

Smartphone addiction and mental ill-health of students in a Nigerian University

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Abstract: *Smartphone addiction is a behavioural problem that has to do with the excessive usage of smartphone. This addiction has several similar mental disorders through compulsive behaviour, functional impairment, withdrawal, and intolerance. This paper therefore, examined Smartphone addiction and mental ill-health of students in a Nigerian University. One research question and two research hypotheses were formulated to guide the research. The sample consisted of one hundred and twenty five (125) students randomly selected from Lagos State University (LASU). A 22-item questionnaire titled “Smartphone Addiction & Mental Survey” (SAMS) was designed for data collection. Cronbach’s Alpha reliability coefficient of the instrument stood at 0.77. The study adopted the descriptive survey design to seek information. The collected data from the instrument was analyzed using percentage, Pearson’s Product Moment Correlation Coefficient and t-test to test the hypotheses at 0.05 level of significance. Results showed that majority of students in a Nigerian university were addicted to smartphone. and that there is a strong correlation between Smartphone addiction and mental ill-health of students in a Nigerian University. Results also revealed that their Smartphone addiction is not gender based. Therefore, in order to enhance the mental health of these students, counselling psychologists have a responsibility of training students in Nigerian universities how to minimize their smartphone usage.*

Key Words: *Smartphone addiction, Mental ill-health, University students.*

1. INTRODUCTION:

Smartphone addiction could be considered a form of technological addiction. Specifically, Griffiths (1996) operationally defined these addictions as non-chemical behavioural addictions that involve human-machine interaction. Other than ‘gambling disorder’, ‘Internet gaming disorder’ is currently the only non-substance-related disorder proposed for inclusion in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) as a substance-related and addictive disorder (American Psychiatric Association, 2013). Although a primary smartphone characteristic is the use of Internet-based applications, smartphone portability and capability for installing applications that are suited to individuals’ needs and lifestyles make it a versatile, multipurpose object that many persons carry with them at all times.

Smartphone addiction is a behavioural problem, and one of the most effective ways of combating this menace is through psychological remedies. Smartphone addiction symptoms may differ from those of Internet addiction. The degree of smartphone addiction proved to be high concerning overuse and the technological dimensions and moderate concerning the other dimensions. This translates to students spending considerable time using their smartphone and a dependence on the several technological applications they provide. Students have come to depend on a smartphone to do even the simplest daily tasks. The youth are mostly targeted by communication technologies. The competition between smartphone companies to produce low priced smartphones has led to a significant increase in the number of students possessing smartphones, which, in turn, increases the likelihood of smartphone addition among students (Abo-Jedi, 2008).

2. LITERATURE REVIEW:

Ross (2011) found that three characteristics of smartphone addiction, the first is that people who are addicted to smartphone always keep their smartphones on. The second is that they tend to use their smartphones even when they have a land-line phone at home. Finally, they normally are confronted with financial and social difficulties due to their excessive smartphone use. James and Drennan (2005) carried out research on Australian university students' smartphone use and discovered a large use rate of 1.5-5 hours a day. Their findings showed a range of characteristics associated with addictive use. These were: impulsiveness, mounting tension prior to using the device, failure of control strategies and withdrawal symptoms. The results also identified some factors that correlated with consumer engagement in addictive or compulsive behaviour. Situational factors affecting excessive use included special events, alcohol abuse

and depressive circumstances. A wide range of other negative consequences from smartphone addiction among consumers included financial issues, damaged relationships, emotional stress and falling literacy.

Park (2005) asked respondents to report their minutes of smartphone use and divided them into light user who reported less than nine minutes of use and heavy user who reported more than nine minutes of use. Respondents who reported less than nine minutes of use were considered “light” users, while respondents who reported more than nine minutes of use were considered “heavy” users. Smartphone addiction was measured based on seven criteria of dependency. These were: tolerance, withdrawal, unintended use, cutting down, time spent, displacement of other activities and continued use. The results showed that smartphone users grew tolerant of smartphones despite the fact that they might cause such problems as high phone bills and public annoyance. Also, when the smartphone was unavailable for a time, users became highly anxious and irritated. This behaviour continued although these were troubling signs of addiction. Further, Park (2005) listed the following as some effects of Smartphone Addiction. They include: the sizes and convenience of smartphones and tablets; increasing loneliness and depression. It fuels anxiety, increase stress, exacerbating attention deficit disorders, disturbs sleep and encouraging self-absorption.

It can be difficult to distinguish between normal (or slightly elevated) daily use and problematic use. Over usage of the smartphone leads to physiological health hazards like headaches, earache, warmth sensation, fatigue and musculoskeletal symptoms. Usage of smartphones during driving is one of the leading causes of accident, and some controversy still exist in the over usage of the smartphone whether it produces tumour or not. Smartphone addicts can be seriously affected at the psychological level. They do not show any physical and psychological symptoms; their disorder goes unnoticed by others. Ozturan, Erdem, Miman, Kalcioğlu and Once (2002) concluded that Ear is the first organ dealing with the smartphones, there is an elevated energy deposition in the ear as compared to other organs and its effect on hearing are debated.

Mental ill-health connotes Mental disorders, Mental sickness or Mental illness. Mental illnesses are health conditions involving changes in thinking, emotion or behaviour (or a combination of these). Mental illnesses are associated with distress and/or problems functioning in social, work or family activities. Mental illness is nothing to be ashamed of. It is a medical problem, just like heart disease or diabetes (Parekh, 2015).

According to Diagnostic and Statistical Manual of Mental Disorders, which is also known as DSM-IV, a mental disorder is a psychological syndrome or pattern which is associated with distress (e.g. via a painful symptom), disability (impairment in one or more important areas of functioning), increased risk of death, or causes a significant loss of autonomy; however it excludes normal responses such as grief from loss of a loved one, and also excludes deviant behaviour for political, or societal reasons not arising from a dysfunction in the individual.

DSM-IV precedes the definition with caveats, stating that, as in the case with many medical terms, *mental disorder* "lacks a consistent operational definition that covers all situations", noting that different levels of abstraction can be used for medical definitions, including pathology, symptomology, deviance from a normal range, or etiology, and that the same is true for mental disorders, so that sometimes one type of definition is appropriate, and sometimes another, depending on the situation (Stein, Phillips, Bolton, Fulford, Sadler & Kendler, 2010).

In 2013, the American Psychiatric Association (APA) redefined mental disorders in the DSM-5 as a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning.

According to Akinade (2008), anyone that is seen pacing up and down, or is talking to himself, or standing at a point for hours, or is moody or looking very sad for a prolonged period, or one that has sex with a prepubescent girl, or one who is unable to sleep for several days, may be undergoing abnormal behaviour. In the same way, someone who has excessive fears or sees as fearful what will not frighten a typical individual, is exhibiting abnormal behaviour. In other words, a mental disorder is a clinically significant behavioural or psychological syndrome or psychological pattern that occurs in an individual and that is associated with present disability or with a significantly increased risk of suffering, death, pain, disability, or an important loss of freedom (APA, 2000).

In most cases, many people who have a mental illness do not want to talk about it. But mental illness is nothing to be ashamed of! Mental illness does not discriminate; it can affect anyone regardless of age, gender, income, social status, race/ethnicity, religion/spirituality, sexual orientation, background or other aspect of cultural identity.

According to Ahn, Proctor and Flanagan, (2009), some of the causative factors of mental ill-health include biological, environmental and psychological factors. The biological factors consist of anything physical that can cause adverse effects on a person's mental health. These include genetics, prenatal damage, infections, exposure to toxins, brain defects or injuries, chemical imbalances, and substance abuse. Environmental factors include but are not limited to a dysfunctional home life, poor parenting, divorce, poor relationships with others, substance abuse, not meeting social expectations and poverty. Ahn, Proctor and Flanagan (2009) further opined that Psychological stressors, which can trigger mental illness, are: emotional, physical or sexual abuse, loss of a significant loved one, neglect and being unable to relate to others. The psychological characteristics alone determine mental ill-health. It is speculated that abnormal

behaviour can be explained by a mix of social and psychological factors. In many examples, environmental and psychological triggers complement one another resulting in emotional stress, which in turn activates a mental illness.

The mental imbalance of Nigeria students could also lead to poor academic achievement, bad relationship, bullying, examination malpractices and a host of other social vices. Andy (2012) stated that persons with mental illness usually exhibit a *cluster* of symptoms, not just one or two symptoms that are persistent and interfere with daily life and work. This listing of warning signs and symptoms of mental illness is to be used as an educational and information tool. They are: confused thinking, prolonged depression (sadness or irritability), feelings of extreme highs and lows, excessive fears, worries and anxieties, social withdrawal, dramatic changes in eating or sleeping habits, strong feelings of anger, delusions or hallucinations, growing inability to cope with daily problems and activities, suicidal thoughts, denial of obvious problems, numerous unexplained physical ailments and substance abuse.

Through exploratory factor analysis, Lin, *et al.*, (2014) demonstrated that smartphone addiction has several similar aspects to substance-related disorders including the following four main factors: (i) compulsive behaviour, (ii) functional impairment, (iii) withdrawal, and (iv) tolerance.

Furthermore, increasing frequency and time spent on smartphones is closely related to the severity of smartphone addiction (Lee, Ahn, Choi & Choi, 2014; Lin *et al.*, 2014). This could be influenced by the type of school the students attend. The students get influenced by their peers who use smartphone. Therefore this study investigated relationship between Smartphone addiction and mental ill-health of students in a Nigerian University.

To aid the study, one research question was asked:

- What is the level of Smartphone addiction among students in a Nigerian University?

Two research hypotheses were equally postulated and tested:

- There is no significant relationship between Smartphone addiction and mental ill-health of students in a Nigerian University.
- There is no significant difference on Smartphone addiction level of students in the Nigerian university on the basis of gender

3. METHOD:

The study adopted the descriptive design to seek information about demographic factors of university students and their smartphone addiction. The sample for the study consisted of 125 students drawn from Lagos State University. This was made up of 60 males and 65 females. The participants were randomly selected. A 22-item questionnaire designed by the researchers called “Smartphone Addiction & Mental Survey” (SAMS) which consisted of three sections: A, B & C was designed for data collection. Section A sought information on students’ demographic data, section B sought students’ smartphone addiction level while Section C is on their mental ill-health. The instrument was validated by experts in the field of psychometrics. The reliability of this instrument was tested using the Cronbach’s Alpha reliability coefficient and it stood at 0.77. The questionnaire was administered on individual basis. The collected data from the instrument was analyzed using percentage, Pearson’s Product Moment Correlation Coefficient and t-test to test the hypotheses at 0.05 level of significance.

4. DISCUSSION:

This study investigated smartphone addiction and mental ill-health of students in a Nigerian University, From the findings, majority of students in Nigerian University were moderately and excessively addicted to smartphone usage. This is a dangerous trend. This discovery agrees with Abo-Jedi (2008). He stated that students have come to depend on a smartphone to do even the simplest daily tasks. The youth are mostly targeted by communication technologies. The competition between smartphone companies to produce low priced smart devices has led to a significant increase in the number of students possessing smartphones, which, in turn, increases the likelihood of smartphone addition among students.

The first research hypothesis which stated that there is no significant relationship between Smartphone addiction and mental ill- health of students in a Nigerian University was not accepted. There is a significant relationship between Smartphone addiction and mental ill- health of students in a Nigerian University. This revealed that Smartphone addiction akin to mental ill- health. This findings agrees with James and Drennan (2005) who carried out research on Australian university students' smartphone use and discovered a large use rate of 1.5-5 hours a day. Their findings showed a range of characteristics associated with addictive use. These were: impulsiveness, mounting tension prior to using the device, failure of control strategies and withdrawal symptoms. The results also identified some factors that correlated with consumer engagement in addictive or compulsive behaviour. Situational factors affecting excessive use included special events, alcohol abuse and depressive circumstances. A wide range of other negative consequences from smartphone addiction among consumers included financial issues, damaged relationships, emotional stress and falling literacy.

Second research hypothesis which stated that there is no significant difference on Smartphone addiction level of students in the Nigerian university on the basis of gender was accepted. The findings revealed that both male and female students are addicted to their smartphone in the same proportion This findings is at variance with Turner, Love & Howell (2008) who suggested that “user personality and individual attributes such as age and gender were found to be differentially associated with some aspects of phone-related behaviours”.

5. ANALYSIS / RESULTS:

Research Question 1. What is the level of Smartphone addiction among students in a Nigerian University?

Table 1: Smartphone addiction level among students

	Frequency	Percent	Cumulative Percent
Valid Excessive	47	37.6	37.6
Moderate	67	53.6	91.2
Low	11	8.8	100.0
Total	125	100.0	

6. FINDINGS:

From Table 1, 37.6 % of respondents (47 students) were excessively addicted, 53.6 % (67 students) were moderately addicted while 8.8 % of the respondents (11 students) have low addiction level. From the findings, 90.2 % of respondents, which correspond to 114 students out of the 125 Nigerian University students sampled, were moderately and excessively addicted It can be deduced that majority of students in a Nigerian university were addicted to smartphone.

Research Hypothesis 1. There is no significant relationship between Smartphone addiction and mental ill- health of students in a Nigerian University.

Table 2 : Correlation between Smartphone addiction and mental ill- health h of students

		Addiction	MentalIllhealth
Addiction	Pearson Correlation	1	.595**
	Sig. (2-tailed)		.000
	N	125	125
MentalIllhealth	Pearson Correlation	.595**	1
	Sig. (2-tailed)	.000	
	N	125	125

** . Correlation is significant at the 0.01 level (2-tailed).

From Table 2 above, it was observed that the Pearson Product Moment Correlation Coefficient (r) stood at 0.595 , approximately 0.60, which means there is a strong positive correlation between the variables and the correlation p-value, 0.00 < 0.05. The correlation is significant at 0.05 level. Hence the null hypothesis was not accepted. This then indicates that there is a significant relationship between Smartphone addiction and mental ill-health of students in a Nigerian University

Research Hypothesis 2: There is no significant difference on Smartphone addiction level of students in the Nigerian university on the basis of gender

Table 3: Independent Samples Test of difference on Smartphone addiction level on the basis of gender

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	T	Df	Sig. (2tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
										Lower	Upper
Addiction	Equal variances assumed	103.785	.000	2.333	123	.021	1.768	.758	.268	3.269	
	Equal variances not assumed			2.129	72.796	.037	1.768	.831	.113	3.424	

From table 3 above, the independent t-test conducted revealed that df =123, F= 103.785, p > 0.05. This result showed that there is no statistically significant difference between the variables. Hence, we accept the null hypothesis. In other

words, there is no significant effect of gender on smartphone addiction of students in a Nigerian University. This implies that both male and female students are addicted to their smartphone in the same way.

7. RECOMMENDATIONS:

From the findings of this study it is recommended that university students should reduce the use of their smartphone as this has tendency to increase their mental ill-health. Also university authority should design an awareness programme that will discourage the smartphone overuse among their students. Parents should monitor their children's frequent daily usage of smartphone so that it will not lead to addiction. The government should come up with policies that will regulate smartphone usage among students generally. Government can also regulate and monitor smartphone manufacturers on the applications and software that will be included on the smartphone.

8. CONCLUSION:

Simply put, smartphone addiction is the same as smartphone overuse, misuse or abuse. Just like any other known addiction, it has a lot of consequence on an individual especial young people. The scariest part about smartphone addiction is that it can affect an individual's physical and mental health, an individual's relationships and productivity. Its effect is very devastating and this makes it similar or related to mental ill-health or disorder. Findings from this study supported earlier position of researcher that smartphone addiction and mental ill-health shares this four characteristics': compulsive behaviour, functional impairment, withdrawal, and intolerance. The two concepts has the same degree of everity, ranges from strong feelings of tension, anxiety or sadness. Tackling the menace of smartphone addiction is more or less a rescue operation from the disturbing and overwhelming effect of mental ill-health.

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