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RESEARCH ARTICLE

EFFECTS OF DEMOGRAPHIC FACTORS ON SMARTPHONE ADDICTION OF STUDENTS IN A NIGERIAN UNIVERSITY

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ABSTRACT

Smartphone addiction connotes excessive and repetitive use of smartphone on a daily basis. It is a destructive behaviour that has capacity of affecting an individual negatively in his/her physical and mental health, relationships, productivity and academic performance. The organismic variables that could dictate the severity of this addiction include gender, age, school factors, peer influence, parental socio-economic status among others. This paper therefore, examined effects of Demographic factors on Smartphone addiction of students in a Nigerian University. Three hypotheses were formulated to guide the research. The sample consisted of one hundred and ten (110) students randomly selected from Lagos State University (LASU). A 15-item questionnaire titled Smartphone Addiction Scale (SPAS) was designed for data collection. Cronbach's Alpha reliability coefficient of the instrument stood at 0.82. The study adopted the descriptive survey design to seek information. Data analysis was carried out with the use of t-test and ANOVA. Results showed that there is a significant effect of age on smart phone addiction of students in a Nigerian University. The results also revealed that their smart phone addiction is not gender based, neither does it depend on their type of school. Counsellors, parents and teacher should watch out for various signs of smartphone addiction and properly guide the students on the right path.

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INTRODUCTION

Smartphone addiction connotes excessive use of smartphone on a daily basis. It involves repetitive and excessive use of smartphone and it is a destructive behaviour. Smartphone addiction has the capacity to negatively affect an individual in his/her physical and mental health, relationships, productivity and academic performance. It is one of the easiest ways to distraction. Smartphone addiction has been caused by fast-developing media including internet and smartphones in advanced Information Technology industries. The addiction has caught the attention of countries all over the world.

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As a result of South Korea's advanced information technology development, quick access to the internet and fast distribution of smartphones resulted in a serious behavioural addiction, mostly noticeable in a vulnerable class of people including adolescents.

LITERATURE REVIEW: The smartphone today has become a lifeline for many. According to the report of Singla, (2010), it is estimated that around 4.5 billion people use smart phones worldwide. And, it comes as no surprise that a huge number of this quantity consists of the youth. The smartphone is more of a necessity for the youth than a luxury. Umpteen number of surveys conducted on the youth worldwide have figured out that they consider smartphones an integral part of survival and some have even gone to the extent of saying that

they would rather go without food for a day than without their smartphones. With constant chatting, snapchatting, facebooking, instagraining, twittering, calling, listening to music, playing phone games or simply fiddling with the smartphone being such an integral part of their lifestyles, it is little wonder that not having it around strikes them with paranoia. Smartphone combines the services of the internet and a mobile phone. Smartphone devices enable people to search for information, communicate with friends, watch videos, express themselves, make video calls with people close by or in another geographical locations living far away and for playing games. The portability and accessibility of a smartphone make it possible to use it anywhere, for any duration. The positive effects of smartphones include the facilitating and enhancing of communication and information sharing among researchers and students as well as the sharing of valuable experiences among countries through the various applications that they include. However, the negative effect of smartphone which include addiction far outweighed the perceived positive effects. Further, these negative effects have really affected the students academically, but there is little that has been done on it especially using psychotherapies. Recently negative effects of smartphone addiction have also emerged and these have not received adequate research emphasis. Therefore, this research is designed to fill all these identified gaps. Hence, the study wishes to determine the Effects of Demographic factors on Smartphone addiction of students in a Nigerian University. Spending a lot of time connected to your smartphone only becomes a problem when it absorbs so much time and thereafter causes an individual to neglect face-to-face relationships, work, school, hobbies, or other important things in life. If an individual finds himself ignoring friends to read Facebook updates or compulsively checking smartphone while driving or during school lectures, then it is time to reassess the smartphone use and strike a healthier balance in life.

In one of the earliest relevant studies, Bianchi and Phillips (2005) argued that the problem of smartphone use may be a symptom of an impulse control deficit or depression. Addressing the underlying problem as well as inappropriate smartphone use, they used some dependent variables to predict smartphone addiction, such as reported time per week spent simply using the device, reported percentage of use socially based, and reported percentage of business-based use. Other variables were also considered including reported percentage of use in other features. The results indicated that the technological addictions offer an appropriate starting point for a consideration of problem smartphone use. The results also revealed that young people, in particular, appear to be susceptible to high use and problem use. They were the heaviest users of the SMS function and other features of smartphones. Hurley, (2019) is of the opinion that it is no big secret that youth have a complex relationship with technology. They are expected to use technology both in and out of the classroom to make the grade, they manage their social lives through various apps and social media platforms, and they use technology to stay organized and on top of their many, many activities. Today's teens face intense levels of pressure. Sometimes their smartphone use is tied to recreational activity and can help them relieve stress, but other times they use their smartphones to keep up with their busy lives. Ensuring that the students' technology use does not result in more stress for them is not an easy task; there is no clean-cut way to delete stressful technology activity. Although, there is not a recognized smartphone addiction diagnosis, it is natural for

parents to wonder if the students' apparent obsession with a smartphone qualifies as addictive behaviour. It can be incredibly frustrating to attempt to hold a conversation with someone when they cannot peel their eyes away from their phone. A 2018 Pew Research Report showed that 45 per cent of teens said they use the Internet almost constantly, and another 44 per cent said they go online several times a day. According to this report, 50 per cent of the female students are near-constant online users, compared to 39 per cent of the male students. 95 per cent of the students have access to a smartphone. Given that adolescents use their smartphones for a variety of reasons, both personal and academic (often simultaneously), it helps to focus less on counting the minutes of use and more on how they use their smartphones. Parents hear a lot about the importance of teaching balance, but part of evaluating for a healthy balance lies in understanding how the students actually use their phones and what purpose that uses serves them. YouTube, for example, can be both recreational and academic. Hartanto and Yang (2016) found that such cognitive preoccupation with smartphones could result in short term deficits in attention switching and inhibitory control. They found that users who were separated from their smartphones experienced heightened anxiety, which mediated an adverse effect on these functions. For example, Billieux *et al.*, (2007) found that those who reported both higher levels of use of their smartphones and higher perceived dependence on their phones showed lower ability to deliberately suppress these automatic responses, resulting in difficulty postponing their use in unsafe or inappropriate conditions, and a lower capacity for sustaining concentration on a tedious or difficult task, as measured by the Urgency and Perseverance subscales (respectively) of the UPS. Students are likely more vulnerable to outside influences on their state and trait mindfulness, it follows that they are also likely more vulnerable to the characteristics of smartphones that facilitate high involvement. Developmental changes in the brain during adolescence, particularly in the processing of social information, have been linked to changes in social behaviour in students, notably in the increased salience of social experiences and ties to peers (Nelson, Leibenluft, McClure and Pine, 2004). This increased salience can lead to difficulties balancing competing social demands and meeting social expectations of constant connectivity. That is, friends and peers are highly influential for adolescents (Smetana, Campione-Barr and Metzger, 2006)

Adolescents consider the smartphone as important in their lives: girls more than boys (Oksman, 2006). According to previous studies, boys and girls respond differently to SMS, the latter using it more than the former. Researches explain how the smartphone levels the gender differences between boys and girls precisely by giving rise to gendered sub-cultures; so that while girls use it primarily as a tool for communication and maintenance of peer-groups and contacts, and social aspects (such as design, ringtone, and colour), boys use it more for its own sake, exploring its features, and as a toy; this difference in use balancing out the amount of use among both groups. Turner, Love & Howell (2008) suggest that "user personality and individual attributes such as age and gender were found to be differentially associated with some aspects of phone-related behaviours". Billieux, Van der Linden and Rocha, (2008) tested gender differences in both teams of impulsion and problematic smart phone use among the young. The results showed that men use their smartphones more frequently in dangerous situations whereas women are more dependent on them.

The results on impulsion showed that men exhibit significantly higher levels of sensation seeking and lower levels of perseverance, while women reveal significantly higher levels of urgency. Assessing the pathological Internet and smartphone use among 337 Spanish college students, Jenaro, Flores, Gomez-Vela, Gonzalez & Caballo, (2007) found that high smartphone use is associated to being female, and having high anxiety and insomnia. Gender was associated with smartphone involvement but not frequency of use. Howell, Love & Howell (2008) investigated gender differences related to their smartphones and users' perception and attitude towards their use in public and private places. They concluded that while females perceived the service very positively, there was a persistent trend for males to dislike the service, regardless of location. Furthermore, increasing frequency and time spent on smartphones is closely related to the severity of smartphone addiction. This could be influenced by the type of school our children attend (Lee, Ahn, Choi & Choi, 2014). The students get influenced by their peers who use smartphone. 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 people carry with them at all times. Therefore, this study investigated effects of demographic factors on smartphone addiction of students in a Nigerian University,

To aid the study, three research hypotheses were raised and tested:

- There is no significant effect of age on smartphone addiction of students in a Nigerian University,
- There is no significant effect of gender on smartphone addiction of students in a Nigerian University,
- 3. There is no significant effect of types of school on smartphone addiction of students in a Nigerian University,

MATERIALS AND METHODS

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 110 students drawn from Lagos State University. This was made up of 55 males and 55 females. The participants were randomly selected. A 15-item questionnaire designed by the researchers called "Smartphone Addiction Scale" (SPAS) which consisted of two sections:

A&B was designed for data collection. Section A sought information on students' demographic data, section B sought students' smartphone addiction level. 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 0.82. The questionnaire was administered on individual basis. The collected data from the instrument was analyzed using t-test and ANOVA to test the hypotheses at 0.05 level of significance.

Ethical consideration: Consent was approved by the students themselves. The purpose of the study was relayed to them before the data collection. The researcher ensured the anonymity and privacy of the participants in the study.

RESULTS

Research Hypothesis 1: There is no significant effect of age on smartphone addiction of students in a Nigerian University,

Table 1. ANOVA of age on smartphone addiction of students

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	290.061	2	145.030	9.187	.000
Within Groups	1689.212	107	15.787		
Total	1979.273	109			

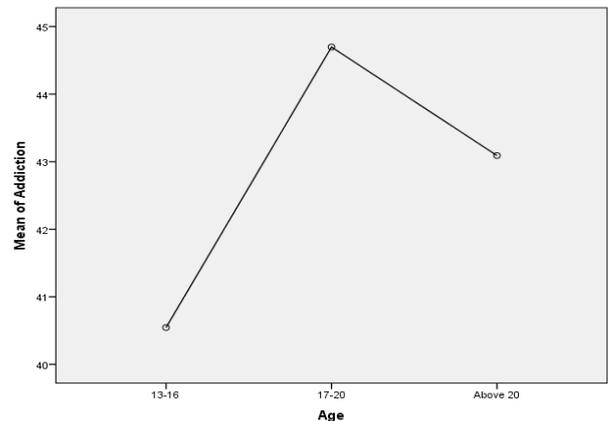


Chart 1. Showing effect of age on smartphone addiction of students in a Nigerian University

Findings: Table 1 above revealed that $F(2, 107) = 9.187$ and that $p < 0.005$. This result then showed that there is statistically significant difference between the variables. Hence, we reject the null hypothesis. In other words, there is significant effect of age on smartphone addiction of students in a Nigerian University. The chart below shows where the significance lies. From chart 1 above, the significant effect lies on students between ages 17 – 20. This implies that students in this category are more addicted to their smartphone than students from other age groups. Also this age group corresponds to the late adolescents.

Research Hypothesis 2: There is no significant effect of gender on smartphone addiction of students in a Nigerian University, From table 2 above, the independent t-test conducted revealed that $df = 108$, $F = 85.449$, $p > 0.05$. 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 proportion.

Research Hypothesis 3: There is no significant effect of types of school on smartphone addiction of students in a Nigerian University, From table 3 above, the independent t-test conducted revealed that $df = 108$, $F = 0.034$, $p > 0.05$. 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 types of school on smartphone addiction of students in a Nigerian University. This implies that students from both private and public schools are addicted to their smartphone in the same way.

Table 2. Independent Samples Test of effect of gender on smartphone addiction of students

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Addiction	Equal variances assumed	85.449	.000	2.172	108	.032	1.760	.810	.154	3.365
	Equal variances not assumed			1.992	65.127	.051	1.760	.883	-.005	3.524

Table 3. Independent Samples Test of effect of type of school on smartphone addiction of students

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Addiction	Equal variances assumed	.034	.854	.510	108	.611	.361	.709
	Equal variances not assumed			.509	126.364	.611	.361	.709

DISCUSSION

This study investigated effects of demographic factors on Smartphone addiction of students in a Nigerian University. The first research hypothesis which stated that there is no significant effect of age on smartphone addiction of students in a Nigerian University was not accepted. The findings from the study revealed that there is significant effect of age on smartphone addiction of students in a Nigerian University and that the significant effect lies on students between ages 17 – 20. This implies that students in this category are more addicted to their smartphone than students from other age groups. Also this age group corresponds to the late adolescents. This in agreement with the findings of Turner, Love & Howell (2008) suggest that “user personality and individual attributes such as age and gender were found to be differentially associated with some aspects of phone-related behaviours”. Second research hypothesis which stated that there is no significant effect of gender on smart phone addiction of students in a Nigerian University was accepted. The findings revealed that both male and female students are addicted to their smart phone in the same proportion this finding is at variance with Billieux, Van der Linden and Rocha, (2008) who tested gender differences in both teams of impulsion and problematic smart phone use among the young people.

The results showed that men use their smartphones more frequently in dangerous situations whereas women are more dependent on them. The results on impulsion showed that men exhibit significantly higher levels of sensation seeking and lower levels of perseverance, while women reveal significantly higher levels of urgency. Further, the third research hypothesis which stated that there is no significant effect of types of school on smartphone addiction of students in a Nigerian University was accepted. This implied that there is no significant effect of family occupation on entrepreneurial intention of students in a Nigerian University. This means that the students from both private and public schools are addicted to their smartphone in the same way. This is at variance with the position of Lee, Ahn, Choi & Choi, (2014). They opined that increasing frequency and time spent on smartphones is closely related to the severity of smartphone addiction. This could be influenced by the type of school our children attend. The students get influenced by their peers who use smartphone.

Recommendations

From the findings of this study it is recommended that university students should reduce the use of their smartphone as this has capacity of affecting them negatively in their physical and mental health, relationships, productivity and academic performance. The government should come up with certain policies that will regulate smartphone usage among students in general. Again, the government can regulate and at the same time monitor smartphone manufacturers on the applications and software that will be added on the smartphone. Furthermore, the universities authority should design some awareness programmes that will discourage the smartphone overuse among the students. Finally, Parents should monitor their children's frequent daily usage of smartphone to avoid addiction.

Conclusion and summary

Based on the findings from this study, it could be concluded that spending a lot of time connected to phone only becomes a problem when it absorbs so much of time. It causes an individual to neglect face-to-face relationships, work, school activities, hobbies, or other important things in life. A vivid indicator of addiction is when an individual you find himself ignoring friends to read facebook updates or compulsively checking phone while driving or during school lectures, then it is time to reassess smartphone use and strike a healthier balance in your life. Basically, the problem of smartphone use may be a symptom of an impulse control deficit or depression. It is very important to address the underlying problem as well as inappropriate mobile phone use. The results from this study revealed that the technological addictions offer an appropriate starting point for a consideration of problem of smartphone use. The findings equally revealed that young people, in particular, appear to be susceptible to high use and problem use. They were the heaviest users of the SMS function and other features of smartphones. Hence, the need for counselling against smartphone addiction among young people.

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