet to easily fulfil their information needs and conduct daily tasks like communication, entertainment, and financial and meeting activities [7].

A maladaptive attitude known as "Internet addiction" and excessive use of the Internet are the results of young adults being drawn to the rapidly expanding Internet and its associated activities and technologies. Overuse of the Internet has been labelled as "addiction," a term that was originally used to characterize a physical dependence on drugs [8]. The physical and emotional well-being of college students is also impacted by cellphone use.

Excessive cellphone use is linked to lower sleep quality, higher anxiety, and a shorter life span, though the researchers did not define it. Many people want to know what exactly qualifies as a cellphone addiction [9]. Internet addiction (IA) is an addictive phenomenon that has been linked to the unrestrained use of the internet in the modern era, especially among young men and adolescents. IA refers to a type of unrestricted internet use that may have negative social, psychological, and behavioural effects. It is frequently used interchangeably with terms such as problematic, compulsive, or pathological internet use [10]. Stressful life events or anxiety-inducing situations can trigger individuals to seek solace or distraction on the internet. The temporary relief provided by online activities can reinforce addictive behaviors, leading to a cycle of dependence [11]. Stressful life events or anxiety-inducing situations can trigger individuals to seek solace or distraction on the internet. The temporary relief provided by online activities can reinforce addictive behaviors, leading to a cycle of dependence.[12-15]. Anxiety, on the other hand, is a persistent feeling of worry, apprehension, or unease, often accompanied by physical

symptoms like tension and restlessness, and can arise from various sources, including stressors or irrational fear [16, 17].

Adolescence is characterized as the phase of rapid and continuous development that occurs between childhood and adulthood. It involves biological, psychological, mental, and social development as well as maturation [18]. Several factors, including individual habits, Internet access, cultural beliefs, and institutional policies, could contribute to disparate outcomes concerning gender and IA. Additionally, children who are alone have a much higher incidence of Internet-related mental health issues than children who have siblings. Single-parent and only-child households are more affected by internet addiction [19]. It has been proposed that gender differences may exist in preferences for using technology. Women may be more vulnerable to smartphone addiction. Men may be more likely than women to be addicted to Facebook and the internet [20].

Diagnostic and Statistical Manual of Mental Disorders (DSM-5): IA and gaming disorder (third section) where IA was recently included as one of the mental disorders. All of these terms—problematic, excessive, or pathological—relate to the non-chemical form of addiction known as Internet addiction (IA), which can result from excessive internet use. Excessive gaming, sexual obsession, and messaging are the three subtypes of IA that there are at least [21]. Reports state that among teenagers from Asia, the Middle East, and Europe, the prevalence of problematic internet usage (PIU) is 2.0–18.0%, 1.0–12.0%, and 1.0–9.0%, respectively. The present study's target population, 3651 medical students, had a prevalence rate of 30.1% for IA. The stated IA prevalence rate for Iran, the study's locale, was 20% [22]. Research has shown that the prevalence of IA can range from 0.3% to 38%. This variance may be attributed to the use of various methods and diagnostic instruments [23]. Students majoring in health-related fields, including nursing, frequently use the internet problematically. For example, prior research indicated that Problematic internet use was present in 17.7% of Iranian nursing students, 10.3% in Poland, 34 and 8.3% in China [24]. Most Internet users are between the ages of 18 and 24, and 10.8% of Iranian medical students have been reported to be addicted to the Internet. Addiction to the internet lowers the quality of sleep and leads to psychological issues like depression symptoms. Depression is a prevalent mental illness that impacts approximately 5.6% of youth and is common among students [25]

Studying internet addiction in nursing students and its link to age and gender is crucial because it affects education, healthcare, and student well-being. The internet is vital in modern education and healthcare, so understanding how nursing students use it is essential. This research can show how internet addiction might impact grades, job readiness, and overall well-being. By figuring out which age and gender groups are more at risk, we can create targeted ways to help. This study adds to what we know, guiding the creation of smart strategies to make sure future nurses are ready for the digital age.

Methodology

A descriptive, cross-sectional, and quantitative study design was used to evaluate Internet addiction (IA) among Nursing Students (NS) and its association with demographic characteristics.

Nursing students of Horizon School of Nursing and Health Sciences Karachi Pakistan

The current study setting conducted in a Private institute of nursing in Karachi the chosen institute will be Horizon School of Nursing and Health Sciences North Nazimabad in Karachi is a private institute of nursing at has different programs including Generic BSN post-Rn BSN and has other Paramedical Courses. The sample size calculated through Open Epi with a 95% confidence interval with a population of 320, and the calculated sample size was 175. For the current study, the convenience sampling technique adopted to recruit the participants from the study setting.

The participants were selected through the following criteria

Inclusion criteria

- ✓ All pre-registered students of GBSN from PNC
- ✓ Both male and female
- ✓ Above 20 years of age

Exclusion Criteria

The following participants excluded from the study.

- ✓ Diplomatic Nursing students
- ✓ Below 18 years

The duration of the study were November 2023 to December 2023

To gather data, we'll seek permission from an authorized person at the institute. After that, each participant asked to sign an informed consent form. We'll ensure that their privacy and confidentiality are protected, and no one pressured into participating in the data collection.

Dr. Kimberly Young created the Internet Addiction Test (IAT), a questionnaire designed to evaluate internet addiction. It is composed of 20 items that gauge how much a person uses the internet and how much it affects their day-to-day activities. The exam enables people to assess their degree of dependence and assists in identifying patterns of excessive internet use. Use the Internet Addiction Test (IAT) as a research tool by giving study participants the questionnaire, getting their answers, and analyzing the information to determine the sample's level of internet addiction. To evaluate internet addiction (IA), the Internet Addiction Test (IAT) is regarded as a reliable instrument. It has been applied widely in clinical and research contexts, demonstrating strong consistency and dependability. But it's crucial to remember that the IAT depends on people reporting honestly, which can be skewed by their prejudices and perceptions. As a result, even though the IAT is useful for comprehending internet addiction, it is advised to employ additional assessment techniques for a more thorough analysis.

The Internet Addiction Test (IAT) has demonstrated strong measurement tool reliability. The term "reliability" describes the stability and consistency of the test results. Numerous studies have shown that the IAT has good internal consistency, indicating a strong correlation between the test's items. Furthermore, test-retest reliability—a measure of how consistently results change over time—has also been determined to be satisfactory for the IAT. The idea that IAT is a trustworthy instrument for evaluating Internet addiction (IA) is supported by these results. After the approval of data collection from the authorized person. The data collected after the explanation of the Concern form to the participant the goal methodology and the importance of the study explained

verbally and in writing, by the researcher the filling process conducted through an online process. Data will be analyzed through SPSS version 26. Percentage and frequency used for the demographic data. IAS scale used to calculate the addiction level of the students, the scale comprises 20 questions and all of these questions answered on a five-point Likert scale (0=Doesn't apply to 5=rarely) and the score can range from 0 to 100 score, scoring that are 40 indicates average, score between 40-70 indicates moderate and above 70 indicates severe addiction. Chi-square tests used for the internet addiction association Demographic Characteristics.

Results

Table 1: Presents information regarding the demographic traits of the individuals involved.. Of the participants, 88% were between the ages of 18-24 years. Among them, 70% were male, and 85% were unmarried. Furthermore, 31% of the participants were in their fourth year of study, while 51% used a mobile source of network.

Demographic Characteristics of the Students			
Variables	Category	Frequency (175)	Percentage
Age	18-24 years	154	88%
	25-30 years	20	11.4%
	Above 30 years	1	.6%
Gender	Female	54	30%
	Male	121	70
Marital Status	Married	27	15
	Unmarried	148	85
Academic Year	1 st year	50	28
	2 nd year	38	22
	3 rd year	33	18
	4 th year	54	31
Source of internet			
	Mobile	89	51
	Laptop	4	1.5
	Wi-Fi	19	10.5
	All of the above	63	37

Table 2: shows the level of IA among NS it indicates that about 24.9% of the participants were addicted due to staying online more than they needed, although they neglected household chores to spend more time online. Similarly, 37.2% of the students formed a new relationship with fellow online users, and about 25% of the students' grades suffered because of the amount they spent online, on the other hand, 24% of the students were addicted they check email before something else to do, however, 30 % of the participant's job performance were suffering because of the internet, similarly, 30.7% of the students are in fair that Without the internet, life would be dull, meaningless, and joyless. 21.7% of participants reported losing sleep due to staying up late online. Additionally, 20.6% of students tried to cut down their online time but failed, while 20% wanted to conceal their online activity. Some participants (20.5%) preferred spending more time online than going out, and 22.9% felt depressed or moody when not online.

Table 2: Responses of Questioner

S no	Statement	0=Doesn't apply	1=Always	2=Often	3=Frequently	4=Occasionally	5=Rarely
1.	How frequently do you find yourself being online longer than you had planned?	9.1% (16)	24.9% (40)	18% (32)	15.7% (30)	14.3% (25)	18 % (32)
2.	How often do you skip around doing tasks around the house so you can spend more time online?	14.5% (26)	16 % (28)	17.1% (30)	11.4% (20)	17.7% (31)	23.3% (40)
3.	How frequently would you rather have intimacy with your lover than the thrill of the Internet?	26.4% (46)	20% (35)	15.4% (27)	11.4% (20)	15.4% (27)	11.4% (20)
4.	How frequently do you start new connections with people you meet online?	12% (22)	37.2% (65)	10.9% (19)	5.5% (9)	15.4% (27)	19% (33)
5.	How frequently do you hear complaints from people in your life about how much time you spend online?	17.9% (31)	18.9% (33)	10.3% (18)	14.3% (25)	14.9% (26)	23.7% (41)
6.	How frequently does the amount of time you spend online affect your grades or academic performance?	12.5% (20)	17.6% (31)	25% (45)	15.4% (27)	9.3% (17)	21% (36)
7.	How frequently do you check your email before completing another task?	15.4% (27)	19.9% (33)	15.4% (27)	10.9% (18)	15.4% (27)	24% (42)
8.	How often does using the Internet lower your productivity or performance at work?	10.3% (18)	30% (51)	9.9% (17)	14.8% (26)	12% (21)	24% (42)
9.	When someone asks you what you do online, how frequently do you get defensive or reticent?	22.9% (40)	14.9% (26)	12% (21)	16.6% (29)	14.3% (25)	19.3% (34)
10.	How many times do you replace anxious thoughts about your life with comforting ones about the Internet?	19.4% (34)	20% (35)	12.6% (22)	11.4% (20)	20.6% (36)	16% (28)
11.	What is the frequency with which you find yourself wondering when you'll be back online?	12% (21)	16.6% (29)	15.4% (27)	16% (28)	17.7% (31)	20.3% (39)
12.	How much do you worry that living without the Internet will be dull, meaningless, and devoid of happiness?	10.3% (19)	30.7% (52)	15.6% (26)	9.7% (17)	20.6% (32)	15.1% (26)
13.	How frequently do you lose your cool, scream, or act irritated when someone annoys you online?	23.4% (41)	11.4% (20)	12.6% (22)	14.9% (26)	14.3% (25)	23.4% (41)
14.	How often does sleeping less come from late-night log-ins?	16.6% (29)	20.6% (36)	21.7% (38)	12.6% (22)	15.4% (27)	13.1% (23)
15.	How frequently do you dream about being online or feel obsessed with the Internet while you're not?	17.7% (31)	12% (21)	18.3% (32)	13.1% (23)	18.9% (33)	20% (35)

16.	Whenever you're online, how often do you find yourself repeating, "Just a few more minutes"?	11.4% (20)	30.9% (54)	14.9% (26)	12.6% (22)	13.7% (24)	16.6% (29)
17.	How many times have you made unsuccessful attempts to reduce the amount of time you spend online?	20.6% (36)	18.9% (33)	14.9% (26)	15.4% (27)	16% (28)	14.3% (25)
18.	How frequently do you make an effort to conceal your internet history?	20% (35)	16% (29)	17.1% (30)	14.4% (20)	15.4% (27)	18.9% (33)
19.	How frequently do you decide not to go out with people and instead spend more time online?	13.1% (23)	20.5% (35)	14.9% (26)	17.1% (30)	14.9% (26)	20% (35)
20.	When you're not online, how frequently do you have feelings of depression, irritability, or anxiety that pass quickly?	20.6% (36)	21.7% (38)	13.1% (23)	9.7% (17)	12% (21)	22.9% (40)

Table :3 Clarifies the mean score of the participant, indicating a moderate level of internet addiction among nursing students.

Table 3: Level of Internet Addiction among Nursing Students		
N	Mean	Std. Deviation
175	59.2	19.0

Table 3: shows the association of AI with demographic characteristics, The mean internet addiction score was statistically similar (p -value=0.05) indicating that there is no significant relationship between AI with demographic variables.

Table 3: Association with Demographic Characteristics of the Students				
Variables	Category	Frequency (175)	Percentage	P-Valve
Age	18-24 years	154	88%	.998
	25-30 years	20	11.4%	
	Above 30 years	1	.6%	
Gender	Female	54	30%	.062
	Male	121	70	
Marital Status	Married	27	15	.744
	Unmarried	148	85	
Academic Year	1 st year	50	28	.252
	2 nd year	38	22	
	3 rd year	33	18	
	4 th year	54	31	
Source of internet	Mobile	89	51	1.00

	Laptop	4	1.5	
	Wi-Fi	19	10.5	
	All of the above	63	37	

Discussion

In this section, we discussed the similarities and differences between internet addiction and demographic characteristics among Nursing students.

According to demographic data, the majority of the participants were male (70%), which was consistent with findings from a study by [26] found that of 391 students enrolled in professional courses, 55% were male. Both research participants' age groups, however, fall into the same range. current finding 88% of the subjects in this study were between the ages of 18-24 years while mentioned in the above study, the mean age group was also 19 years. The current study suggests that 51% of the participants were addicted while using mobile sources of the internet similarly 87.62% of the subjects in the other study, which was carried out in India, used mobile phones as the primary source for internet usage, [27].

The current study Clarifies the mean score of the participants, by using the Internet Addiction test (AIT) which is 59.2, suggesting a moderate level of Internet Addiction (IA) among Nursing students (NS). A significant proportion of participants exhibited signs of IA attributed to various factors such as excessive online duration, establishing new relationships with online peers, and habitually checking emails before attending to other tasks. Many students prolong their online sessions into late hours, often justifying a few more minutes of browsing. Furthermore, a prevalent fear among them is that life without internet connectivity would lack excitement.

Similarly, the results of a study carried out in Gulf Countries indicate that 33% of people in GC meet the requirements for Young's IAT, meaning that one in three people in GC suffer from an Internet addiction [28]. However, research from Mexico and Spain showed that the average IA rate was around 11.75%. Conversely, there were no discernible variations between Mexican and Spanish pupils in terms of the prevalence or severity of IA [29].

Moreover, another investigation was carried out in Western Iran. The study's findings showed that, at Kermanshah University of Medical Sciences, 31.2% and 25% of students, respectively, had mild and severe IA. Who made the statement that college students spend a lot of time unstructured? They always utilise the Internet to communicate and to avoid stressors associated with university life, such as studying and tests [8]. In contrast, the IAT was used in a Guangzhou City, Republic of China research to evaluate IA. The majority of respondents (n=1,392, 89.2%) were categorised as typical Internet users, with 158 (10.2%) being moderately and 10 (0.6%) seriously hooked to the network [30].

Additionally, according to [7], in a study carried out in Turkey, around half of the nursing students who took part in it were either dangerous or addicted internet users. 72% of students have not detected an IA, according to the findings of another study done in South Punjab, which included 286 internet addicts out of 1020 students, or 28% of the sample as a whole (Saleem et al., 2015)

In the present study, no significant association between IA and gender was found (p -value = 0.062), where a significant p -value is typically less than 0.05. However, a study in Bangladesh indicated that males exhibited a higher susceptibility to IA (31.58%) compared to females (21.74%).[31]. Moreover, Our research shows no discernible relationship between age and IA, although other studies have found that young individuals, who use the internet the most, are more prone to acquire addictive behaviours [32]. Although prior studies frequently revealed that single people were more likely than married subjects to be online addicts, our study did not find a correlation between marital status and IA [33]. Similar to this, our research did not find any evidence of a significant correlation between the sources indicated and IA, however, previous studies revealed that 87.62% of participants used their mobile phones primarily for internet access, with 63% of those usage being for internet access alone [27].

Conclusion

The study aimed to assess Internet addiction (IA) among nursing students and its associations with demographic factors. The study revealed a mean score of 59.2 on the Internet Addiction Test (AIT), indicating a moderate level of addiction among participants. Many students displayed signs of addiction, driven by factors like spending excessive time online, forming new relationships online, and frequently checking emails before other tasks. Some students extend their online sessions late into the night, justifying it as a few extra minutes of browsing. Moreover, a common concern among them is the fear of life lacking excitement without internet connectivity. additionally, the study found no significant association between internet addiction and demographic variables.

Recommendation

An overview of the importance of Internet addiction among nursing students is given by the current study. The current study was restricted to a certain age range, professional course, and small population. It is possible to perform the study on a sizable group of professional students, including nursing students. In further research, suitable therapies and techniques might be tested to detect and lessen internet addiction. Because nursing is a holistic healthcare profession, nurses should collaborate with their brains hearts, and hands. Thus, they must learn about the potential risks of internet addiction so that we can create a positive work environment.

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Appendix: B Study Tools Questionnaire
Internet Addiction among Nursing Students and its Association with Age and Gender

Section 1: Demography

Name: (optional) _____

Age:

- a) 18 to 24
- b) 25 to 30
- c) 31 to above

Gender

- a) Male
- b) Female

Academic year

- a) 1st year
- b) 2nd year
- c) 3rd year
- d) 4th year

Source of Internet

- a) Mobile
- b) Laptop
- c) Wi-Fi
- d) All of the above

Section 2 Questioner

Instruction

The following questionnaire is related to internet addiction and its association with age and gender, your answers should indicate the most accurate reply for the

1. How often do you find that you stay online longer than you intended?

0= Does not apply

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always

2. How often do you neglect household chores to spend more time online?

0= Does not apply

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always

3. How often do you prefer the excitement of the Internet to intimacy with your partner?

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always

4. How often do you form new relationships with fellow online users?

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always

5. How often do others in your life complain to you about the amount of time you spend online?

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always

6. How often do your grades or school work suffer because of the amount of time you spend online?

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always

7. How often do you check your e-mail before something else that you need to do?

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often
5 = Always

8. How often does your job performance or productivity suffer because of the Internet?

1 = Rarely
2 = Occasionally
3 = Frequently
4 = Often
5 = Always

9. How often do you become defensive or secretive when anyone asks you what you do online?

1 = Rarely
2 = Occasionally
3 = Frequently
4 = Often
5 = Always

10. How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?

1 = Rarely
2 = Occasionally
3 = Frequently
4 = Often
5 = Always

11. How often do you find yourself anticipating when you will go online again?

1 = Rarely
2 = Occasionally
3 = Frequently
4 = Often
5 = Always

12. How often do you fear that life without the Internet would be boring, empty, and joyless?

1 = Rarely
2 = Occasionally
3 = Frequently
4 = Often
5 = Always

13. How often do you snap, yell, or act annoyed if someone bothers you while you are online?

- 1 = Rarely
- 2 = Occasionally
- 3 = Frequently
- 4 = Often
- 5 = Always

14. How often do you lose sleep due to late-night log-ins?

- 1 = Rarely
- 2 = Occasionally
- 3 = Frequently
- 4 = Often
- 5 = Always

15. How often do you feel preoccupied with the Internet when offline, or fantasize about being online?

- 1 = Rarely
- 2 = Occasionally
- 3 = Frequently
- 4 = Often
- 5 = Always

16. How often do you find yourself saying "Just a few more minutes" when online?

- 1 = Rarely
- 2 = Occasionally
- 3 = Frequently
- 4 = Often
- 5 = Always

17. How often do you try to cut down the amount of time you spend online and fail?

- 1 = Rarely
- 2 = Occasionally
- 3 = Frequently
- 4 = Often
- 5 = Always

18. How often do you try to hide how long you've been online?

- 1 = Rarely
- 2 = Occasionally
- 3 = Frequently
- 4 = Often

5 = Always

19. How often do you choose to spend more time online over going out with others?

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always

20. How often do you feel depressed, moody, or nervous when you are offline, which goes away once you are back online?

0= doesn't apply

1 = Rarely

2 = Occasionally

3 = Frequently

4 = Often

5 = Always