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Consequences of Excessive Mobile Phone Use Among Healthcare Students in Ilorin, Kwara State

Adigun Akeem Ayodeji¹, Aminullahi Salman Alawaye², Adio Abdulgafar Alafara³, Aminu Hammed Popoola⁴

¹ Department of Educational Psychology and Counselling, Ahmad Bello University, Zaria, Nigeria, <https://orcid.org/0000-0002-0651-0023>

² PhD, University of Ilorin, Counselling and Human Development Center, Nigeria, <https://orcid.org/0009-0003-1925-6612>

³ Department of Educational Psychology and Counselling, Kwara State College of Education, Oro, Nigeria, <https://orcid.org/0000-0001-5295-8024>

⁴ PhD, Department of Educational Psychology and Counselling, Ahmad Bello University, Zaria, Nigeria, <https://orcid.org/0000-0003-4644-745X>

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Abstract: Every society worldwide has made using a mobile phone as a primary form of communication. There is less data on this topic among healthcare students, but excessive use of this device seems to have had terrible effects on them. The study focused on consequences of excessive mobile phone use among healthcare students in Ilorin, Kwara State, Nigeria. The research was conducted using a descriptive survey design. A sample of 269 students participated in this study.



The "Consequences of Phone Addiction Questionnaire" was the instrument used to collect data. Descriptive and inferential statistics were employed in data analysis. The average rating revealed that procrastination ($x = 3.10$), poor concentration ($x = 3.08$) and poor academic performance ($x = 3.05$) are some of the consequences of excessive mobile phone use among healthcare students in Ilorin. The perceptions of respondents were not significantly influenced by gender ($p = 0.768 > 0.05$) and age ($p = 0.273 > 0.05$). Hence, recommendations were made in relations to the findings.

Keywords: Consequences, excessive, mobile phone use, healthcare students, Ilorin

Introduction

Smartphones represent sophisticated devices equipped with a multitude of features, including telecommunication capabilities, internet browsing, and access to social media platforms. A recent report indicates that, in 2021, the global population of smartphone users reached 3.8 billion (Bank My Cell, 2020). Furthermore, contemporary university students have grown up in an environment where smartphones are integral to their daily lives, rendering them essential tools (Long et al., 2021). As the user base expands, the phenomenon of smartphone addiction has concurrently escalated, particularly within the Saudi population. Google's latest research reveals that countries such as Australia, the United Kingdom, Sweden, Norway, Saudi Arabia, and the United Arab Emirates all report smartphone adoption rates exceeding 50% (Alfawareh & Jusoh, 2014).

The use of smartphones is not merely a source of enjoyment; it also alleviates feelings of pain and stress. However, excessive engagement can lead to a loss of control, resulting in dependency (Diana, 2018). This dependency is often characterised as addiction. Smartphone addiction is defined as the excessive use of these devices to the extent that it disrupts users' daily functioning (Demirci et al., 2014). Symptoms indicative of this addiction include persistent preoccupation with the device, compulsive usage, engagement in socially inappropriate or hazardous situations, and emotional distress, such as anger, tension, or depression; when access to the device or network is hindered. Additional indicators encompass anxiety regarding battery life, cravings for upgraded devices, diminished productivity, and social withdrawal (Nikhita et al., 2015).

Many studies categorise smartphone usage as an addictive behaviour, although there remains active debate regarding whether excessive use constitutes a continuum of addictive behaviours (Yu & Sussman, 2020). For numerous researchers, excessive smartphone use is regarded as a form of technological addiction (Lin et al., 2014), defined as a behavioural addiction resulting from interactions between humans and non-chemical machines (Kuss & Billieux, 2017). Prior research has identified several parallels between smartphone addiction and substance-related dependencies, including compulsive behaviour, withdrawal symptoms, tolerance, and functional impairment (Lin et al., 2014).



The prevalence of smartphone addiction varies internationally. Research indicates rates of 26.6% in South Korea (Lee, 2018), 26.8% in India (Choksi & Patel, 2021), 9.3% in Tehran (Yahyazadeh et al., 2016), and 16.9% in Switzerland (Haug et al., 2017). A recent study in Malaysia reported a notably higher prevalence of 40.6% (Lei et al., 2020). It is posited that the prevalence of smartphone addiction may exceed that of internet addiction due to the unique characteristics of mobile devices. Furthermore, as smartphone functionality continues to expand, the likelihood of addiction is expected to increase (Chen et al., 2003).

Smartphone addiction can lead to various cognitive and physical issues, including memory and concentration deficits, altered eating habits, and sleep disturbances among students (Choi et al., 2015). Such addiction has been shown to significantly diminish health-related quality of life and adversely impact academic performance (Buctot et al., 2020). The use of smartphones while driving poses considerable risks, contributing to road traffic accidents due to distractions (Olsen et al., 2013). Additionally, excessive smartphone usage has been linked to a range of physical health problems, including musculoskeletal pain, blurred vision, headaches, and discomfort in the wrists and neck (Soni et al., 2017). Numerous adverse outcomes associated with excessive smartphone use include poor academic performance, procrastination (Mohamed & Mostafa, 2020), depression, anxiety, and compromised sleep quality (Alhassan et al., 2018). Notably, depressive and anxiety symptoms have been found to be particularly prevalent among university students in the aftermath of the COVID-19 pandemic (Xie et al., 2021).

Diana (2018) observed a significant correlation between smartphone addiction and heightened feelings of loneliness, particularly in individuals with severe addiction compared to those with lower levels of loneliness. Smartphone addiction negatively impacts various aspects of individuals' lives, including sleep, nutrition, physical activity, and social engagement (Ahmadi, 2014). It also detrimentally affects academic and professional trajectories, as well as familial relationships. The escalation of smartphone addiction is likely to exacerbate associated problems, thereby placing additional strain on healthcare systems. Since the issues arising from this addiction typically do not require specialised treatment, most related studies have been conducted within general health departments (Hejab & Alfawareh, 2014).

To the best of the researchers' knowledge, there is a dearth of studies focusing on smartphone addiction among healthcare students in Kwara State. Much of the existing literature originates from international contexts, lacking relevance to the local population or specific focus on healthcare students. Given the identified gaps in the current literature, this study explored the consequences of excessive mobile phone use among healthcare students in Ilorin, Kwara State, Nigeria. Thus, the inquiry asked: What are the consequences of excessive mobile phone use among healthcare students in Ilorin?



Hypotheses

The following hypotheses were tested in this study:

1. There is no significant difference in the consequences of excessive mobile phone use among healthcare students in Ilorin based on gender.
2. There is no significant difference in the consequences of excessive mobile phone use among healthcare students in Ilorin based on age.

Methodology

In order to address the research objectives, the study engaged 269 students as participants. The sample size was determined using the Krejcie and Morgan (1970) sample size determination table. Participants were selected through a proportionate sampling technique. Initially, respondents were chosen based on the contributions of each of the nine schools, as outlined in Table 1. Subsequently, a random sampling technique was employed to select participants from each school.

Table 1

Population Distribution of Respondents

S/N	Schools	Population	Sample size
1	School of Health Information Management	362	$362/892 * 269 = 109$
2	Community Health Officers	104	$104/892 * 269 = 31$
3	School of Orthopedic Cast and Technology	165	$165/892 * 269 = 50$
4	Postgraduate Diploma in SHIM	25	$25/892 * 269 = 7$
5	Basic Nursing	138	$138/892 * 269 = 42$
6	Post Basic Nursing Pediatrics	25	$25/892 * 269 = 7$
7	Post Basic Nursing Ophthalmic	19	$19/892 * 269 = 6$
8	Post Basic Nursing Accident and Emergency	26	$26/892 * 269 = 8$
9	Post Basic Nursing Nephrology	28	$28/892 * 269 = 9$
Total		892	269

The data collection instrument employed was a questionnaire titled "Consequences of Phone Addiction Questionnaire" (CPAQ). This instrument comprised two sections: Section A gathered demographic information, including gender and age, while Section B featured fifteen items assessing the "Consequences of Phone Addiction." The questionnaire utilised a five-point Likert-type scale, with response options ranging from Strongly Agree (SA) to Strongly Disagree (SD).

To establish content validity, the questionnaire was reviewed by four experts in measurement and evaluation, whose feedback informed the final version. The reliability of the instrument was



assessed using the split-half method and Cronbach's Alpha statistic, yielding a reliability index of 0.89, thereby confirming the instrument's adequacy for data collection.

The researchers employed both descriptive and inferential statistical methods for data analysis. Descriptive statistics, including frequency and percentage, were used to present demographic data. Mean scores and rank order were applied to address the primary research question. Inferential statistics, specifically the independent t-tests and Analysis of Variance (ANOVA), were utilised to evaluate the research hypotheses at a significance level of 0.05. The t-test is a parametric method for comparing the means of two groups, while ANOVA is employed for comparing the means of three or more groups.

Results

Demographic Characteristics of Respondents

The demographic profiles (gender and age) of the respondents were distributed using percentage as follows:

Table 2

Percentage Distribution of Respondents by Gender and Age

S/N	Variables		Frequency	Percentage %
1.	Gender	Male	106	41.7
		Female	148	58.3
		Total	254	100.0
2.	Age in Years	Less than 18	65	25.6
		18-24	86	33.9
		25-34	74	29.1
		35-44	18	7.1
		45 & above	11	4.3
		Total	254	100.0

Table 2 shows that of the 254 respondents who participated in this study, 106 (41.7%) were males; while 148 (58.3%) were females. This means that more females participated in the study than their male counterparts. The age distribution of respondents indicates that 65 (25.6%) of them were less than 18 years, 86 (33.9%) were between 18-24 years, 74 (29.1%) were between 25-34 years, 18 (7.1%) were between 35-44 years; while 11 (4.3%) were 45 years and above. It was inferred here that majority of the respondents were adolescents and in their earlier stage of adulthood.

Research Question: What are the consequences of excessive mobile phone use among healthcare students in Ilorin?

**Table 3**

Mean and Rank Order of Consequences of Excessive Mobile Phone Use among Healthcare Students

N	Excessive mobile phone use can lead to the following:	Mean	SD	Rank
1	Muscle pain or stiffness	2.76	0.665	8 th
2	Risk of developing depression	2.62	1.962	9 th
3	Blurry vision	3.05	0.906	7 th
4	Thumb or wrist pain	2.26	0.784	10 th
5	Loss of interest in other activities previously enjoyed	3.01	0.897	5 th
6	Insomnia and sleep disturbance	2.15	0.857	14 th
7	Poor school performance	2.77	0.868	3 rd
8	Heightened conflicts with your social group or family	2.18	0.873	13 th
9	Reduced social interaction	2.77	0.845	6 th
10	Fatigue	2.23	0.832	11 th
11	Lower self-esteem	3.04	0.803	4 th
12	Susceptibility to suicidal thoughts	2.21	0.800	12 th
13	Poor concentration on tasks	3.05	0.694	2 nd
14	Fatigue	2.08	0.737	15 th
15	Procrastination of tasks	3.10	0.538	1 st

Table 3 presents the mean and rank order of the consequences of excessive mobile telephone use among healthcare students. The table shows that 5 of the 15 items have mean scores that are above the average or benchmark mean value of 3.0 (that is, $5+4+3+2+1/5 = 3.0$) for determining the main consequences of excessive mobile phone use. On the table, the three topmost items are items 15 ($x = 3.10$), 13 ($x = 3.08$) and 3 ($x = 3.05$) and were ranked 1st, 2nd and 3rd respectively. It was inferred thus that the consequences of excessive mobile phone use include procrastination of tasks, poor concentration on tasks and poor school performance.

H₀₁: There is no significant difference in the consequences of excessive mobile phone use among healthcare students in Ilorin based on gender.

Table 4

Independent t-test Comparing Male and Female Respondents' Perception of Consequences of Excessive Mobile Phone Use

Gender	N	Mean	SD	df	Cal. t	p-value
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Male	106	38.71	7.77	252	0.29	0.768
Female	148	38.41	7.94			

Table 4 shows that at a degree of freedom (df) of 252, the calculated t-value of 0.29 is not statistically significant ($p = 0.768 > 0.05$). This indicates that, there is no significant difference in the consequences of excessive mobile telephone use among healthcare students in Ilorin based on gender; hence, the hypothesis was retained. Therefore, despite their gender difference, the respondents are similar in their perception of consequences of excessive mobile phone use among the students.

H₀₂: There is no significant difference in the consequences of excessive mobile phone use among healthcare students in Ilorin based on age.

Table 5

ANOVA Comparing Respondents' Perception of Consequences of Excessive Mobile Phone Use Based on Age

Source	Sum of Square	df	Mean Square	Cal. F	p-value
Between Group	317.988	4	79.497	1.29	0.273
Within Group	15303.193	249	61.459		
Total	13621.181	253			

Table 5 shows that at degrees of freedom (df) of 4 and 249, the calculated F-ratio of 1.29 is not statistically significant ($p = 0.273 > 0.05$). This indicates that, there is no significant difference in the consequences of excessive mobile phone use among healthcare students in Ilorin based on age; hence, the hypothesis was retained. Therefore, the respondents with different age groups are of similar view regarding the consequences of excessive mobile phone use among the students.

Discussion

The study revealed that some of the consequences of excessive mobile phone use include procrastination of tasks, poor concentration on tasks and poor school performance. Excessive engagement with phone might lead an individual to unnecessarily postpone the tasks that are supposed to be performed at a given period of time. Procrastination they say, it is a thief of time. The more an individual postpone a tasks to be done, the longer the time needed to accomplish the tasks. So, a student that procrastinates as result of his/her undue engagement in the use of phone is likely to leave many things on done and concentrate more on frivolities than his/her education pursuits. The result of this study agrees with the previous finding by Mohamed and Mostafa (2020),



which indicated that one of the consequences of mobile phone addiction is procrastination. Therefore, it could be inferred that phone dependants are likely to become procrastinators, which in turn, jeopardise their overall realisation of life goals.

Also, the finding revealed that excessive use of mobile phone use could lead to poor concentration on tasks. Since the phone addict has given priority to the phone use, other pressing activities are likely to be given less attention. So, while they are supposed to be busy attending to normal daily tasks that should be done, students tend to concentrate on frivolous activities using their phones. The outcome of this finding is consistent with the studies of Choi, *et al.* (2015); Abdulrahman, *et al.* (2020), which revealed that phone addiction can result into poor concentration on school tasks for students. The finding of this study suggests that mobile phone addiction can be an impediment to adequate focus on the tasks at hand; consequently, such jobs or responsibilities might be left unaccomplished. In addition, the result of this study indicated that one of the implications of mobile phone addiction is poor academic performance of the students. When students procrastinate and concentrate less on their tasks, as a result of their devotion or commitment to phone use, the likely consequence is poor academic performance. This is because they have failed to invest the required time and resources on their educational pursuits and this is more likely to lead to failure. This current research outcome is similar to the study of Buctot, *et al.* (2020), whose result revealed that poor academic achievement is a resultant effect of phone addiction among students. The finding of this study suggests that poor educational outcomes might result from addiction to phone usage.

The independent t-test statistic revealed that there is no significant difference in the consequences of excessive mobile phone use among healthcare students in Ilorin based on gender. This implies that the opinions of male and female healthcare students on the implications of phone addiction correspond. The outcome of this study concurs with the study of Numanoglu-Akbas, *et al.* (2020), whose research findings showed that gender has no relative influence on respondents' perception of consequences of mobile phone addiction. Consistent with this research, the past study could have resulted from the fact that they were conducted among students with similar level of education and age range. In contrast, the findings by Abed, *et al.*, (2017), showed that male and female students were different in their view of impact of mobile phone addiction. Perhaps, the research methodology used were not similar; hence, the observed difference in findings. This finding follows that consequences of excessive mobile phone use is a knowledge area that is not limited by gender.

The result of the ANOVA statistics also revealed that there is no significant difference in the consequences of excessive mobile phone use among healthcare students in Ilorin based on age. This implies that variations in respondents' age did not influence their perception of the implications of mobile phone addiction. This finding supports the result of Bhandari (2021), which documented



that the respondents are not different in their opinions of the consequences of mobile phone addiction on the basis of age. Contrarily, the finding by Abed, *et al.* (2017) revealed that age contributed significantly to the students' perceived aftermath of mobile phone addiction. The locality and research methodology adopted in these studies could have been responsible for the disparity from this current finding. The result of this study follows that individuals regardless of age are liable to understand the likely consequences of excessive mobile phone use among students.

Conclusion

The findings of the study revealed that some of the consequences of excessive mobile phone use are procrastination, poor concentration and poor school performance. Also, gender and age have no relative influence on the respondents' perception of the consequences of excessive mobile phone use among the healthcare students. Intervention strategies should therefore be centered on reducing the level of mobile phone use among the students and enhancing their educational performances.

Recommendations

Based on the findings of this study, it was recommended that:

1. Counsellors should discuss with students the underlying causes of procrastination and expose them to strategies for avoiding procrastination, such as prioritising tasks, setting realistic goals, using time management techniques, creating a distraction-free environment, and providing study skills services.
2. Instructors and school counsellors should communicate to healthcare students the educational requirements as well as the repercussions of failing to reach these objectives. This will encourage students to concentrate on their academic tasks and prioritize academics over phone use.
3. Students should use their phone devices to help them perform better, such as educational apps or online resources to enhance their study. This can help them focus on their academics while also reducing the temptation to prioritize the use of their phones over academic purposes.

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