Impact of Socio-demographic Factors on Cyber Addiction and Cyberbullying Among Adolescents in Nigeri

Henry A. Olubode,[1]✉ Elizabeth O. Akinyemi[2], Benjamin O. Omolayo[3], Thaddeus Umoru[4], Babatola Olawa[5]

[1,3] Department of Psychology, Federal University, Oye-Ekiti, Nigeria
[2] Albert Einstein College of Medicine and Montefiore Medical Center, New York, United States
[4] Department of Sociology, Faculty of Social Sciences, Kogi State University, Anyigba, Nigeria
[5] Department of Gerontology, University of Vechta, Germany

Abstrak

Internet dikembangkan untuk memfasilitasi akses mudah terhadap informasi, namun banyak disalahgunakan dan menimbulkan kecanduan serta perundungan. Tujuan utama dari studi ini adalah untuk mengetahui kecanduan dan perundungan di dunia cyber kalangan remaja di institusi pendidikan tinggi publik. Sampel penelitian diambil dari 400 remaja dari 4 institusi pendidikan tinggi publik di Nigeria. Dengan menggunakan desain penelitian eks-post facto, hasil penelitian menunjukkan bahwa 0,7% remaja mengalami kecanduan internet yang parah, 26,8% adalah pengguna normal, 42,5% mengalami kecanduan ringan, dan 30% mengalami kecanduan sedang terhadap penggunaan internet. Analisis regresi menunjukkan bahwa faktor-faktor sosiodemografi seperti usia, jenis kelamin biologis, afiliasi agama, institusi studi, tahun penggunaan internet, dan penggunaan perangkat internet secara bersama-sama memprediksi kecanduan cyber dan perundungan cyber. Afiliasi agama dan tahun penggunaan internet secara independen memprediksi kecanduan cyber, sementara usia secara independen memprediksi perundungan cyber. Temuan penelitian ini mengungkapkan perlunya pemantauan dan pengendalian aktivitas internet remaja.

Abstract

The internet was developed to foster easy access to information but has been abused in terms of addiction and bullying. The main objective of this study was to assess cyber addiction and cyberbullying among adolescents in public tertiary institutions. The sample of the study consisted of 400 adolescents from 4 public tertiary institutions in Nigeria. Using an ex-post facto research design, the results indicate that 0.7% of adolescents were severe internet addicts, 26.8% were normal users, 42.5% were mildly addicted, and 30% were moderately addicted to internet use. Regression analysis showed that socio-demographic factors such as age, biological sex, religious affiliation, the institution of study, years of using the internet, and internet device usage jointly predicted cyber addiction and cyberbullying. Religious affiliation and years of using the internet independently predicted cyber addiction, while age independently predicted cyberbullying. The research findings revealed the need for monitoring and controlling adolescents' internet activities.

✉ Corresponding author :
Address: Department of Psychology, Federal University, Oye-Ekiti, Nigeria
E-mail: profoluomolayo@gmail.com

INTRODUCTION

Cyber is a prefix used in an increasing number of terms to describe new things made possible by the widespread use of computers. Anything related to the internet also falls under the cyber category. The internet is a communication tool that has greatly improved human interactions worldwide. It is a global network connecting millions of electronic machines called computers (Joanna, Melinda, Lawrence, & Jeanne, 2014). Internet mobile platforms have revolutionized technological advancements (Livingstone, Kirwil, Ponte, & Staksrud, 2013), and social networking sites play a crucial role in providing academic opportunities, which explains why people use these platforms (Kuss & Griffiths, 2011). However, people also utilize social network platforms for activities such as seminars, meetings, business, and education.

The use of the internet among young people has increased (Tokunaga, 2010) and has become an integral part of their lives (Livingstone, Kirwil, Ponte, & Staksrud, 2013). Griffiths (2004) suggested that the use of social networking sites can be a mild addiction, but excessive use can disrupt daily life and lead to negative outcomes such as loneliness, depression, anxiety, and phobias (Vallerand et al., 2003). In 2010, approximately 28.7% of the world's population used the internet (Wanajak, 2011). Although this percentage may not seem significant`, the rapid growth of internet usage is concerning. There is a growing concern about the negative aspects of internet use (Dotinga, 2009; Fackler, 2007).

Internet addiction refers to the excessive and uncontrolled use of the internet, which is facilitated by easy access to information (Nath, Chen, Muyingi, & Lubega, 2013). This issue is prevalent among young people due to activities such as chatting, which can lead to withdrawal symptoms that hinder participation in important domestic activities and neglect of academic and occupational responsibilities (Ong, 2014). Adolescents use the internet for various purposes, including messaging, discussions, seeking revenge, self-expression, sharing pictures, forming social relationships, obtaining information, online shopping, completing school assignments, playing games, and engaging in gambling, among others. With smartphones, tablets, and other internet technologies, adolescents can access the internet wherever there is a strong network signal. They spend a significant part of their days at school or outside the direct monitoring and supervision of their parents or guardians. This provides a platform for their social and mental development through interpersonal interactions.

Cyberbullying refers to the abuse inflicted through the use of computers, smartphones, and other electronic devices (Patchin & Hinduja, 2010). It is a form of modern victimization that affected over 40% of adolescents in 2009 alone (National Crime Prevention Council, 2010), and it encompasses actions such as harassment, impersonation, and trickery. Cyberbullying involves emotional, verbal, or physical attacks against individuals who are vulnerable due to an imbalance of power (Olweus, 1993). The anonymity provided by internet usage allows perpetrators of cyberbullying to remain unidentified and enables them to disseminate messages to a wide audience (Kowalski & Limber, 2007). Cyberbullying aggressors employ threats and manipulation of social relationships through the internet to target their victims (Adeosun et al., 2015). Even though the offender or aggressor is not physically visible to the victim, the act of cyberbullying remains psychologically and emotionally damaging, particularly for young people (Emmanuel, Anayochi, & Thompson, 2015). It generates strains that can elicit feelings of anger, frustration, or depression, which may manifest as negative behavioral choices.

Therefore, this study aims to assess the level of internet addiction and cyberbullying among adolescents by examining socio-demographic factors that predict cyberbullying and cyber addiction, including age, biological sex, religious affiliation, institution of study, internet device usage, and years of internet use. Additionally, the study explores the internet applications that adolescents spend most of their time on. The research hypotheses for the study state that the socio-demographic characteristics of age, biological sex, institution of study, religious affiliation, years of using internet, and internet device usage will jointly and independently predict cyber addiction among adolescents in tertiary institutions, as well as cyberbullying. By investigating these factors, the study aims to provide insights into the relationship between socio-demographic factors and the occurrence of cyberbullying and internet addiction among adolescents in tertiary institutions.

LITERATURE REVIEW

The Internet was originally intended to

facilitate knowledge sharing and provide access to information for the betterment of individuals and society (Kapahi, Ling, Ramadass, & Abdullah, 2013). However, the excessive use and misuse of the internet have become a cause for concern. Studies on internet addiction have revealed that it can lead to various psychophysiological problems, including compulsive and aggressive behaviors, personality changes, emotional numbness, hyperactivity, antisocial behavior, decreased academic performance, increased anxiety, deteriorating interpersonal relations, escapism, weight loss, difficulty distinguishing between imagination and reality, boredom, and sensory impairment (Adalıer & Balkan, 2012; Akın & İskender, 2011). Pathological internet use can result in poor psychological well-being, reduced peer and family interaction, academic underachievement, and hindered psychosocial development (Mitchell, 2000). Davis, Flett, and Besser (2002) found that compulsive internet use is associated with diminished impulse control, loneliness, depression, distraction, and using the internet as a means of seeking social comfort.

Research on gender differences in cyberbullying has shown that older girls in grades 10 and 11 are more likely to be targets of cyberbullying compared to older boys in the same age group (Mishna, Cook, Gadalla, Daciuk, & Solomon, 2010). Individuals who are dissatisfied with reality are prone to becoming addicted to internet use and creating false personas for self-actualization (Suler, 1996). Kiesler, Siegal, and McGuire (1984) revealed that individuals experiencing depression tend to rely on virtual spaces to conceal their non-verbal actions, suggesting that computer-mediated communication is more appealing to them. Consequently, factors associated with depression, such as low self-esteem, poor motivation, fear of rejection, and the need for approval, may contribute to increased internet use. Previous research has indicated that the interactive capabilities offered by the internet are particularly addictive (Young, 1998). Kiesler, Siegal, and McGuire (1984) also found that computer-mediated communication can weaken face-to-face social interaction.

Several internet activities are susceptible to cyberbullying, making cyberbullying prevalent in relation to these specific internet applications. One example is gaming sites, which provide a platform for interactions among gamers. In the pursuit of gaining superiority over their opponents, online gamers may resort to bullying tactics, pressuring their opponents to quit the game (Lawler & Molluzzo, 2015). Cyberbullying thrives due to various factors, including the cyberbully's desire for attention, the absence of immediate consequences for cyberbullying behavior, the presence of stress, anxiety, and depression in the cyberbully leading to acting out, the need to vent frustrations resulting from being bullied in real life, and the excessive freedom afforded by online platforms (Smith & Yoon, 2013).

The adverse effects of cyberbullying on the psychological well-being of individuals can be observed through the prevalence of suicide attempts among cyberbullying victims. Research has revealed that all forms of bullying, whether traditional or cyberbullying, are significantly associated with increased suicidal ideation among youth who have experienced bullying as either the offender or the victim. Consequently, it is crucial to address all forms of peer aggression among adolescents both within educational institutions and at home (Hinduja & Patchin, 2012).

Global studies have demonstrated the existence of cyber addiction. In Europe, the prevalence of internet-related addictive behavior varies significantly between countries, ranging from 7.9% in Iceland to 22.8% in Spain (Tsitsika et al., 2014). The increasing risk of adolescents developing internet addiction is a growing concern, as highlighted by the study conducted by Tsitsika et al. (2014), which found that an additional 12.7% of adolescents were at risk of developing addictive internet behaviors. In Africa, research indicates that a significant proportion of students in Namibia and Uganda experience frequent addiction issues related to internet use (Nath, Chen, Muyingi, & Lubega, 2013).

Studies have produced conflicting findings regarding gender differences in cyberbullying. Some studies, such as Mura and Diamantini (2014) and Shin and Ahn (2015), found no significant gender differences. However, Navarro and Jasinski (2013) reported that girls were at a higher risk of experiencing cyberbullying compared to boys. In terms of internet exposure, Lee's (2001) study showed that male students were more exposed to the internet than females. However, a study by Kim, Koh, and Leventhal (2005) among elementary school students found no difference in internet addiction between male and female students.

Regarding age and cyberbullying, Wil-

liams and Guerra (2007) reported that cyberbullying peaks in 9th grade, with 12.9% of students at this age reporting cyberbullying incidents. However, rates of involvement in cyberbullying decrease with age, as indicated by Khoury-Kassabri, Mishna, and Massarwi (2016), with 9.9% of 11th-grade students reporting perpetrating cyberbullying. Studies have also shown that the addictive tendency to the internet increases more significantly with age among women compared to men (Brenner, 1997).

As the internet has become a pervasive aspect of young people's lives, particularly adolescents, research has focused on their online activities and interactions (Guan & Subrahmanyam, 2009). Many studies on internet usage among adolescents center around social networking sites such as Facebook, Twitter, and Instagram. The use of social networking sites has become a norm for communication among adolescents (Ben-Ze'ev, 2004). Facebook, in particular, captures a significant amount of users' time, with individuals engaging in synchronous communication and interactive activities that may contribute to addiction (Saied, Elsabagh, & El-Afandy, 2016). Research examining excessive time spent on Facebook has highlighted reasons for such behavior and the unintended negative effects of Facebook usage (Saied et al., 2016). Additionally, Kuss and Griffiths (2011) found that a considerable percentage of young adults and teenagers, over 68.5%, regularly use Facebook, and addiction to social networking sites can lead to ignorance about personal life, social escape, and a decline in pleasure over time.

This study is based on Alfred Adler's Individual Psychology Theory, which suggests that the drive for superiority is a fundamental human motive. Adlerian theory highlights striving for success or superiority, social interest, aggression, unified personality, and style of life. The motive for success or superiority stems from feelings of inferiority due to perceived physical deficiencies, leading individuals to compensate for these weaknesses. Psychologically imbalanced individuals seek personal superiority, while psychologically healthy individuals strive for success for the benefit of humanity. Adler emphasized social interest as the key distinction between personal superiority and success for all. The innate drive for perfection fuels feelings of inferiority and the desire for superiority. Overcoming inferiority feelings can drive individuals to engage in cyber addiction and cyberbullying. Cyberbullies and addicts are motivated by exaggerated personal inferiority, disregarding the well-being of others in their pursuit of superiority.

METHOD

This study utilizes a cross-sectional research design, specifically employing an ex-post facto approach, to assess cyberbullying involvement and compulsive internet use, referred to as cyber addiction, among adolescents in tertiary institutions. The ex-post facto research design was chosen because no variables were manipulated, and structured questions were used to gather information from the participants. The study incorporates both quantitative and qualitative research approaches over a 10-month period, from October 10, 2021, to August 14, 2022.

To select the research participants, a multi-stage sampling technique was employed from the target population of undergraduate adolescent students in four public tertiary institutions in Ekiti State, Nigeria: Federal University, Oye-Ekiti; Ekiti State University, Ado-Ekiti; Federal Polytechnic, Ado-Ekiti; and College of Education, Ikere-Ekiti. In the first stage, these four institutions were conveniently selected from the existing public tertiary institutions in Ekiti State. Subsequently, a purposive sampling technique was used to select 100 participants from each of the selected institutions, while a simple random sampling method was employed to select seven faculties or schools from within the four tertiary institutions in the third stage. Overall, 400 participants, comprising first-year to fourth-year students across seven faculties and schools, were selected for the study. An equal number of students from each institution participated in the research.

In terms of data collection, a questionnaire consisting of two standardized research instruments was utilized to measure the variables. The questionnaire was divided into four sections as follows.

First, section A. This section includes items that measure socio-demographic information of the participants, such as biological sex, age, institution of study, faculty or school, year of study, religious affiliation, years of internet usage, and internet device usage.

Second, section B. This section comprises items from the Internet Addiction Test (IAT) developed by Young (2017), which assesses the severity of self-reported compulsive internet use

in adults and adolescents. The 20-item questionnaire measures characteristics and behaviors associated with compulsive internet use, including compulsivity, escapism, and dependency. Items also evaluate problems related to addictive use in personal, occupational, and social functioning. The items are randomized, and each statement is weighted along a Likert-scale continuum ranging from 0 (less extreme behavior) to 5 (most extreme behavior) for each item. The reliability of the scale was Cronbach's α = 0.90. The IAT total score indicates the level of severity of internet compulsivity and addiction, with scores ranging from 0 to 30 reflecting normal internet usage, scores from 31 to 49 indicating a mild level of internet addiction, scores from 50 to 79 indicating a moderate level, and scores from 80 to 100 indicating a severe dependence on the internet.

Third, section C. This section consists of items from the Cyber Bullying Test (CBT) developed by Garaigordobil (2017). The CBT assesses 15 cyberbullying behaviors through 45 items, categorized based on the roles performed in aggressive situations: cyber victim, cyber aggressor, and cyber observer. Each behavior is scored on a scale of 0 (never), 1 (sometimes), 2 (several times), and 3 (always), and a direct global score is obtained for each role. The scale also provides cut-off points to determine whether participants have no problem, are at-risk, or have a problem in the indices. Participants with scores equal to or greater than the 85th percentile (1 standard deviation above the mean) are considered at-risk in the CBT, while scores equal to or greater than the 95th percentile (2 standard deviations above the mean) indicate a problem range. The Cronbach's alpha coefficients obtained for the 45 items were high (α = .91), as were those obtained for its three factors: cyber victimization (α = .82), cyber aggression (α = .91), and cyber observation (α = .87), demonstrating evidence of the test's internal consistency.

Fourth, section D. This section includes the Internet Application Checklist (IAC), which is a list of applications from which participants select the ones they visit most frequently. This self-report measure requires participants to estimate the percentage of time they have spent on various online activities and tools, including online auctions, gaming, and social media applications such as Instagram, Facebook, WhatsApp, and others.

The study received approval from the four selected public tertiary institutions to conduct research with the target population of undergraduate adolescent students. Prior to commencing data collection, participants were provided with an Informed Consent Form and given the opportunity to indicate their approval to participate in the study. They were informed about their freedom to withdraw from the research at any point. Following this, questionnaires were distributed to participants within their respective institutions. Once the questionnaires were completed, they were collected from the participants. Subsequently, the collected data underwent statistical analyses.

In analyzing the data, descriptive statistics, such as frequency and simple percentages, were employed to provide an overview of the socio-demographic characteristics of the participants. To explore the relationships between cyber addiction, cyberbullying, and socio-demographic variables, the study utilized multiple regression analysis, which allowed for testing the hypotheses and examining the associations between these factors.

RESULT AND DISCUSSION

This section presents the results of the data analyses and hypothesis testing. It includes five tables that display the socio-demographic variables and the findings of the research hypotheses in tabular format.

A. Socio-demographic Data of Participants

Table 1 presents the socio-demographic variables of the study participants. The table indicates that a total of 400 undergraduate adolescents participated in the study, with 212 males and 188 females. The participants were selected from four tertiary institutions: Federal University, Oye-Ekiti; Ekiti State University, Ado-Ekiti; Federal Polytechnic, Ado-Ekiti; and College of Education, Ikere-Ekiti, all located in Ekiti State, Nigeria. They were drawn from seven faculties or schools within these institutions. The participants were distributed across different academic years, with 45.3% in Year One, 35.8% in Year Two, 14.5% in Year Three, and 4.5% in Year Four. The age range of the participants was between 15 and 21 years. In terms of religious affiliation, 75.3% identified as Christians, 21.3% as Muslims, and 3.3% as Traditionalists.

B. Distribution of degree and classification of internet addiction

The results presented in Table 2 de-

Table 1 Descriptive table showing the frequency and percentage of participants' socio-demographic characteristics.

Socio-demographics	Descriptions	Frequency (N)	Percentage (%)
Biological sex	Male	212	53
	Female	188	47
Age	15	3	0.8
	16	19	4.8
	17	36	9
	18	52	13
	19	81	20.3
	20	145	36.3
	21	64	16
Institution of study	Federal University, Oye-Ekiti	100	25
	Ekiti State University, Ado-Ekiti	100	25
	Federal Polytechnic, Ado-Ekiti	100	25
	College of Education, Ikere-Ekiti	100	25
Faculty or School	Science	128	32
	Social Sciences	52	13
	Engineering	28	7
	Arts	10	2.5
	Education	72	18
	Management Science	88	21.5
	Agricultural Science	24	6
Year of study	Year One	181	45.3
	Year Two	143	35.8
	Year Three	58	14.5
	Year Four	18	4.5
Religious affiliation	Christianity	302	75.3
	Islam	85	21.3
	Traditional Religion	13	3.3

Table 2 Frequency table showing the distribution of degree and classification of internet addiction among adolescents

Variables	N	Mean	SD	Frequency (%)
Internet addiction	400	41.5	16.71	
Normal use	107	21.38	7.7	26 .8
Mild addiction	170	39.76	5.73	42.5
Moderate addiction	120	60.94	6.89	30.0
Severe addiction	3	81.67	0.58	0.7

Table 3 Multiple regression table showing independent and joint prediction of cyber addiction on socio-demographic characteristics of adolescents.

Predictors	β	T	p	R	Adj R2	F	p
Age	-.056	1.055	>.05	.272	.060	5.233	<.05
Biological sex	-.062	-1.234	>.05				
Institution of study	.153	2.944	>.05				
Religious Affiliation	.017	.335	<.05				
Internet device usage	-.181	-3.708	>.05				
Years of using the internet	.009	.173	<.05				

Table 4 Multiple regression table showing independent and joint prediction of cyberbullying on socio-demographic characteristics of adolescents.

Predictors	β	T	p	R	Adj R2	F	p
Age	.022	.453	<.05	.435	177	15.301	<.05
Biological sex	-.090	-1.922	> .05				
Institution of study	.361	7.396	> .05				
Religious Affiliation	.109	2.265	> .05				
Internet device usage	-.104	-2.275	> .05				
Years of using the internet	-.053	-1.068	> .05				

Table 5 Descriptive statistics showing the mean, standard deviation and variance of internet applications adolescents spend their time on.

Variables	Mean	Standard Deviation	Variance
Adult entertainment	20.25	27.280	744.204
Business email	19.96	26.005	676.241
Business surfing	17.81	26.091	680.722
WhatsApp	45.23	32.475	1054.616
Chat room	31.44	31.255	976.869
We chat	20.04	28.847	832.156
Discussion list	29.57	30.635	938.506
Instant messaging	34.12	35.000	1224.993
News sites	27.62	30.983	959.936
Online auction	18.76	25.973	674.601
Facebook	55.01	33.210	1102.910
Instagram	33.61	33.237	1104.716
Online gambling	11.53	22.414	502.390
Online gaming	15.89	26.449	699.535
Online shopping	19.82	26.135	683.028
Personal email	37.23	32.485	1055.272
Twitter	22.26	28.451	809.456
Snap chat	20.17	27.219	740.860

monstrate the tendencies towards internet addiction among adolescents. The mean score for internet addiction among the participants was 41.5, indicating a relatively low level of addiction. The frequency distribution further reveals that out of the 400 participants, 107 (26.8%) were classified as normal users, 170 (42.5%) exhibited mild addiction, 120 (30%) showed moderate addiction, and only 3 (0.7%) were categorized as severely addicted. These findings indicate that the proportion of adolescents who displayed severe internet addiction is considerably low compared to those who exhibited mild addiction or were categorized as normal users.

C. Independent and joint prediction of cyber addiction on participants' socio-demographic

In this section, we examine the independent and joint prediction of cyber addiction based on participants' socio-demographic factors. The results are presented in the following tables.

Results of the multiple regression analysis, as presented in Table 3, indicated that the six predictors accounted for 6% of the variance [$R2$=.074, $F(6, 393)$=5.233, p<.05]. The findings revealed that religious affiliation (β=.017, p<.05) and years of using the internet (β = .009, p<.05) significantly predicted cyber addiction. However, age (β=-.056, p>.05), biological sex (β=-.062, p>.05), the institution of study (β=.153, p>.05), and internet device usage (β=-.181, p>.05) did not independently predict cyber addiction. This suggests that religious affiliation and years of using the internet are the socio-demographic factors that independently predict cyber addiction, while biological sex, age, the institution of study, religious affiliation, internet device usage, and years of using the internet jointly predict cyber addiction.

D. Independent and joint prediction of cyberbullying on participants' socio-demographic

From the Table 4, the results indicated

that the six predictors accounted for 17% of the variance [R2 = .189, F(6, 393) = 15.301, p<.05]. Age was found to significantly predict cyber-bullying (β = .022, p<.05). However, biological sex (β = -.090, p>.05), internet device usage (β = -.104, p>.05), and years of using the internet (β = -.053, p>.05) did not independently predict cyberbullying. This means that age is the only socio-demographic variable that independently predicts cyberbullying, while biological sex, age, the institution of study, religious affiliation, internet device usage, and years of using the internet collectively predicted cyberbullying.

E. Data on internet applications adolescent participants spend their time on

Results from Table 5 revealed that among the internet applications, Facebook accounted for the highest percentage of time spent by adolescents, with a mean of 55.01. This was closely followed by WhatsApp with a mean of 45.23, Personal email with a mean of 37.23, Instant messaging with a mean of 34.12, and Instagram with a mean of 33.61. Chat room had a mean of 31.44, while Business email, Online shopping, Online auction, Business surfing, Online gaming, and Online gambling had lower means ranging from 11.53 to 19.96. These findings suggest that Facebook is the most prevalent internet application among adolescents, indicating a potential association with addiction and cyberbullying behaviors.

F. Discussion

The internet has revolutionized human communication patterns both at home and in the workplace. However, it has also given rise to problematic behaviors, particularly among young people who exhibit compulsive internet use. This study demonstrated that several socio-demographic characteristics, including biological sex, age, institution of study, religious affiliation, internet device usage, and years of internet use, collectively predicted cyber addiction.

The findings of this study indicate that cyber addiction was jointly predicted by socio-demographic factors, but religious affiliation and years of internet use emerged as the two independent predictors. This aligns with the previous research conducted by Kapahi, Ling, Ramadass, and Abdullah (2013), who observed that individuals between the ages of 18 and 25, particularly those attending college or university, are more susceptible to internet addiction. However, in contrast to Brenner's (1997) findings,

which suggested that women's addictive tendencies to the internet increase significantly with age, the present study did not find age to be an independent predictor of cyber addiction among adolescents aged 15-21.

Furthermore, the results indicate that biological sex did not independently predict cyber addiction, which supports the previous research by Young (1998) and Kim, Koh, and Leventhal (2005), who found no significant differences in internet addiction between male and female students or children. Overall, these findings shed light on the complex interplay between socio-demographic factors and cyber addiction, emphasizing the importance of considering multiple variables when examining this phenomenon.

The institution of study was not found to be significantly associated with cyber addiction, suggesting that the type of institution adolescents attend does not influence their likelihood of developing cyber addiction. This finding is consistent with studies conducted in Iceland, Spain, Namibia, and Uganda, which examined the differences in scores of adolescents based on their locality and institution of study (Tsitsika et al., 2014; Nath, Chen, Muyingi, & Lubega, 2013).

Similarly, internet device usage did not independently predict cyber addiction. The study revealed that the average score for adolescents' internet addiction was 41.5, indicating relatively low levels of addiction among the participants. This suggests that the prevalence of cyber addiction may vary depending on the location and characteristics of the individuals studied. Additionally, the study found that only 0.7% of the participants were severely addicted to the internet.

Regarding cyberbullying, it was found that socio-demographic factors including biological sex, age, institution of study, religious affiliation, internet device usage, and years of internet use jointly predicted cyberbullying. However, when examined independently, biological sex, internet device usage, and years of internet use did not individually predict cyberbullying. On the other hand, age was identified as an independent predictor of cyberbullying, suggesting that age influences the occurrence of cyberbullying. This finding aligns with previous research conducted by Williams and Guerra (2007) and Khoury-Kassabri, Mishna, and Massarwi (2016), which reported that cyberbullying peaks around ninth

grade and declines by the 11th grade. However, it is worth noting that previous studies by Navarro and Jasinski (2013) and Mishna, Cook, Gadalla, Daciuk, and Solomon (2010) suggested that girls, particularly older girls in specific school grades, were more likely to experience cyberbullying. This disparity highlights the complex nature of the relationship between gender and cyberbullying experiences.

In this study, it was found that the average adolescent in Ekiti State spends approximately 55% of their internet time on Facebook, making it the most frequently used internet application. This is closely followed by WhatsApp, where adolescents spend about 45% of their internet time. These findings indicate that the prevalence of online activities among average adolescents has been reduced due to the popularity of social networking sites. Social networking sites, such as Facebook, have become a global phenomenon and a prominent means of electronic communication. The increased use of social network sites for communication and connecting with others has led to adolescents spending a significant amount of time engaging in interactive activities, which may have negative effects such as addiction. Previous studies by Kuss and Griffiths (2011), which reported that over 68.5% of young adults and teenagers regularly use Facebook, and Saied, Elsabagh, and El-Afandy (2016), which found that Facebook users primarily engage in synchronous communication and interactive activities, support the present finding.

CONCLUSION

Cyber addiction and cyberbullying are prevalent among adolescents in public tertiary institutions, with varying levels of occurrence. Socio-demographic factors jointly predict these behaviors, with religious affiliation and years of internet use predicting cyber addiction independently, while age independently predicts cyberbullying. Adolescents primarily spend their time on Facebook and WhatsApp applications, emphasizing the need for effective monitoring and control of their internet activities.

To address these issues, preventive measures should be implemented, including orientation programs to educate adolescents about the consequences of internet addiction and cyberbullying on their academics and social relationships. Despite social media platforms' attempts to restrict certain age groups, the presence of individuals from all age groups on Facebook highlights the need for stricter policies to monitor and control negative comments. Flagging or temporarily suspending accounts could be considered as measures.

It's important to note that this study focused mainly on mid-adolescents in tertiary institutions, excluding early adolescents in secondary schools and late adolescents after graduation. Further research is needed to understand cyber addiction and cyberbullying among these age groups comprehensively.

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