

# Internet addiction among adults: A cross-sectional study

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**Abstract: Introduction:** Human beings generally feel stressed at some point in life. Internet addiction disorder is increasingly gaining attention as individuals use the internet excessively as a maladaptive way to cope with daily life stress. **Objective:** The paper aims to find out the level of internet addiction with respect to gender, age groups, and family type, to determine the difference (if any) between males and females with respect to internet addiction, the difference (if any) in internet addiction with respect to age groups, and the difference (if any) between nuclear and joint family types with respect to internet addiction. **Method:** A cross-sectional study was conducted with 140 participants (71 male and 69 female) from Kolkata, West Bengal. **Findings:** It shows a statistically significant difference in internet addiction mean scores between males and females. It also indicates that participants under 25 years of age have higher mean scores than those over 25 years. The next part reveals that individuals in nuclear families have higher mean scores than those in joint families, regardless of gender and age group, and finally indicates a statistically significant interaction effect of age group with gender and family type. **Conclusion:** Gender significantly affects internet addiction mean scores, with females under 25 in nuclear families being more addicted than their counterparts.

**Keywords:** comparative analysis; cross-sectional study; internet addiction; purposive sampling

## 1. Introduction

The Internet is a new tool that is evolving greatly and is becoming an integral part of everyday life. As it is gradually becoming the essential and most important part of many people worldwide, Internet addiction disorder is also getting attention to a large extent, slowly and steadily. It can be stated that individuals who get addicted to the Internet excessively, use it as a maladaptive way of dealing with their own personal daily life stress as well.

Human beings, in general, do feel stressed out at some point in their lives. One can live peacefully without experiencing stress, and in many studies, it has also been stated that a little bit of stress is also needed to cope with life. According to Shaw and Black (2008), Internet addiction (IA) is defined as excessive or poorly controlled internet-related preoccupations, cravings, or behaviors that cause harm or suffering. In today's generation, addiction to the Internet has genuinely become a reality. The Internet has eventually become an important part of many people's lives as a result of technological advancement. The term "Internet addiction" was proposed by Dr. Ivan Goldberg in 1996 for pathological compulsive Internet use. In recent years, it has been seen that Internet addiction disorder is becoming a global concern worldwide to such an extent that it was decided that this disorder should be included in the "Diagnostic and Statistical Manual of Mental Disorder".

According to various reports, it is expected that the number of Internet users in India will increase in total of 60.5 million users between 2014 and 2029. People's lives have become increasingly dependent on the internet.

However, it is still controversial whether Internet addiction constitutes a behavioral addiction or not since it was not specifically acknowledged in the Diagnostic and Statistical Manual of Mental Disorders DSM-5 or the International Classification of Diseases ICD-11. Internet addiction (IA) is common, and it is eventually linked to poor health functioning.

Globally, very little is known regarding gender disparities. Addiction is a treatable, chronic medical disease involving complex interactions among various factors. People with addiction use harmful substances or engage in behavior that becomes compulsive and often continues despite all the negative consequences. Excessive internet use causes not only psychological but also physical difficulties, resulting in a decline in academic performance, among many others. It has been shown in many research papers that pupils who engage in physical activity are less interested in sedentary activities such as surfing the internet for longer hours. In this present study, individuals whose age range from 18–45 years of age are considered; individuals below 25 are referred to as the young adults (it represents a group of individuals who are more likely to be heavy internet users and who may be at risk of developing problematic internet use), and individuals above 25 are referred to as the adults.

Nalwa and Anand (2016) studied the prevalence of internet addiction among Indian schoolchildren. The current study's research suggests that addiction is more widespread in men than in women. Karmakar and Karmakar (2017) discovered that "Internet in India 2016" has been published jointly by the Internet and Mobile Association of India (IAMAI) and the IMRB, and the number of Internet users in India has increased. Anderson et al. (2017) discovered that males have often been reported to have higher levels of IA than females. Mohammadkhani et al. (2017) discovered that there is no significant difference in the study that has been conducted by them, and they also concluded that there is a presence of a positive relationship between Internet addiction and the symptoms of mental disorders. Ofir and Oren (2018) discovered that there is a negative correlation between well-being and symptoms of social media addiction. Furthermore, there is a possible expanded risk of low temperament or gentle gloom in people with these side effects. The study also suggests that people with higher levels of neuroticism are more likely to have this connection and that this effect may be stronger for women than for men. Haroon et al. (2019) found that there is an excessive amount of Internet addiction among college students. It has been seen that around 7.86% have met the given criteria for addiction. They basically carried out a cross-sectional study with 148 students, and the data was collected using academic and school competence scales and, of course, the Internet addiction criteria. Rajter et al. (2019) found that among 352 students who are aged between 15–20 years of age, 3.4% of high school students reported a high level of Internet addiction, and 35.4% reported some signs of addiction. Besides this, three factors of the Internet addiction test were obtained: emotional and cognitive Internet preoccupation, neglecting work, lack of self-control, and social problems. Gender differences were found only in the last two factors.

Shawi and Humidy (2021) found a high rate of internet addiction among medical students in Anbar City, west of Iraq, and that there was a significant association between internet addiction and mental disorders in the subjects. Horita and Seki (2022) discovered that parents who think their child is addicted to the internet may recognize the emotional and behavioral problems of the child and have an authoritarian parenting style.

Each study has some noticeable research gaps, the above-mentioned studies share a common gap, i.e., the need for additional research into the underlying causes of internet addiction, its prevalence, and its potential drawbacks. To specifically ascertain the connection between Internet addiction (IA) and mental health, academic performance, and societal issues, more in-depth research is required.

### **Objectives of the study**

The present study aims to investigate the following questions:

- 1) What is the level of internet addiction across different genders, age groups, and family types?
- 2) Are there any differences in internet addiction between males and females?
- 3) How does internet addiction vary among different age groups?
- 4) Is there a difference in internet addiction between individuals from nuclear families and those from joint families?

## **2. Materials and methods**

### **2.1. Participants**

The research design employed was cross-sectional in nature. A purposive sampling method was used. Here, the data was collected based on males and females. Participants in this cross-sectional study were 140 (71 male and 69 female) belonging to the Kolkata district of West Bengal. Male and female samples were kept unequal in the sample, and their age range varied from 18–38 years. Participants below 25 years of age were considered young adults, and participants above 25 years of age were considered mid-adults. The participants in the present study also represent two groups of family types, i.e., nuclear family and joint family. The participants were of middle socio-economic status. The described research is a cross-sectional survey study that uses purposive sampling to collect data. Data was collected over a two-month period from January 2024 to February 2024, providing a time-bound perspective on the findings. To access the sample, we first focused on the study population by focusing on males and females of middle socio-economic status and then categorized them into young adults and mid-adults. We have collected the data from 140 participants, as discussed earlier. Participants were recruited through informative materials and screening questionnaires, ensuring ethical considerations like informed consent and confidentiality were addressed properly before filling out the required questionnaires.

### **2.2. Instruments**

Keeping in mind the objective of the study, the following instruments were

used:

Demographic information schedule: It gathers personal information (such as age, gender, educational qualification, income per month, nature of the family, position at the workplace, nature of the job, and whether the individual uses the internet for work or not) of the respondents.

The Internet addiction test was developed by Young (1998) to determine the presence and severity of Internet dependency. Researchers found that the Cronbach alpha measures of internal consistency for the Internet addiction test (IAT) are between 0.60 and 0.72 (Li et al., 2001; Dowling and Quirk, 2009). This scale has 20 statements with five response choices, with each item namely not applicable, rarely, occasionally, frequently, often, and always. The score ranges from 0 to 100.

The maximum score is 100 points. The higher the score the higher the severity of your problem. Total scores that range from 0 to 30 points are considered to reflect a normal level of Internet usage; scores of 31 to 49 indicate the presence of a mild level of Internet addiction. 50 to 79 reflect the presence of a moderate level, and scores of 80 to 100 indicate a severe dependence on the Internet.

### 2.3. Procedure

The study is based on primary data. Data were collected from males and females, whose age range was 18–38 years. Permission was obtained from every individual as to whether they were willing to fill out the questionnaire, which is being used in the present study.

### 2.4. Statistical analyses

In this study, an independent *t* test and a three-way Analysis of Variance (ANOVA) were used for statistical analyses.

## 3. Results and discussion

The data collected from the participants was first scored based on their gender, and then different analyses were carried out to see the impact of different variables. The results are presented in the following sections:

The mean, SD (standard deviations), and *t*-value of Internet addiction for males and females were calculated in **Table 1** below:

**Table 1.** Mean, SD (standard deviation), and *t* value of Internet addiction with regards to gender.

Gender	<i>N</i>	Mean	SD	<i>t</i> value
Male	71	42.2	12.7	2.01*
Female	69	47.2	16.4	

\*Significant at 0.05 level of significance.

**Table 1** suggests that men are significantly lower in Internet addiction than women. According to the findings, there is a statistically significant difference between males and females in the mean scores for internet addiction. In particular, females’ mean scores were higher than their male counterparts, suggesting that

females in this sample may be more susceptible to internet addiction than males. The middle scores likewise recommend that most all kinds of people scored over the midpoint of the scale, demonstrating a moderately high pervasiveness of internet addiction in the two gatherings. Nevertheless, it is essential to keep in mind that the study was carried out with a specific sample and may not apply to other populations. The probable reason behind females being more susceptible to Internet addiction than males is that women tend to use the Internet more for social purposes and to connect with other people, which ultimately develops into an addiction to the Internet. Another probable reason is that females are more likely to use the internet as a way to cope with their daily stress, anxiety, or any other psychopathological issue, which ultimately leads to addiction at a more severe level with respect to males.

The mean, SD (standard deviations), and *t*-value of Internet addiction of the participant's based on the two age groups divided on the basis of mean  $\pm$  SD were carried out and presented in the following table:

**Table 2.** Mean, SD (standard deviation), and *t*-value of Internet addiction with regards to age group.

Age group	<i>N</i>	Mean	SD	<i>t</i> -value
Less than 25 years	72	46.5	14.5	1.53
More than 25 years	68	42.7	15.0	

From the difference in mean in the above-mentioned **Table 2**, it is evident that the participants who fall under the category of less than 25 years of age have a higher mean score than the individuals who fall under the category of more than 25 years of age. The probable reason is that younger adults tend to use the internet more and more in order to access a variety of information related to careers, education, and sometimes entertainment and refreshment purposes, whereas mid-adults tend to be busy with their already established careers, family, and other responsibilities.

The mean, SD (standard deviations), and *t*-value of the participant's Internet addiction based on their family type were calculated and presented in **Table 3**.

**Table 3.** Mean, SD (standard deviation), and *t*-value of Internet addiction with regards to family type.

Family type	<i>N</i>	Mean	SD	<i>t</i> -value
Nuclear	113	45.6	14.1	1.43
Joint	27	41.0	17.5	

From the difference in mean in the above-mentioned **Table 3**, it may be said that the participants who are living in a nuclear family have a higher level of mean score than the participants living in joint families, irrespective of gender as well as age group. The probable reason behind this group is that there are some participants present in this study, who represent members of nuclear families, where parents usually don't have enough time for their children because of their own obligations to their jobs. Grandparents and other family members are also rarely present to give

them the needed attention, and eventually, those individuals begin to use the internet excessively, which may result in excessive addiction to the internet.

To determine the role of gender, age group, and family type and their interaction effects on internet addiction, a three-way ANOVA ( $2 \times 2 \times 2$ ) was carried out, and the results are presented in the following table:

**Table 4.**  $2 \times 2 \times 2$  ANOVA of internet addiction.

Variables	df	Sum of square	Mean of square	F ratio	p value
Age group	1	145.3	145.3	0.722	0.397
Gender	1	1738.2	1738.2	8.633	0.004
Family type	1	464.1	464.1	2.305	0.131
Age group * Gender	1	1621.4	1621.4	8.052	0.005
Age-group * Family type	1	31.9	31.9	0.159	0.691
Gender * Family type	1	1179.5	1179.5	5.858	0.017
Age-group * Gender * Family type	1	752.8	752.8	3.739	0.055
Residuals	132	26,579.4	201.4	-	-

**Table 4** indicates that different age groups, genders, and family types do play a crucial role in analyzing the impact of internet addiction among individuals. The interaction effect of age group and gender is statistically significant; it also indicates that closer scrutiny of the interaction effect reveals that females who fall under the category of less than 25 years old and live in a nuclear family have a significant effect on internet addiction. The probable reason for this is that according to Augner and Hacker (2012), it has been concluded that females are more likely than males to use the internet for social media and communication, especially in this age group, and it has been noted that specifically, women under 25 years of age, who live in nuclear families may be more vulnerable to internet addiction than others. As we all know, till now, females in some societies don't get all the privileges as compared to males. In fact, gender norms and societal expectations do have a big impact on how women interact with others, which could explain why there is more internet addiction among women. Chou and Edge (2012) suggested that females might be given some limited opportunities for in-person socialization, which ultimately triggers that particular group to use the internet for socializing with the outside world as a replacement. This group of individuals in the current scenario is more likely to engage in Internet-based activities.

#### 4. Conclusion

From the findings of the present study, the following conclusion can be drawn:

Gender plays a significant role in the difference in mean scores of Internet addiction between males and females, and the closure scrutiny reveals that females who are less than 25 years of age and live in a nuclear family are more addicted to the internet than their other counterparts. The probable reason behind this may be that females might be given some limited opportunities for socialization, which ultimately triggers that particular group of individuals to use the internet for socializing with the outside world as a replacement, which eventually leads to

Internet addiction.

Based on the findings of the present study, it is quite evident that gender plays a significant role in determining the mean scores of Internet addiction between males and females. Based on the statistical analysis, it indicates that females under the age of 25 who reside in nuclear families exhibit higher levels of internet addiction compared to their male counterparts and other demographic groups. Research suggests that gender roles and family dynamics play a significant role in shaping individuals' internet use patterns and addiction tendencies. The probable reason behind the finding may be due to societal expectations, family dynamics, coping mechanisms, and online social interactions. This observation suggests a nuanced relationship between gender, age, family structure, and internet usage patterns.

Upon closer scrutiny, it is suggested that females in this demographic may experience limited opportunities for traditional forms of socialization, which ultimately leads them to seek social interaction through online platforms. This dependence on the internet as a primary means of social connection may contribute to the development of internet addiction among young women in nuclear family settings.

From other previous findings, and knowledge in this field, these findings align with existing literature highlighting the usual nature of internet usage and addiction. Studies have consistently shown that females, particularly younger individuals, are more likely to utilize the Internet for social purposes, which can increase the risk of addictive behaviors.

This study highlights the complex interplay between gender, age, family structure, and internet addiction among young adults. By contextualizing our findings within the existing literature, this present study contributes to a broad field of findings on the multifaceted nature of internet-related behaviors and their implications for the well-being of young individuals.

## **5. Limitations of the study**

- 1) The sample was drawn from West Bengal State only; hence, it cannot be generalized.
- 2) The present study only included participants from a specific age group, which may limit the generalizability of the results.
- 3) The present study did not use objective measures of Internet addiction, such as physiological or behavioral, which may have provided a greater and more accurate result.

## **6. Implications of the study**

- The findings of the study explicitly address the pattern of internet addiction. Factors such as gender, age group, and family type are some of the main governing factors in the formation of this type of addiction. These above-mentioned factors may contribute significantly to forming this addiction. Despite a number of limitations that have been mentioned above, the findings also have some implications, which enable us to understand the effect of Internet addiction so that the individual can seek help accordingly.

- In the findings, it can be said that females who fall under the category of under 25 years of age and live in a nuclear family are somehow more susceptible to Internet addiction than others. So, in this case, it is necessary to conduct some kind of prevention program, specifically for female's needs. This can be implemented by providing proper knowledge on how to manage stress in their daily lives in healthier ways as well as by promoting healthy internet use behavior.
- The study findings reveal that females who are less than 25 years of age (young adults) are more addicted to the Internet. As gender plays a significant role in the present study, it can be stated that we can engage this age group in some kind of constructive project. In this case, we cannot tell them not to use the Internet, as they are born into a generation of Artificial Intelligence, because if we don't allow them to use the Internet every now and then, it will automatically raise their curiosity, which in turn would result in an addiction to a large extent.

Psychologists or teachers can engage them better in some kind of constructive work, and while being engaged in some kind of constructive work like projects work, PowerPoint presentations, etc., eventually the targeted group will face some kind of recognition for their work, and eventually that might work as a motivator for them, to use the internet in a much more constructive and fruitful way rather than getting addicted to it.

- The results of the study also reveal that young adults who live in nuclear families have a significant influence in the context of Internet addiction. When the child is present alone or the child is living with his or her parents only, addiction to the internet may automatically increase in this scenario within the individual. Some kind of constructive work can be given by the parents to their child, in order to engage them in a more fruitful way so that the child of this particular age group belonging to the nuclear family type finds that work interesting enough, can engage themselves in a much better manner, and is probably not addicted to the internet to a large extent. Parents must channel their children in a fruitful manner to engage their children in a good way.

Family type plays an important role, and hence the psychologist or the teacher may engage the child in this way, who belongs to this particular family type and age range. Due to the fact that family structure, as well as the age group, is found to be significant, educators or psychologists may interact with this group in a similar way, who come from such backgrounds in this field.

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