

Examination Anxiety, Internet Addiction and Sleep Disorder among Undergraduates in University of Ibadan

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ABSTRACT

The incidence of sleep disorders among university students, often intensified by excessive use of digital technologies and academic pressures is gradually becoming a public health concern, having serious implications on health and general wellbeing of Undergraduates. This study therefore examined the relationship between internet addiction, examination anxiety, and sleep disorders among undergraduate of the University of Ibadan, Nigeria.

A descriptive correlational research design was employed for the study. A total of 200 undergraduates were selected from the University using a multistage sampling procedure. Data were collected through a structured, self-developed questionnaire ($\alpha=0.81$) and analyzed using inferential statistical of Pearson Product Moment Correlation and multiple regression analyses.

The findings revealed significant positive relationships between internet addiction and sleep disorders ($r = 0.459$, $p < 0.001$) as well as between examination anxiety and sleep disorders ($r = 0.481$, $p < 0.001$). Further analysis using multiple regression showed that internet addiction ($\beta = 0.275$, $p < 0.001$) and examination anxiety ($\beta = 0.310$, $p < 0.001$) were significant independent predictors of sleep disorders, with examination anxiety demonstrating a slightly stronger relative contribution. Demographic variables such as age, level of study, and religion did not have a statistically significant influence on sleep disorders.

The study concluded that internet addiction and examination anxiety are significant and interrelated factors contributing to sleep disorders among undergraduate students. It therefore recommended that university authorities implement comprehensive wellness programs emphasizing digital literacy, stress management, and sleep hygiene in order to enhance students' well-being and academic performance.

Keywords: Internet Addiction, Examination Anxiety, Sleep Disorders, Undergraduates, University of Ibadan.

INTRODUCTION

Sleep disorders have become a significant health concern among university students globally. With increasing academic demands, changing lifestyle patterns, and heavy reliance on technology, students are experiencing high rates of sleep-related problems. Studies indicate that a substantial proportion of undergraduates suffer from sleep disorders such as insomnia, delayed sleep phase syndrome, and excessive daytime sleepiness, with prevalence rates ranging from one-third to nearly half of students in some regions (Lund et al., 2010). These disorders often lead to impaired academic performance, reduced cognitive functioning, mood disturbances, and long-term health consequences (Beattie et al., 2015). The situation is worsened by late-night internet use, irregular sleep schedules, and elevated stress levels commonly associated with university life (Alfonsi et al., 2020).

Globally, sleep disorders are estimated to affect approximately 45% of the world population, with university students representing one of the most vulnerable groups due to lifestyle changes, academic pressures, and high rates of technology use (World Health Organisation, 2022). Internet addiction, often characterised by excessive and uncontrolled use of online platforms, social media, or online gaming, has been directly associated with poor sleep quality, irregular sleep patterns, and reduced sleep duration among young adults (Demirci et al., 2015).

In Africa, emerging research shows a similar trend of poor sleep health among young adults. University students across sub-Saharan Africa report difficulty initiating and maintaining sleep, frequent night awakenings, and non-restorative sleep, which are associated with high stress levels and socio-economic challenges (Okonkwo & Akpunne, 2021). Sleep disorders within this demographic have been linked to mental health problems, increased risk of accidents, impaired judgment, and reduced productivity (Ojelabi et al., 2022).

In Nigeria, several studies have reported concerning levels of sleep disorders among undergraduates. For example, research indicates that a significant proportion of students experience insomnia symptoms, poor sleep hygiene, and excessive daytime sleepiness, often exacerbated by academic workload, examination anxiety, and irregular schedules (Olutayo & Akinbami, 2020). In addition, late-night internet use often for social media, gaming, or academic purposes has been strongly associated with chronic sleep deprivation in Nigerian university populations (Iyanda & Akintaro, 2016; Owwoye et al., 2019).

Although some researches have investigated sleep disorders in Nigerian youth, there remains limited evidences which specifically focused on undergraduates at the University of Ibadan. Given the unique academic and social environment of this institution characterised by high academic pressure, examination anxiety, and increased internet usage, it is likely that sleep disorders are prevalent. However, empirical data quantifying and explaining the scope of this problem within the University of Ibadan context are scarce. Addressing this knowledge gap is critical, as sleep disorders are closely tied to mental well-being, academic success, and overall health outcomes in the student population (Okafor & Adebisi, 2018).

Examination anxiety, defined as excessive worry and nervousness before or during exams also significantly impair sleep quality, leading to insomnia, difficulty initiating or maintaining sleep, and frequent nighttime awakenings (Putwain & Symes, 2018). Studies from Asia, Europe, and North America indicate a strong correlation between internet addiction and sleep disorders, which is caused by prolonged screen exposure and psychological distress. A practical example is a survey of university students in China which revealed that 38.2% of those classified as internet-addicted reported clinically significant insomnia symptoms (Li et al., 2020). Similarly, research from the United States shows that students who engage in late-night internet use are more likely to experience short sleep duration and daytime fatigue, which in turn affect academic performance and mental well-being (Hershner & Chervin, 2014). Examination anxiety further compounds this problem, as anxiety increases cognitive hyperarousal, making it difficult to fall asleep and decreasing sleep efficiency, especially during examination periods (Lund et al., 2010). Globally, these issues are now being recognised as interconnected rather than isolated, with multiple studies emphasizing that unhealthy internet use and academic anxiety can act synergistically to worsen sleep health.

In Africa, these challenges manifest differently due to cultural, infrastructural, and socioeconomic factors, yet the trend of rising internet addiction and its consequences is notable. Africa has experienced significant growth in internet penetration, particularly among young people, driven by mobile technology and affordable data packages (GSMA, 2021). This increased access has positive aspects which includes access to academic resources, but it also fosters problematic internet behaviours, including compulsive social media use and gaming, which interfere with healthy sleep practices.

A systematic review of studies across 11 African countries, involving 16,275 university students, reported that 63% experienced poor sleep quality, with electronic device use at bedtime and academic stress as the strongest predictors (Mekonnen et al., 2024). A study conducted among university students in South Africa found that 26% reported problematic internet use, and these students were more likely to report insomnia and irregular sleep patterns (Mabasa and Dlamini, 2022). Examination anxiety is also a pressing concern in Africa, given the high pressure associated with educational success and limited employment opportunities, resulting in intense

competition and pressure to excel academically. This anxiety, in combination with late-night study habits and heavy internet use for both academic and non-academic purposes, often leads to disrupted sleep cycles among students (Oginni et al., 2018).

In Nigeria, these issues are even more pronounced due to the rapid adoption of internet-enabled devices among young adults, particularly university students, for both academic and social purposes. Nigeria has one of the largest numbers of internet users in Africa, and university students represent a significant portion of this population (NCC, 2023). Several studies have linked internet addiction in Nigerian undergraduates to various mental health outcomes, including depression, anxiety, and poor sleep quality (Okwaraji & Aguwa, 2021). For instance, research conducted among Nigerian university students revealed that those with high levels of internet addiction were twice as likely to experience poor sleep quality compared to their non-addicted counterparts (Adeyemi et al., 2020). Examination anxiety among Nigerian undergraduates is also highly prevalent, often driven by systemic factors such as overcrowded classrooms, limited access to academic resources, and societal expectations of success (Salami, 2020). The combination of examination anxiety and excessive internet use exacerbates sleep problems, resulting in insomnia, delayed sleep onset, and daytime dysfunction, which can impair academic performance and overall well-being.

Focusing on the University of Ibadan which is Nigeria's premier university, the same patterns are observed but are intensified by the academic rigor and competitive environment of the institution. The University of Ibadan attracts students from diverse socio-economic and cultural backgrounds, many of whom face immense academic and social pressures. As access to smartphones and the internet continues to expand within the student population, there has been an observable shift in lifestyle behaviours, including prolonged nighttime internet use for social media, streaming, and online gaming. Anecdotal reports and preliminary campus based studies indicated that a good proportion of undergraduates experience sleep disturbances, particularly during examination periods. Examination anxiety at the University of Ibadan is further heightened by the perceived difficulty of courses, the weight of assessments, and the societal importance placed on academic excellence, resulting in increased mental strain and disrupted sleep. Hence, this study examined the relationship between internet addiction, examination anxiety, and sleep disorders among undergraduates in the University of Ibadan.

Statement of the Problem

Sleep disorders have become an increasingly prevalent health issue among university students, affecting their academic performance, mental well-being, and overall quality of life. Many undergraduates experience difficulty falling asleep, frequent night awakenings, irregular sleep schedules, and non-restorative sleep, often resulting in daytime sleepiness, poor concentration, and impaired cognitive function. In recent years, researchers have identified several behavioral and psychological factors that contribute significantly to these sleep disturbances, two of which are internet addiction and examination anxiety. Internet addiction has emerged as a growing problem among students who, while using the internet for academic purposes, also spend prolonged hours engaged in non-academic activities such as social media, online gaming, and streaming. This excessive late night screen exposure disrupts normal sleep-wake cycles, delays sleep onset, and reduces sleep quality, predisposing students to chronic sleep deprivation. Similarly, examination anxiety characterized by fear, worry, and heightened tension before and during examinations has been linked to disrupted sleep patterns, increased physiological arousal, and difficulty maintaining healthy sleep routines.

Despite the recognition of sleep disorders and their impact on student health, there is limited research examining how these two key factors which are internet addiction and examination anxiety interact to influence sleep health among undergraduates in the Nigerian university context. At the University of Ibadan, where students are exposed to intense academic competition and widespread digital technology use, these challenges are likely to be pronounced. Yet, empirical data on how internet addiction and examination anxiety jointly contribute to sleep disorders within this population remain scarce.

This study therefore focuses primarily on sleep disorders as a critical health issue and investigates the extent to which internet addiction and examination anxiety serve as major contributing factors. Findings from this study

will provide insight into effective strategies to promote better digital habits, manage academic stress, and improve sleep health among undergraduates.

Objectives of the Study

The main objective of this study is to determine the relationship between internet addiction, examination anxiety and sleep disorder amongst Undergraduates in the University of Ibadan.

Specific Objectives

Specifically, the study sought to determine;

1. The relationship between internet addiction and sleep disorder
2. The relationship between examination anxiety and sleep disorder.
3. The relative contribution of Internet addiction and examination anxiety to sleep disorder.

Research Questions

The study provided answers to the following research questions;

1. What is the prevalence of Internet addiction among Undergraduates in University of Ibadan.
2. Do undergraduates in University of Ibadan experience sleep disorder.

Hypotheses

The following hypotheses were tested:

1. There will be no significant relationship between internet addiction and sleep disorders among undergraduates in the University of Ibadan.
2. There will be no significant relationship between examination anxiety and sleep disorders among undergraduates in the University of Ibadan.
3. There will be no significant joint contribution of internet addiction and examination anxiety to sleep disorders among undergraduates in the University of Ibadan.
4. There will be no significant relative contribution of Internet addiction, examination anxiety to sleep disorder among undergraduates in the University of Ibadan.

Significance of the Study

This study will provide valuable knowledge to readers, helping them understand how internet addiction and examination anxiety influence sleep disorders among undergraduates in the University of Ibadan. It will shed light on the combined effect of these factors on students' health and academic performance, which is often overlooked in research.

The findings of this study will be of immense importance to undergraduates, university authorities, health educators, society, and future researchers. By focusing on sleep disorder as the main concern, and identifying internet addiction and examination anxiety as major contributors.

Furthermore, the results may assist the University of Ibadan and similar institutions in addressing issues related to students' wellbeing. It can guide the creation of awareness campaigns, counseling programs, and workshops aimed at improving digital habits, managing academic stress, and promoting healthy sleep routines. For health

educators, the study offers empirical evidence to design interventions that emphasize healthy technology use and sleep hygiene among students.

This study will also stimulate conversations on how academic pressure and modern technology influence mental health and lifestyle habits among young people. It will also be significant to future researchers by providing empirical data and recommendations that can serve as a reference for similar studies in other universities or among different demographic groups. Ultimately, this research will contribute to policies and practices that support student health, academic success, and overall quality of life.

Theoretical Framework

Compensatory Internet Use Theory (Kardefelt-Winther, 2014)

The Compensatory Internet Use Theory (CIUT), developed by Daniel Kardefelt Winther in 2014, is a psychological framework that explains why individuals engage in excessive internet use. The theory suggests that problematic internet behaviors do not occur randomly but rather serve as a coping mechanism to compensate for negative emotions, unmet needs, or stressors in everyday life. According to the theory, people turn to the internet as a form of escape, relief, or distraction from problems they face offline. While this strategy may provide temporary comfort, it often leads to compulsive internet use, dependency, and negative consequences such as poor sleep, declining academic performance, and reduced psychological well-being (Kardefelt-Winther, 2014).

Within the context of undergraduates, this theory is particularly relevant. University students, especially those at the University of Ibadan, experience multiple stressors including heavy academic workloads, examination pressure, financial challenges, and social adjustments. Faced with these difficulties, some students resort to excessive internet use such as late-night scrolling on social media, binge-watching series, gaming, or chatting as a way of coping with stress and avoiding negative thoughts. While this provides short-term distraction, it comes at the expense of adequate sleep and healthy routines. Over time, this maladaptive coping strategy develops into internet addiction, which disrupts circadian rhythms and contributes to the onset of sleep disorders (Demirci et al., 2015).

The theory emphasizes that internet addiction is not simply caused by the availability of technology but by the underlying psychological motives driving its use. For example, a student who feels overwhelmed by examination anxiety may stay up late watching movies or engaging on social media as a way of reducing stress. However, prolonged screen exposure at night stimulates the brain and delays the release of melatonin, the hormone responsible for sleep regulation. This leads to delayed sleep onset, poor quality of sleep, and increased daytime fatigue. Rather than reducing anxiety, such behaviors reinforce a cycle where internet use becomes both a coping mechanism and a cause of further stress due to sleep loss and academic underperformance (Kardefelt-Winther, 2014).

Empirical studies support this theory, showing that students with high academic stress or anxiety are more likely to report compulsive internet use and irregular sleep schedules. For instance, research has found strong associations between problematic internet use, insomnia, and excessive daytime sleepiness in student populations (Lemola et al., 2015). In Nigeria, where internet penetration among young people has rapidly increased, undergraduates often spend long hours online at night due to cheaper night data plans and social influences. The Compensatory Internet Use Theory provides an explanation for this trend: students are not merely attracted to the internet out of habit, but use it to cope with academic stress, loneliness, or examination anxiety. Unfortunately, this behavior worsens the very problems they seek to escape, creating a feedback loop of stress, internet use, and sleep deprivation.

The Compensatory Internet use theory is especially useful for understanding the interaction between internet addiction and sleep disorders. Students facing academic pressure may engage in late night browsing or streaming as a way to “unwind” after long study hours. However, this coping strategy only pushes sleep later into the night, shortens sleep duration, and causes irregular patterns such as oversleeping during the day or struggling with insomnia at night. The theory also helps to explain the joint influence of internet addiction and examination



anxiety on sleep disorders: students anxious about exams use the internet to cope, but the resulting poor sleep increases anxiety and stress the following day, thereby perpetuating the cycle.

The relevance of this theory to the present study lies in its ability to explain why undergraduates develop internet addiction and how this behavior contributes to sleep problems. It explains the compensatory role of the internet in dealing with academic and emotional stress, while also illustrating the harmful consequences of relying on such maladaptive strategies. By applying the Compensatory Internet Use Theory, the study underscores the importance of addressing both the psychological stressors (such as examination anxiety) and the behavioral outcomes (such as excessive internet use) in order to understand and reduce sleep disorders among undergraduates at the University of Ibadan.

METHODOLOGY

The descriptive cross-sectional survey research design was adopted for this study. This design was chosen because it enables the researcher to collect data from a defined population at a single point in time to determine the relationship between examination anxiety, internet addiction and how they contributed to sleep disorder among undergraduates in the University of Ibadan, Oyo state. The cross-sectional design is particularly suitable for assessing the prevalence of attributes or phenomena and exploring relationships between variables without manipulating the study environment. The population for this study comprised all undergraduates in the University of Ibadan, Oyo state, Nigeria. A total of two hundred (200) undergraduates in University of Ibadan were selected through the multistage sampling procedure.

Stage 1: Purposive sampling technique was used to select faculty of education as undergraduates from 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 were randomly selected in each of the selected departments.

A self-developed structured questionnaire was used for data collection. The questionnaire was divided into three (3) sections.

Section A: This section focused on the prevalence and patterns of internet use among undergraduates in the University of Ibadan, including indicators of internet addiction.

Section B: This section assessed the prevalence and experiences of sleep disorders among undergraduates.

Section C: This section examined the level of examination anxiety among respondents.

The instrument was validated by experts in Health education and psychometrician through peer review while the reliability was established using Cronbach's alpha analysis. The instrument

Descriptive statistics of frequency count was used provide answers to the research questions while inferential statistics of regression and t-test were used to analyse the hypotheses at 0.05 a level of significance. The ethical principles guiding the use of human participants in research were taken into consideration in the design and conduct of the study. In addition, permission was obtained from the participants. Participation in the study was 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 were required and all information provided were kept with utmost confidentiality.

Research Question 1: What is the prevalence of Internet Addiction among undergraduates in the University of Ibadan

Table 1: Descriptive analysis of the prevalence of Internet Addiction among undergraduates in the University of Ibadan

Question	SA	A	N	D	SD	Mean	STD
I often spend more hours online than initially planned.	77 (38.5%)	78(39.0%)	26(13.0%)	13(6.5%)	6(3.0%)	4.04	1.024
I find it difficult to reduce my internet use even when I want to.	32(16.0%)	66(33.0%)	43(21.0%)	48(24.0%)	11(5.5%)	3.30	1.160
I stay online late at night	48(24.0%)	70(35.0%)	33(16.5%)	37(18.5%)	12(6.0%)	3.53	1.211
I abandon important tasks to use the internet.	27(13.5%)	48(24.0%)	46(23.0%)	58(29.0%)	21(10.5%)	3.01	1.224
I feel restless when I cannot access the internet.	24(12.0%)	59(29.5%)	38(19.0%)	48(24.0%)	31(15.5%)	2.99	1.282
I prefer spending time online to interacting with friends.	36(18.0%)	53(26.5%)	49(24.5%)	47(23.5%)	15(7.5%)	3.24	1.212
I see the internet as a way to escape from problems.	42(21.0%)	58(29.0%)	43 (21.5%)	38 (19.0%)	19(9.5%)	3.33	1.265

When respondents were asked if they often spend more time online than usually planned 77 (38.5%) responded Strongly Agree, 78 (39.0%) responded that they Agree, 26 (13.0%) responded that they are Neutral, whereas 13 (6.5%) responded that they Disagree and 6 (3.0%) responded that they Strongly Disagree, The Mean and Standard Deviation are 4.04 and 1.024 respectively. When respondents were asked if they found it difficult to reduce Internet use even when they want to 32 (16.0%) responded Strongly Agree, 66 (33.0%) responded that they Agree, 43 (21.5%) responded that they are Neutral, whereas 48 (24.0%) responded that they Disagree and 11 (5.5%) responded that they Strongly Disagree, The Mean and Standard Deviation are 3.30 and 1.160 respectively.. When respondents were asked if they stay online late at night, 48 (24.0%) responded Strongly Agree, 70 (35.0%) responded that they Agree, 33 (16.5%) responded that they are Neutral, whereas 37 (18.5%) responded that they Disagree and 12 (6.0%) responded that they Strongly Disagree, The Mean and Standard Deviation are 3.53 and 1.211 respectively. When respondents were asked if they abandon important task online to use the Internet, 27 (13.5%) responded Strongly Agree, 48 (24.0%) responded that they Agree, 46 (23.0%) responded that they are Neutral, whereas 58 (29.0%) responded that they Disagree and 21 (10.5%) responded that they Strongly Disagree, The Mean and Standard Deviation are 3.01 and 1.224 respectively. When respondents were asked if they feel restless when they can't access the Internet, 24 (12.0%) responded Strongly Agree, 59 (29.5%) responded that they Agree, 38 (19.0%) responded that they are Neutral, whereas 48 (24.0%) responded that they Disagree and 31 (15.5%) responded that they Strongly Disagree, The Mean and Standard Deviation are 2.99 and 1.282 respectively. When respondents were asked if they preferred spend time online to interacting with friends, 36 (18.0%) responded Strongly Agree, 53 (26.5%) responded that they Agree, 49 (24.5%) responded that they are Neutral, whereas 47 (23.5%) responded that they Disagree and 15 (7.5%) responded that they Strongly Disagree, The Mean and Standard Deviation are 3.24 and 1.212 respectively. When respondents were asked if they see the Internet as a way to escape their problems, 42 (21.0%) responded that

they Strongly Agree, 58 (29.0%) responded that they Agree, 43 (21.5%) responded that they were Neutral in this regards whereas 38 (19.0%) responded that they Disagreed, and 19 (9.5%) responded that they Strongly Disagree, The Mean and Standard Deviation are 3.33 and 1.265 respectively.

Research Question 2: What is the prevalence of examination anxiety among undergraduates in the University of Ibadan

Table 2: Descriptive analysis of the prevalence of examination anxiety among undergraduates in the University of Ibadan

Questions	SA	A	N	D	SD	Mean	STD
I feel nervous/tense when preparing for examinations.	30(15.0%)	67(33.5%)	52(26.0%)	41(20.5%)	10(5.0%)	3.33	1.112
During examinations, my hands get sweaty/ my heart beats faster.	19(9.5%)	51(25.5%)	37(18.5%)	70(35.0%)	23(11.5%)	2.87	1.197
I find it difficult to concentrate on my studies because I keep worrying about exams.	11(5.5%)	30(15.0%)	44(22.0%)	81(40.5%)	34(17.0%)	2.52	1.107
I lose confidence in myself when I think about writing an exam.	13(6.5%)	22(11.0%)	39(19.5%)	80(40.0%)	46(23.0%)	2.38	1.145
I feel blank/forget what I studied once examination begins.	7(3.5%)	15(7.5%)	49(24.5%)	78(39.0%)	51(25.5%)	2.25	1.030
I fear writing examinations.	12(6.0%)	30(15.0%)	51(25.5%)	70(35.0%)	37(18.5%)	2.55	1.133
Examination periods make me feel extremely stressed.	34(17.0%)	82(41.0%)	35(17.5%)	29(14.5%)	20(10.0%)	3.41	1.216

From the table above, when the respondents were asked if they feel nervous or tense when preparing for examinations, of which, 30 (15.0%) responded that they Strongly Agree, 67 (33.5%) responded that they Agree, 52 (26.0%) responded that they were Neutral, whereas 41 (20.5%) responded that they Disagree and 10 (5.0%) of the respondents stated that they Strongly Disagree, The Means and Standard Deviation are 3.33 and 1.112 respectively. When the respondents were asked if during the exam their hands become sweaty and heart race faster 19 (9.5%) chose Strongly Agree, 51 (25.5%) of the respondents chose Agree, 37 (18.5%) of the respondents chose Neutral, whereas 70 (35.0%) of the respondents chose Disagree and 23 (11.5%) chose Strongly Disagree, The Mean and Standard Deviation are 2.87 and 1.197. When respondents were asked if they found it difficult to concentrate while studying because of worry about exams, 11 (5.5%) said they Strongly Agree, 30 (15.0%) chose they Agree, 44 (22.0%) chose to stay Neutral, whereas 81 (40.5%) chose they Disagree and 34 (17.0%) chose they Strongly Disagree, The Mean and Standard Deviation are 2.52 and 1.107 respectively. When the respondents were asked if they lose confidence in themselves each time they think about writing an exam, of which, 13 (6.5%) responded that they Strongly Agree, 22 (11.0%) responded that they Agree, 39 (19.5%) responded that they were Neutral, whereas 80 (40.0%) responded that they Disagree and 46 (23.0%) of the respondents stated that they Strongly Disagree, The Means and Standard Deviation are 2.38 and 1.145 respectively. When the respondents were asked if they feel blank or forget what they have read once exam start, 7 (3.5%) chose Strongly Agree, 15 (7.5%) of the respondents chose Agree, 49 (24.5%) of the respondents chose Neutral, whereas 78 (39.0%) of the respondents chose Disagree and 51 (25.5%) chose Strongly Disagree, The

Mean and Standard Deviation are 2.25 and 1.030. When respondents were asked if they fear writing exams, 12 (6.0%) said they Strongly Agree, 30 (15.0%) chose they Agree, 51 (25.5%) chose to stay Neutral, whereas 70 (35.0%) chose they Disagree and 37 (18.5%) chose they Strongly Disagree, The Mean and Standard Deviation are 2.55 and 1.133 respectively. When respondents were asked if exam period made them feel extremely stressed, 34 (17.0%) responded Strongly Agreed, 82 (41.0%) responded Agree, 35 (17.5%) responded Neutral, whereas 29 (14.5%) responded Disagree, and 20 (10.0%) responded Strongly Disagree, The Mean and Standard Deviation are 3.41 and 1.216.

Research Question 3: What is the prevalence of sleep disorder among undergraduates in the University of Ibadan

Table 3: Descriptive analysis of the prevalence of sleep disorder among undergraduates in the University of Ibadan

Items	SA	A	N	D	SD	Mean	STD
I often find it difficult to fall asleep at night.	17(8.5%)	47(23.5%)	41(20.5%)	64(32.0%)	31(15.5%)	2.78	1.213
I wake up several times during the night.	21(10.5%)	56(28.0%)	43(21.5%)	55(27.5%)	25(12.5%)	2.97	1.217
I feel sleepy/drowsy during the day.	9(4.5%)	65(32.5%)	58(29.0%)	50(25.0%)	18(9.0%)	2.99	1.058
I do not feel refreshed when I wake up in the morning.	15(7.5%)	31(15.5%)	40(20.0%)	91(45.5%)	23(11.5%)	2.62	1.110
I sleep fewer hours than I need.	27(13.5%)	73(36.5%)	33(16.5%)	50(25.0%)	17(8.5%)	3.32	1.207
I sometimes do not sleep at all.	15(7.5%)	41(20.5%)	38(19.0%)	64(32.0%)	42(21.5%)	2.62	1.235
I experience irregular sleep patterns (e.g. sleeping late and waking up late).	36(18.0%)	64(32.0%)	40(20.0%)q	41(20.5%)	19(9.5%)	3.29	1.246

From the table above, when the respondents were asked if they often find it difficult to sleep at night, of which, 17 (8.5%%) responded that they Strongly Agree, 47 (23.5%) responded that they Agree, 41 (20.5%) responded that they were Neutral l, whereas 64 (32.0%) responded that they Disagree and 31 (15.5%) of the respondents stated that they Strongly Disagree, The Means and Standard Deviation are 2.78 and 1.213 respectively. When the respondents were asked if they wake many times during the night, 21 (10.5%) chose Strongly Agree, 56 (28.0%) of the respondents chose Agree, 43 (21.5%) of the respondents chose Neutral, whereas 55 (27.5%) of the respondents chose Disagree and 25 (12.5%) chose Strongly Disagree, The Mean and Standard Deviation are 2.97 and 1.217. When respondents were asked if they felt sleepy or drowsy during the day,, 9 (4.5%) said they Strongly Agree, 65 (32.5%) chose they Agree, 58 (29.0%) chose to stay Neutral, whereas 50 (25.0%) chose they Disagree and 18 (9.0%) chose they Strongly Disagree, The Mean and Standard Deviation are 2.99 and 1.058 respectively. When the respondents were asked if they do not feel refreshed when they wake in the morning, of which, 15 (7.5%%) responded that they Strongly Agree, 31 (15.5%) responded that they Agree, 40 (20.0%) responded that they were Neutral l, whereas 91 (45.5%) responded that they Disagree and 23 (11.5%) of the respondents stated that they Strongly Disagree, The Means and Standard Deviation are 2.62and 1.110 respectively. When the respondents were asked if they sleep for fewer hours than they need, 27 (13.5%) chose

Strongly Agree, 73 (36.5%) of the respondents chose Agree, 33 (16.5%) of the respondents chose Neutral, whereas 50 (25.0%) of the respondents chose Disagree and 17 (8.5%) chose Strongly Disagree, The Mean and Standard Deviation are 3.32 and 1.207. When respondents were asked if they sometimes don't sleep at all, 15 (7.5%) said they Strongly Agree, 41 (20.5%) chose they Agree, 38 (19.0%) chose to stay Neutral, whereas 64 (32.0%) chose they Disagree and 42 (21.0%) chose they Strongly Disagree, The Mean and Standard Deviation are 2.62 and 1.235 respectively. When respondents were asked if they experience improper sleeping patterns, 36 (18.0%) responded Strongly Agreed, 64 (32.0%) responded Agree, 40 (20.0%) responded Neutral, whereas 41 (20.5%) responded Disagree, and 19 (9.5%) responded Strongly Disagree, The Mean and Standard Deviation are 3.29 and 1.246.

Hypothesis One: There will be no significant relationship between internet addiction and sleep disorders among undergraduates in the University of Ibadan.

Table 4: Correlation between internet addiction and sleep disorder

Items	N	df	r	p
Internet addiction	200	198	.459	.000
Sleep disorder	200			

Table 4 revealed that there was a significant relationship between internet addiction and sleep disorder among undergraduates in the University of Ibadan ($r=0.459$, $df=198$, $p<0.05$), therefore, the null hypothesis was rejected. The table also showed that the magnitude of the relationship is moderate and the direction of the relationship is positive, therefore a significant moderate positive relationship exists between internet addiction and sleep disorder.

Hypothesis Two: There will be no significant relationship between examination anxiety and sleep disorders among undergraduates in the University of Ibadan.

Table 5: Correlation between examination anxiety and sleep disorder

Items	N	df	R	p
Internet addiction	200	198	.781	.000
Examination anxiety	200			

Table 5 revealed that there was a significant relationship between examination anxiety and sleep disorder among undergraduates in the University of Ibadan ($r=0.781$, $df=198$, $p<0.05$), therefore, the null hypothesis was rejected. The table also showed that the magnitude of the relationship is high and the direction of the relationship is positive, therefore a significant high positive relationship exists between examination anxiety and sleep disorder.

Hypothesis 3: There will be no significant joint contribution of internet addiction and examination anxiety to sleep disorders among undergraduates in the University of Ibadan

Table 6: Regression table showing the joint contributions of internet addiction and examination anxiety to sleep disorder among undergraduates in the University of Ibadan

R = .539					
Multiple R = .290					
Multiple R ² adjustment = .289					
Analysis of Variance					
Model	Sum of square	Df	Mean square	F	P
Regression	163.833	2	81.917	54.867	.000 ^b
Residual	294.056	197	1.493		
Total	457.889	199			

Table 6 revealed that the joint contribution of internet addiction and examination anxiety to sleep disorders among undergraduates in the University of Ibadan was significant ($F_{(2,197)} = 54.867$, $p < .05$). The independent variable also yielded an adjusted R^2 of .289, indicating that about 29% of the variation is accounted for by the independent variables. Therefore, the null hypothesis was rejected.

Hypothesis 4: There will be no significant relative contribution of Internet addiction and examination anxiety to sleep disorder among undergraduates in the university of Ibadan

Table 7: Regression table showing the relative contributions of internet addiction and examination anxiety to sleep disorder among undergraduates in the University of Ibadan

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	9.119	1.879		4.854	.000
Examination Anxiety	.294	.067	.310	4.398	.000
Internet Addiction	.257	.066	.275	3.891	.000
Dependent Variable: Sleep disorder					

Table 7, showed for each independent variable, the unstandardised regression weight (**B**), the standardized error of estimate (SEB), the standardized coefficient, the t-ratio and the level at which the t-ratio was significant. The table revealed that examination anxiety has a higher contribution of 31.0% ($\beta=.310$, $t=4.398$, $p<0.05$) while internet addiction has a contribution of 27.5% ($\beta=.275$, $t=3.891$, $p<0.05$), therefore, the null hypothesis is rejected.

DISCUSSION OF FINDINGS

The finding of this study is in line with the submission of Seun-Fadipe & Mosaku, (2016) who concluded that students with high test anxiety frequently report difficulty falling asleep, restless nights and frequent awakenings during exam periods. Sleep disorders in turn reduce concentration and impair cognitive performance, worsening the very fear of failure that triggered the anxiety in the first place. This creates a vicious cycle where poor sleep worsens anxiety, and anxiety further disrupts sleep. Geng et al., (2018) also found that examination anxiety contributes not only to insomnia but also to excessive daytime sleepiness and irregular sleep schedules, both of which impair academic performance and mental health. Also in agreement with the finding of this study is Alfonsi et al., (2020) who submitted that sleep disorder is worsened by late-night internet use, irregular sleep schedules, and elevated stress levels commonly associated with university life.

Olutayo & Akinbami, (2020) also indicated that a significant proportion of students experience insomnia symptoms, poor sleep hygiene, and excessive daytime sleepiness, often exacerbated by academic workload, examination anxiety, and irregular schedules. In addition, late-night internet use often for social media, gaming, or academic purposes has been strongly associated with chronic sleep deprivation in Nigerian university populations (Owoeye et al., 2019).

Also studies from Asia, Europe, and North America indicated a strong correlation between internet addiction and sleep disorders, which is caused by prolonged screen exposure and psychological distress. Li et al., (2020) in a survey of university students in China revealed that 38.2% of those classified as internet-addicted also reported clinically significant insomnia symptoms. Similarly, research from the United States shows that students who engage in late-night internet use are more likely to experience short sleep duration and daytime fatigue, which in turn affect academic performance and mental well-being (Hershner & Chervin, 2014). A systematic review of studies across 11 African countries, involving 16,275 university students, reported that 63% experienced poor sleep quality, with electronic device use at bedtime and academic stress as the strongest predictors (Mekonnen et al., 2024). A study conducted among university students in South Africa found that 26% reported problematic internet use, and these students were more likely to report insomnia and irregular sleep patterns (Mabasa & Dlamini, 2022).

Several studies have linked internet addiction in Nigerian undergraduates to various mental health outcomes, including depression, anxiety, and poor sleep quality (Okwaraji & Aguwa, 2021). For instance, research conducted by Adeyemi et al., (2020) among Nigerian university students revealed that those with high levels of internet addiction were twice as likely to experience poor sleep quality compared to their non-addicted counterparts. Examination anxiety among Nigerian undergraduates is also highly prevalent, often driven by systemic factors such as overcrowded classrooms, limited access to academic resources, and societal expectations of success (Salami, 2020). The combination of examination anxiety and excessive internet use exacerbates sleep problems, resulting in insomnia, delayed sleep onset, and daytime dysfunction, which can impair academic performance and overall well-being.

Evidence from recent studies shows that excessive internet use is strongly associated with poor sleep quality, delayed bedtimes, increased daytime fatigue, and reduced academic performance (Alimoradi et al., 2019; Sohn et al., 2021). Mokitimi et al. (2018) observed that South African university students who spent long hours online, especially at night, reported increased symptoms of insomnia and poor academic performance. In Nigeria, where affordable midnight data plans encourage nocturnal internet use, several studies have highlighted sleep disruption as a major consequence of internet addiction (Ojelabi et al., 2020; Ogunsemi et al., 2018). Students often remain online until the early hours of the morning, scrolling through social media or downloading materials, leading to irregular sleep schedules and chronic fatigue. Psychologically, internet addiction and sleep disorders are also linked through the mechanism of arousal and anxiety. Continuous online engagement keeps the brain active, stimulating cognitive and emotional centers that delay relaxation and rest. Many students report difficulty “switching off” mentally after spending time online, particularly on emotionally engaging platforms like TikTok or Instagram (Wang & Zhao, 2020). Furthermore, the “fear of missing out” (FOMO) the anxiety of being left out of social media updates drives students to remain online late at night, worsening their sleep quality (Rozgonjuk et al., 2021).

Examination anxiety which is a form of performance anxiety characterized by excessive fear, worry, and physiological arousal during academic evaluations often manifests in sleep disturbances before and during examinations (Putwain, 2020). For many students, the fear of failure, high parental or societal expectations, and intense academic competition contribute to emotional tension that directly affects sleep quality and duration (Cassady & Finch, 2015).

Garett et al., (2017) also in support of the finding of this study concluded that, globally, numerous studies have established that sleep problems are common among students experiencing examination-related stress. A study conducted in the United States found that 60% of college students with high levels of test anxiety reported insomnia or difficulty maintaining sleep during exam periods. In China, research by Geng et al. (2018) revealed that students with elevated exam anxiety scores had significantly poorer sleep quality, shorter sleep duration, and higher levels of fatigue compared to their less-anxious peers. Similarly, a meta-analysis by Alfonsi et al. (2020) found that examination anxiety was one of the strongest psychological predictors of short sleep duration and irregular sleep patterns among university students.

The result of this study is in agreement with that of Mokitimi et al. (2018) who observed that South African undergraduates who reported severe exam stress also exhibited chronic insomnia and late-night restlessness. The study further showed that students often stayed up excessively late revising or worrying about their performance, resulting in fragmented sleep. In Nigeria, Seun-Fadipe & Mosaku (2016) found that examination anxiety was a major determinant of sleep problems among undergraduates in Ibadan, with over half of respondents reporting difficulty sleeping before examinations. The combination of fear of academic failure, limited preparation time, and financial or parental pressure creates a climate of persistent anxiety that disrupts students’ normal sleep-wake patterns.

CONCLUSION

In conclusion, this study provides empirical evidence that internet addiction and examination anxiety are significant and interrelated contributors to sleep disorders among undergraduates at the University of Ibadan. The research confirms that students who engage in excessive, compensatory internet use are more likely to

experience poor sleep quality and irregular sleep patterns. It also affirms that the cognitive and emotional stress associated with examinations directly promotes sleep disturbances.

Most significantly, the study concludes that these two factors do not operate in isolation. They have an additive effect, meaning that students grappling with both high examination anxiety and high internet addiction are at a substantially greater risk of severe sleep disruption. The problem is primarily behavioral and psychological in nature, rather than stemming from demographic background. Ultimately, this creates a vicious cycle where academic stress fuels anxiety and escapist internet use, which together degrade sleep, leading to worsened academic preparedness and heightened stress. Addressing this nexus is therefore critical for safeguarding student well-being and academic performance.

RECOMMENDATIONS

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

1. The University of Ibadan should incorporate mandatory wellness education modules on digital literacy, stress management, and sleep hygiene into the general studies curriculum.
2. The University Health Service should establish targeted screening and brief intervention programs during examination periods to identify and support students with high anxiety and sleep problems.
3. The Student Affairs Division should organize regular awareness campaigns and workshops to educate students on the negative impact of excessive nighttime internet use on academic performance and sleep.
4. University counselors should develop and offer group-based Cognitive Behavioral Therapy (CBT) sessions focused on managing examination anxiety and reducing pre-sleep cognitive arousal.
5. Faculty and department heads should consider implementing policies that discourage the scheduling of major assignments and tests back-to-back to alleviate peak stress periods.
6. Students should be encouraged to practice self-regulated digital detoxes, especially during exam preparations, by using app limiters and establishing screen-free periods before bedtime.
7. Halls of residence should promote a conducive sleep environment by encouraging quiet hours and providing information on good sleep practices.
8. The university should leverage its ICT unit to send periodic reminders and tips on healthy internet usage and sleep habits to the student body via official portals and messaging platforms.
9. Future researchers should conduct longitudinal studies to better understand the causal pathways linking internet addiction, anxiety, and sleep disorders over time.
10. Researchers should also explore the effectiveness of specific intervention strategies, such as mindfulness training or structured physical activity programs, in mitigating these interrelated issues among undergraduates.

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