

Mental Health Variables and Internet Addiction among Undergraduates of the University of Ibadan, Oyo State, Nigeria

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ABSTRACT

The increasing reliance on the internet among university students has raised concerns about problematic internet use and its implications for mental health. This study examined the mental health implications of internet addiction among undergraduates of the University of Ibadan, focusing on anxiety, depression, sleep disorders, and social isolation. A descriptive correlational research design was adopted for the study. The population comprised all undergraduates of the University of Ibadan, from which a sample of 200 students was selected using simple random sampling. Data were collected using standardized and self-developed questionnaires. Data analysis involved descriptive statistics and inferential statistics, specifically regression analyses and t-test, tested at 0.05 level of significance. The conceptual and theoretical foundations of the study were anchored on the PEN-3 Cultural Model and the Emotional Intelligence Framework, which together provided a culturally grounded and psychological lens for understanding how internet addiction interacts with individual emotional skills and socio-cultural contexts to influence mental health outcomes.

Findings revealed that internet addiction was significantly correlated with all the examined mental health variables. There was a positive and significant relationship between internet addiction and social isolation among respondents ($r = 0.366$, $p < 0.05$), indicating that higher levels of internet addiction were associated with increased social withdrawal. Similarly, a positive significant relationship was found between internet addiction and depression ($r = 0.328$, $p < 0.05$), suggesting that excessive internet use contributes to depressive symptoms among undergraduates. Results further showed a low but significant positive relationship between internet addiction and sleep disorders ($r = 0.118$, $p < 0.05$), implying that increased internet use slightly but significantly disrupts students' sleep patterns. In addition, a strong and significant positive relationship existed between internet addiction and anxiety ($r = 0.517$, $p < 0.05$), indicating that anxiety was the mental health outcome most strongly associated with internet addiction. There was no significant gender difference in internet addiction among undergraduates in University of Ibadan

This study demonstrates that internet addiction is a significant predictor of poor mental health among undergraduates, with anxiety, depression, social isolation, and sleep disorders increasing as internet addiction levels rise. The study concludes that excessive internet use poses a substantial risk to the psychological well-being of university students. It therefore recommends the implementation of mental health education programs, promotion of healthy internet usage habits, and strengthening of student counseling and support services within the university.

Keywords: Internet Addiction, Mental Health, Anxiety, Depression, Sleep Disorders, Social Isolation, Undergraduates

INTRODUCTION

In an era of unprecedented digital connectivity, the internet has become an integral part of individuals' daily lives, revolutionizing communication, work, learning and entertainment. The internet is an important tool for learning and communication in this modern world. It provides an ever-expanding pool of information necessary for research, learning and education (Akantuire et al, 2014). The Internet is a global network of interconnected computers and devices that allows users to access and share information and devices, allowing them to

communicate and exchange data. It enables users to access a wide range of services, such as websites, emails, social media, online applications, and cloud storage. Through standardized communication protocols, the Internet facilitates the sharing of information, resources and media across vast distances, making it an essential tool for education, business, entertainment and personal communication worldwide. According to the International Telecommunication Union (ITU) Facts and Figures 2025 report, internet use expanded to approximately 6 billion individuals in 2025, up from earlier estimates in 2024, with nearly three-quarters of the world's population now connected.

Among university students, access and usage of the internet has become crucial; it allows them to stay connected with their educational environment, as well as expand their knowledge through dissertations, thesis papers and other reference material irrespective of physical or geographical boundaries (Ahmad et al., 2016). Nigeria's Internet subscriber base grew by 1.88 million in October 2024, reaching a total of 134.78 million, up from 132.9 million recorded in September. This is according to the latest report by the Nigerian Communications Commission. Vast majority of Nigerian students are users of the internet in communicating.

It is an undeniable fact that both computers and the internet have become one of the most important achievements of modern society. With the continuous development of new technologies, the Internet users are able to communicate anywhere in the world to shop online, use it as an educational tool, work remotely and carry out financial transactions with various services offered by banks. The infinite possibilities that are offered by the Internet can often lead users to abuse it, or to use it for malicious purposes against other users, organizations and public services. With the rapid spread and growth of the Internet, there have been some social phenomena such as cyber-bullying, internet pornography, grooming through social networks, cyber-suicide, internet addiction and social isolation.

Internet addiction, also known as Internet addiction disorder (IAD) or problematic internet use, is a behavioral addiction characterized by excessive or compulsive use of the internet that leads to significant distress or impairment in daily life. Internet addiction, often referred to as problematic or compulsive internet use, is a growing behavioral disorder that affects individuals across diverse age groups, cultures, and backgrounds (Chadha et al., 2024). It involves a loss of control over online activities, with individuals struggling to reduce or stop their internet usage despite negative consequences. Internet addiction is an umbrella term that refers to the compulsive need to spend a great deal of time on the Internet, to the point where relationships, work and health are allowed to suffer. Young people are at particular risk of developing internet addiction disorder, with case studies highlighting students whose academic performance plummets as they spend more and more time online. Some also experience health consequences from loss of sleep, as they stay up later and later to chat online, check for social network status updates or to further progress in a game.

Internet addiction is an impulse control disorder, which does not involve use of an intoxicating drug and is very similar to pathological gambling. Similar to other addictions, those suffering from internet addiction use the virtual fantasy world to connect with real people through the internet, as a substitution for real-life human connection, which they are unable to achieve normally. Internet addiction is a growing epidemic characterized by a compulsive desire to interact online through internet gaming, gambling, cybersex, social networking, seeking health information or compulsive surfing of the web. According to Dr. Kimberly Young, the first psychologist to document internet addiction, these disorders are similar to impulse-control disorders.

Mental health refers to the state of emotional, psychological, and social well-being, shaping how individuals think, feel, and behave while navigating life's challenges. It influences the ability to manage stress, build relationships, and make decisions. The World Health Organization defines mental health as a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community (World Health Organization, 2004). This means feeling capable, handling life's pressures, and staying connected to others. Mental health refers to an effective functioning in daily activities resulting in productive activities (work, school, caregiving), healthy relationships, and the ability to adapt to change and cope with adversity (American Psychiatric Association, 2013). In essence, it's about managing responsibilities, maintaining connections, and bouncing back from setbacks.

Internet addiction could lead to poor mental health; this is because mental health is concerned with individual feelings, thinking and reactions when it comes to life situations generally. While the internet offers valuable resources, excessive and uncontrolled usage can potentially lead to a range of adverse mental health outcomes. Existing literature suggests a significant association between internet addiction and increased rates of anxiety disorders, depression, sleep disorders and social isolation among university students globally. Being addicted to the internet kills creativity that most of the students cannot think correctly until they make use of their internet. In a related study by Lebni et al (2020), it was revealed that half of the students in the study had poor mental health which include anxiety, depression, somatic symptoms and insomnia as a result of internet addiction. The idea that internet addiction significantly impacts one's mental health has been universally embraced since Young first described it. Aside from mental health, internet addiction has a massive effect on poor academic performance and this is known to be one of the significant contributors to mental illness among undergraduates. Internet addiction has been shown to cause poor time management, leading to poor academic performance. Hence it goes without saying that internet addiction can cause poor mental health status via poor academic performance.

A result of a study shows that Internet addiction significantly influences the occurrence of teenage pregnancy, abortion, sexually transmitted infection and sleep disorder (Iyanda and Akintaro, 2016). Furthermore, internet addiction can result in physical health problems like pain, stiffness, eye strain, back and neck pain, sleeping disorders, and eating disorders, decrease in hygiene, extreme hyperactivity, excessive talkativeness, all of which contribute to deteriorating mental health.

Internet addiction contributes to anxiety disorders by creating a cycle of dependency and stress. Constant engagement with social media, gaming, or browsing may heighten worry about missing out or failing to meet online standards, fostering unease. Prioritizing online activities over real-world interactions can amplify anxious feelings. Overstimulation from relentless notifications or information overload keeps the brain on edge, making calm elusive. A cross-sectional study among Nigerian university undergraduates found that internet addiction significantly predicts anxiety, with a prevalence of 50.6% for anxiety disorders among participants, driven by compulsive internet use (Nduanya et al., 2018). Another study in Nigeria showed that internet addiction correlates with heightened anxiety, particularly among students facing academic and social pressures, as excessive online engagement disrupts emotional stability (Akanni and Adayonfo, 2020).

Depression is the feeling of guilt, worthlessness, irritability, restlessness and loss of interest in life pleasures. University students undergo a transitory period from being teenagers to becoming adults. Such transition can cause a lot of stress, depression and anxiety to some of them. Internet addiction contributes to depression by spending excessive time online which reduces face-to-face social interactions, fostering feelings of loneliness and isolation. Engagement with social media or other online content often leads to negative self-comparisons, diminishing self-esteem and triggering persistent sadness. A student addicted to the internet may feel depressed when unable to access it due to intense cravings and emotional reliance on online activities. Social media or gaming often provides temporary escape or validation, so without it, low self-esteem or depression may worsen. Research in Nigeria notes that students with internet addiction show higher depression when disconnected, as their coping mechanism is unavailable. A research study done by Okwaraji et al, 2015 showed that 59.2% of undergraduates were addicted to the internet, and 24.5% had some form of depression. It also shows the strong correlation between internet addiction and depression.

Sleep disorders (or sleep-wake disorders) involve problems with the quality, timing, and amount of sleep, which result in daytime distress and impairment in functioning. Sleep-wake disorders often occur along with medical conditions or other mental health conditions, such as depression, anxiety, or cognitive disorders. There are several different types of sleep-wake disorders, of which insomnia is the most common. Internet addiction, particularly among students in Nigeria, is closely linked to sleep disorders due to several factors. Excessive internet use, especially before bed, disrupts sleep patterns, leading to difficulty falling asleep, staying asleep, and experiencing restful sleep. This is further exacerbated by the blue light emitted from screens, which can suppress melatonin production; a hormone crucial for regulating sleep. The increasing prevalence of internet addiction and the significant association between internet addiction and poor sleep quality documented in the different studies is particularly worrisome especially pertaining to the young people who are expected to be a

major backbone of the productive capacity of any nation, since poor sleep is harmful to the body with negative consequences such as tiredness, reduced concentration, increased risks of accidents, and overall poor daytime activeness. A study reportedly showed that among the study participants, 74.6% have internet addiction (36.6% mild; 35.1% moderate; 2.9% severe); 65.2% have poor sleep quality. There was significant association between internet addiction and sleep quality (p -value 0.042), as well as between internet addiction and habitual smartphone use close to sleep time (Fehintola,2023).

Social isolation is a state of complete or near-complete lack of contact between an individual and society. Internet addiction significantly contributes to social isolation. Prolonged engagement with online activities, such as social media, gaming, or browsing, reduces time spent on face-to-face interactions with family, friends, or peers. This shift prioritizes virtual connections over real-world relationships, weakening social bonds and diminishing support networks. Neglecting social activities, like attending gatherings or participating in group events, becomes common as individuals prioritize online content. Studies from Nigeria highlight that excessive internet use among university students correlates with reduced social engagement, as time spent online replaces efforts to nurture relationships.

Internet addiction, even when the devices are off, may cause anxiety, sleep disorder, abnormal insomnia and digestive problems. Since communication is the most important use of social networks and individuals communicate with various people within a short period, this may result in overuse of these networks in many cases; internet addiction, emotion decline, self-confidence diminution and depression are common disorders of social network addictions (Zokae, 2012). In comparison to face-to-face relationships the reduction of security and superficiality of social relationships is considered as a consequence of cell phone use (Laru,2008). Threat to death and depression caused by bullying via social media are other consequences of using the internet. The use of smartphones, computers, gadgets, internet and virtual social networks is an integral part of everyday life of many youngsters and students for academic and non-academic activities, whereas it can directly affect all aspects of life including studying and academic performance and even more exposure to complications and harmful effects of internet use.

The pervasive integration of the internet into the daily lives of university undergraduates has brought about numerous academic and social benefits. However, alongside these advantages lies a growing concern regarding problematic internet use, often referred to as internet addiction. This phenomenon, characterized by excessive and compulsive online engagement leading to distress and functional impairment, has been increasingly observed among undergraduates. The University students are the most interested in possessing devices to access the internet such as smartphones on which they spend time and dedicate much of their thinking.

The rise in internet dependence among adolescent has led to growing concerns about Internet Addiction (IA) and its potential implications on mental health. Internet addiction manifests in several ways, including compulsive browsing, gaming addiction, and social media dependency. At University of Ibadan, where adolescent students rely heavily on digital platforms for academic and social engagement, excessive internet use may lead to mental health issues such as depression, anxiety disorders, social isolation which are detrimental to their health and academic performance. Furthermore, internet addiction kills creativity, disturb sleep, interfere with reasoning and destroy personal development. This had been a great concern by many researchers who had carried on studies of internet addiction and academic performance of undergraduate but little research efforts have been directed towards mental health implications of internet addiction in the university. In filling this gap, this study seeks to investigate the mental health implications of internet addiction among adolescent undergraduates of the University of Ibadan.

METHODOLOGY

The study adopted a descriptive research design of survey type which is appropriate for exploring the interplay between mental health and internet addiction. The descriptive approach enables the collection of detailed, quantitative data about the phenomenon. The population for this study comprised all adolescent undergraduates in the University of Ibadan, Oyo state. The sample for this study was two hundred (200) respondents. The multistage sampling Procedure was adopted to select the respondents and the stages are as follows;

Stage 1: Purposive sampling technique was used to select faculty of education as undergraduates. In this faculty are trained to be teachers and whatever they are taught can easily get to the larger society through their students.

Stage 2: Simple random sampling technique was used to select four departments in the faculty of education.

Stage 3: Fifty undergraduates who fell between the ages of 16 and 19 were purposively selected in each of the selected departments.

The research instrument for this study was a self-developed questionnaire which was designed according to the variables tested in the hypotheses. The questionnaire was divided into sections and includes related questions on internet addiction and its mental health implications.

Section A: contains information on internet addiction. The scale is made up of (11) items which were rated on four-point likert scale of strongly agree, agree, disagree and strongly disagree. All the items on this scale were close ended items. Section B: contains information on depression as a mental health implication. Section C: contains information on social isolation as a mental health implication. This scale is designed to examine effects of internet addiction on social isolation. Section D: contains information on anxiety as a mental health implication. Section E: contains information on sleep disorders as a mental health implication. All the items on this scale were close ended items and were rated on a four point likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). It has a reliability co-efficient of ($r=0.81$). The instrument was administered personally with the help of five trained research assistants, and the collection of completed copies of the questionnaire was done on the spot. The self-administration of the questionnaire was to ensure a high rate of return and also enable the respondents to obtain clarifications on issues that may need explanation.. The filled questionnaires were collated, coded and analysed using both descriptive and inferential statistics. Descriptive statistics of frequency count and mean were used for to provide answers to the research questions while influential statistics of Regression was used to test the hypotheses at 0.05 level of significance.

The ethical principles guiding the use of human participants in research was taken into consideration in the design and conduct of the study. In addition, permission was obtained from the participants. Participation in the study was made voluntary and informed consent was obtained from each respondent involved in the study. Each of the respondents were provided with information about the focus of the study objectives of the study, study methodology, inconveniences that might be experienced and the potential benefits of the study. No identifiers such as names of respondents was required and all information provided were kept with utmost confidentiality.

RESULTS

Research question one: What is the prevalence of internet addiction among undergraduates of the University of Ibadan?

Table 1.0: Prevalence of internet addiction among adolescent undergraduates of the University of Ibadan

S/N	Statement	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean
1.	I find myself staying online longer than I originally planned	102 (51.0%)	75 (37.5%)	16 (8.0%)	7 (3.5%)	2.82
2.	I use the internet to escape from stress	117 (58.5%)	11 (5.5%)	15 (7.5%)	57 (28.%)	1.92
3.	I check my social media compulsively throughout the day	80 (40.0%)	48 (24.0%)	18 (9.0%)	54 (27.0%)	2.15

4.	I feel a sense of loss/emptiness when I am not connected to the internet	79 (39.5%)	77 (38.5%)	22 (11.0%)	11 (11.0%)	2.49
5.	I feel happier when I am using the internet	133 (66.5%)	26 (13.0%)	18 (9.0%)	23 (11.5%)	2.19
6.	I feel restless when trying to cut down on my internet use	22 (11.0%)	57 (28.5%)	95 (47.5%)	26 (13.0%)	2.37
7.	I have missed study sessions because I was preoccupied with the internet	45 (22.5%)	27 (13.5%)	116 (58.0%)	12 (6.0%)	2.52
8.	I used the internet to relieve a bad mood	16 (8.0%)	11 (5.5%)	139 (69.5%)	34 (17.0%)	2.04
9.	I leave important tasks for internet use	25 (12.5%)	65 (32.5%)	108 (54.0%)	2 (1.0%)	2.56
10.	I cannot withstand not having data to access online	6 (3.0%)	39 (19.5%)	117 (58.5%)	38 (19.0%)	2.06
11.	My internet use has negatively affected my grades	45 (22.5%)	70 (35.0%)	53 (26.5%)	32 (16.0%)	2.64
12.	I check my emails compulsively throughout the day	31 (15.5%)	53 (26.5%)	101 (50.5%)	15 (7.5%)	2.50
13.	I feel more relaxed when I am using the internet	21 (10.5%)	22 (11.0%)	99 (49.5%)	58 (29.0%)	2.03
14.	I feel a need to be constantly connected to the internet	5 (2.5%)	41 (20.5%)	103 (51.5%)	51 (25.5%)	2.00
15.	I find it hard to concentrate on tasks when I am not online	33 (16.5%)	56 (28.0%)	95 (47.5%)	16 (8.0%)	2.53
16.	I am frustrated when internet access is slow/unavailable	8 (4.0%)	25 (12.5%)	121 (60.5%)	46 (23.0%)	1.97
17.	I feel that my internet use is out of control	36 (18.0%)	50 (25.0%)	76 (38.0%)	38 (19.0%)	2.42
18.	I attempt to reduce my internet use, but fail repeatedly	38 (19.0%)	48 (24.0%)	71 (35.5%)	43 (21.5%)	2.40
19.	I use internet to escape feeling of sadness	18 (9.0%)	34 (17.0%)	93 (46.5%)	55 (27.5%)	2.07
20.	I feel more distracted in class due to my urge to check online content.	32 (16.0%)	95 (47.5%)	48 (24.0%)	25 (12.5%)	2.67

Table 1.0 shows the prevalence of internet addiction among undergraduates of the University of Ibadan. On if they find themselves staying online longer than they originally planned, the mean score of (1.82) indicates a moderate level of staying online; 16 students strongly agree, 7 students agree, 102 students disagree, while 75 students strongly disagree. Similarly, when asked if they use the internet to escape from stress, 15 students strongly agree, 11 students agree, 117 students disagree, while 57 students strongly disagree. When they were asked if they check their social media compulsively throughout the day, 18 students strongly agree, 48 students agree, 80 students disagree, while 54 students strongly disagree. When they were asked if they feel a sense of loss/emptiness when they are not connected to the internet, 22 students strongly agree, 77 students agree, 79 students disagree, while 11 students strongly disagree. When the respondents were asked if they feel happier when they are using the internet, with a mean score of 2.19, 18 students strongly agree, 26 students agree, 133 students disagree, while 23 students strongly disagree. When asked if they feel restless when trying to cut down on their internet use, with a mean score of 2.37, 22 students strongly agree, 57 students agree, 95 students disagree, while 26 students strongly disagree. When they were asked if they had missed study sessions because they were preoccupied with the internet, 45 students strongly agree, 27 students agree, 116 students disagree, while 12 students strongly disagree. This showed a mean score of 2.52. Also, when they were asked if they used the internet to relieve a bad mood, 16 students strongly agree, 11 students agree, 139 students disagree, while 34 students strongly disagree. When asked if they leave important tasks for internet use, 25 students strongly agree, 65 students agree, 108 students disagree, while 2 students strongly disagree. When they were asked if they cannot withstand not having data to access online, with a mean score of 2.06, 6 students strongly agree, 39 students agree, 17 students disagree, while 38 students strongly disagree. When they were asked if internet use has negatively affected their grades, 45 students strongly agree, 70 students agree, 53 students disagree, while 32 students strongly disagree. When asked if they check their emails compulsively throughout the day, 31 strongly agree, 53 students agree, 101 students disagree, while 15 students strongly disagree. When the respondents were asked if they feel more relaxed when they are using the internet, 21 students strongly agree, 22 students agree, 99 students disagree, while 58 students strongly disagree, showing a mean score of 2.03. When the respondents were asked if they feel a need to be constantly connected to the internet, with a mean score of 2.00, 5 students strongly agree, 41 students agree, 103 students disagree, while 51 students strongly disagree. Also, when they were asked if they find it hard to concentrate on tasks when they are not online, 33 students strongly agree, 56 students agree, 95 students disagree, while 16 students strongly disagree, revealing a mean score of 2.53. When they were asked if they are frustrated when internet access is slow/unavailable, with a mean score of 1.97, 8 students strongly agree, 25 students agree, 121 students disagree, while 46 students strongly disagree. When they were asked if they feel that my internet use is out of control, 36 students strongly agree, 50 students agree, 76 students disagree, while 38 students strongly disagree, revealing a mean score of 2.42. When they were asked if they attempt to reduce their internet use, but fail repeatedly, with a mean score of 2.40, 38 students strongly agree, 48 students agree, 71 students disagree, while 43 students strongly disagree. Also, when asked if they use the internet to escape feelings of sadness, 18 students strongly agree, 34 students agree, 93 students disagree, while 55 students strongly disagree. Lastly, when they were asked if they feel more distracted in class due to their urge to check online content, 32 students strongly agree, 95 students agree, 48 students disagree, while 25 students strongly disagree, showing a mean score of 2.67.

Research question two: Is there any relationship between the dependent variable (internet addiction) and independent variables (social isolation, depression, sleep disorder and anxiety)?

Table 2.0: Relationship between the independent variable and the dependent variables

	Internet Addiction	Social Isolation	Depression	Sleep Disorder	Anxiety
Internet Addiction	1				
Social Isolation	.366	1			
Depression	.328	.384	1		
Sleep Disorder	.118	.756	.258	1	
Anxiety	.517	.670	.429	.623	1

The table 2.0 showed that there was a positive relationship between internet addiction and social isolation among the respondents ($r= 0.366, p<0.05$). A positive relationship was also found between internet addiction and depression among the respondents ($r= 0.328, p<0.05$). There was a low positive relationship between internet addiction and sleep disorder among the respondents ($r= 0.118, p<0.05$). Lastly, there was a significant positive relationship between internet addiction and anxiety among the respondents ($r= 0.517, p<0.05$).

Research question three: Is there gender differences in internet addiction among undergraduates of University of Ibadan.

Table 3.0: Summary of independent sample t-test on internet addiction among undergraduates of University of Ibadan

Variable	Gender	N	Mean	Std. Dev	Df	T	Sig.	Remark
Internet Addiction	Male	121	15.0473	3.22430	198	1.564	0.260	Not Sig.
	Female	79	15.0434	2.99863				

Table 3.0 showed that there was no significant gender difference in internet addiction among undergraduates of University of Ibadan. ($df= 198; N= 200, t= 1.564, P>.05$). The table revealed that respondents who are male had a higher mean score of (15.0473) while respondents who are female had a mean score of (15.0434). Hence, the result was confirmed not to be significant. This means that there was no significant difference in internet addiction among undergraduates of University of Ibadan, based on gender. Therefore, the null hypothesis was therefore accepted.

DISCUSSION OF THE FINDINGS

The result of this study confirmed that sleep disorder significantly correlated with internet addiction. This result agrees with that of Fehintola (2023), in a research carried out among undergraduate of Obafemi Awolowo University, who found that there was a significant association between internet addiction and sleep quality amongst undergraduate students because the students could not sleep due to their habitual use of smartphones close to bedtime. The result also supports that of Hammad et al. (2024). In their study, they found out that internet addiction is significantly linked to poorer sleep quality among medical students, showing that excessive and compulsive internet use tends to disrupt normal sleep patterns and contributes to sleep disorders. This outcome suggests that problematic internet use disrupts normal sleep-wake cycles, largely due to prolonged screen exposure, heightened cognitive arousal, and displacement of regular bedtime routines.

The result of the study revealed that depression is one of the major correlate of internet addiction. This result supports the findings of Okwaraji et al. (2015), who reported that approximately 20% of participants were mildly depressed, while 4.5% recorded moderate depression, with increased levels of internet addiction significantly associated with increased depressive symptoms. The result of this study also confirmed social isolation as a significant correlate of internet addiction. This result corroborated that of Kuss et al. (2016), who stated that compulsive internet use is consistently linked to impairments in real-world social functioning. Even though online activity may include social interactions, those interactions often do not substitute for face-to-face relationships. As individuals become increasingly preoccupied with online activities, they tend to spend less time engaging in direct interpersonal contact, withdrawing from offline social networks and ignoring social obligations, which results in social isolation. The result is also in line with that of Omoyemiju and Omotosho (2023). In their study, they indicated that students with higher levels of internet addiction tend to have greater social anxiety and withdrawal from real-life social interaction. This outcome suggests that quantitative engagement with technology does not necessarily translate into meaningful interpersonal relationships.

Result of study revealed that anxiety has a significant correction with internet addiction. The result agrees with that of Akanni and Adayonfo (2020) who found out that nearly a quarter of Nigerian secondary school students were problematic internet users and scored significantly higher on anxiety measures compared with their peers who had normal internet use patterns. Also, depression was found to have a strong positive relationship with

internet addiction. This result supports the findings of Okwaraji et al. (2015), who reported that approximately 20% of participants were mildly depressed, while 4.5% recorded moderate depression, with increased levels of internet addiction significantly associated with increased depressive symptoms. The result of this study also confirmed that social isolation significantly correlate with internet addiction. This result corroborated that of Kuss et al. (2016), who stated that compulsive internet use is consistently linked to impairments in real-world social functioning. Even though online activity may include social interactions, those interactions often do not substitute for face-to-face relationships. As individuals become increasingly preoccupied with online activities, they tend to spend less time engaging in direct interpersonal contact, withdrawing from offline social networks and ignoring social obligations, which results in social isolation. The result is also in line with that of Omoyemiju and Omotosho (2023). In their study, they indicated that students with higher levels of internet addiction tend to have greater social anxiety and withdrawal from real-life social interaction. This outcome suggests that quantitative engagement with technology does not necessarily translate into meaningful interpersonal relationships.

Anxiety was found to be strongly correlated with internet addiction. The result agrees with that of Akanni and Adayonfo (2020) who found out that nearly a quarter of Nigerian secondary school students were problematic internet users and scored significantly higher on anxiety measures compared with their peers who had normal internet use patterns. The result of this study also confirmed that there was no significant gender difference in internet addiction. This result is consistent with several previous empirical studies. Some researchers have reported that although males and females may differ in patterns or purposes of internet use, the overall level of internet addiction does not significantly vary by gender. The result is in line with that of Yao and Zhong (2014) who found no statistically significant difference between male and female university students in overall internet addiction scores, suggesting that both genders are equally susceptible to problematic internet use in contemporary digital environments. Similarly, Kuss, et'al (2013) reported that gender differences in internet addiction were diminishing, largely due to increased access to smartphones and social networking platforms, which are widely used by both males and females. Also, Okwaraji, et;al (2016) observed that while males and females differed in the types of online activities they engaged in, gender did not significantly predict internet addiction severity among undergraduate students. This suggests that contextual factors such as academic demands, social media use, and availability of internet-enabled devices may influence addiction levels more strongly than gender alone.

CONCLUSION

Based on the findings of this study, it can be concluded that internet addiction significantly correlated with the selected mental health variables among undergraduates of the University of Ibadan. The widespread use of the internet for academic, social, and recreational purposes has increased students' exposure to excessive online engagement, which in turn negatively affects their psychological well-being.

The study established that internet addiction significantly correlated with sleep disorders, as excessive internet use especially during late hours disrupts normal sleep patterns, reduces sleep quality, and results in fatigue and reduced concentration. The study also confirmed that internet addiction is significantly associated with depression, as students who are excessively engaged online tend to experience reduced face-to-face social interaction, emotional withdrawal, and feelings of loneliness and hopelessness.

Furthermore, findings showed a significant relationship between internet addiction and anxiety, indicating that constant online engagement, fear of missing out (FOMO), academic pressure mediated by digital platforms, and overexposure to online stimuli contribute to heightened worry and psychological tension among students. Similarly, social isolation emerged as a correlate of internet addiction, as excessive reliance on virtual interactions weakens real-life social bonds and reduces meaningful interpersonal relationships.

Importantly, the study concluded that gender does not significantly influence internet addiction, implying that both male and female undergraduates are equally vulnerable to problematic internet use in the University of Ibadan context.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. University Management:

The University of Ibadan management should develop and implement institutional policies that promote responsible internet use, including awareness campaigns on the dangers of internet addiction and its mental health implications.

2. Counseling and Mental Health Services:

The university counseling unit should be strengthened to provide regular screening, counseling, and intervention programs for students experiencing symptoms of internet addiction, anxiety, depression, and sleep disorders.

3. Health Education and Awareness Programs:

Regular seminars, workshops, and orientation programs should be organized to educate students on digital well-being, time management, emotional regulation, and healthy online habits.

4. Promotion of Offline Engagement:

The university should encourage students' participation in sports, social clubs, religious activities, and peer-support groups, which can serve as protective factors against excessive internet use and social isolation.

5. Lecturers and Academic Staff Involvement:

Lecturers should be encouraged to adopt balanced instructional strategies that do not excessively rely on online platforms alone, thereby reducing unnecessary screen time for students.

6. Parental and Family Awareness:

Parents and guardians should be sensitized to monitor and guide students' internet use, even at the university level, through open communication and emotional support.

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