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### RESEARCH ARTICLE

# IMPACTS OF SMARTPHONE ADDICTION ON ACADEMIC PERFORMANCE OF STUDENTS IN SENIOR SECONDARY SCHOOLS IN LAGOS STATE

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#### **ABSTRACT**

Smartphone addiction could be described as smartphone mis management, mishandling and misuse. It is also being fuelled by the fear of being without a mobile phone for certain number of hours. It is a non-chemical addiction that is been driven by an Internet overuse problem thereby becoming 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. This paper therefore, examined impacts of Smartphone addiction on academic performance of students in senior secondary schools in Lagos state. One research question and three hypotheses were formulated to guide the research. The sample consisted of one hundred and thirty (130) students randomly selected from four senior secondary schools in Lagos state. A 25-item questionnaire designed by the researchers titled "Addiction to Smartphone Inventory" (ASPI) was designed for data collection. Cronbach's Alpha reliability coefficient of the instrument stood at 0.91. The study adopted the descriptive survey design to seek information. Data analysis was carried out with the use of percentages, t-test and ANOVA. Results showed that there is a significant impact of Smartphone addiction on academic performance of students in senior secondary schools in Lagos state. The results also revealed that academic performance of students is not gender based, neither does it depended on the type of school. Students in senior secondary schools should be exposed to dangers inherent in smartp hone addiction and how they can overcome the menace.

#### INTRODUCTION

The misuse, overuse and abuse of Smartphone are known as smartphone addiction. It connotes the mishandling, unregulated and possibly the mismanagement of the smartphone applications. Like any other addiction, it has a grave consequence on an individual especially young people. Invariably, itconnotes excessive use of smartphone every day and also it involves repetitive and excessive use of smartphone. This is a destructive behaviour that has the capacity to negatively affect an individual in his/her physical, mental health, relationships, productivity and academic performance. Smartphone addiction shoots out from technology or internet addiction. Technology addiction problem has been treated importantly, especially in the education field of secondary schools, because adolescent is more vulnerable to the addiction. Internet addiction was an important issue a few years ago. However, smartphone addiction has become a more serious problem recently.

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In order to prevent the addiction and to provide new educational methods for the secondary school students, many researchers have proposed various kinds of research works such as new addiction measurement scales and the environmental or personal factors that cause the addiction so far (Park& Lee, 2011). The scariest part about smartphone addiction is that it can affect our physical and mental health, our relationships and our productivity. American's obsession with smartphone has even been compared to the obesity epidemic. That's because, just like drug or gambling addictions, smartphones provide an escape from reality. Humans are, by nature, prone to distraction. With smartphones, we literally have a world of distractions at our fingertips. It's time to acknowledge that our devices can negatively impact our lives and we have to make a change (Scudamore, 2018). According to Help Guide (2009), smartphone addiction, sometimes colloquially known as "nomophobia" (fear of being without a mobile phone), is often fueled by an Internet overuse problem or Internet addiction disorder. After all, it's rarely the phone or tablet itselfthat creates the compulsion, but rather the games, apps, and online worlds it connects us to Kibona&Mgaya (2015) opined that Smartphones are the new

generation of mobile phones, they have emerged over the last few years and already have conquered the market.

Smartphones with their mini keyboards are not just phones, but have computer functions as email, calendar and address book, and office programs for reading and editing. The multimedia phone features such as camera, video, sound recordings or podcasting is advanced and can compete with specialized equipment. Smartphones can be customized with new software, and the variety of these programs is in creasing. The social communication platforms (like Facebook, Twitter, Instagram, WhatsApp, etc.), GPS functions and games are especially popular. Today Smartphone's enable consumers, advertisers and publishers how to better engage, socialize using the ubiquitous experience this advanced platform by leveraging it's of the firm. The focus of income statement is on the operating revenues and expenses. User groups of financial reports for decision-making require data related to all easy to use and availability characteristic. Smartphone abuse to addiction is becoming more problematic nowadays in Tanzania because most students whether higher learning students or low level students are more addicted to applications found on smartphones so that they download and run numerous applications with smartphone even without Internet connection.

One of the uses of smartphone that have been grossly abused is the social media. According to Gordon (2019), Social media originated as a way for people to connect with family and friends, even if they were thousands of miles apart. But over the years, it has transformed. Now, social media is used in a variety of different ways and a lot more frequently. For instance, businesses, non-profit organizations, and even politicians use it as a way to reach a much targeted market. Meanwhile, teens and young adults use social media as a virtual scrapbook to document every detail of their life as they are living it. There are even "influencers" with large social media followings that use their following as a way to promote a product, service, or group through social media and gain support for it. Social media is even a valuable resource for and a means of connecting isolated populations with other parts of the world. In many ways, social media has enriched our lives by connecting and inspiring people. But there is a dark side as well. Aside from all the negative post on social media, the cyber bulling, and the FOMO (fear of missing out) that exists, recent studies indicate that excessive social media use not only leads to poor decision-making, but people who use social media incessantly often have attitudes, thoughts, and behaviors that mimic those of a drug addict.

The development of smartphones packed with applications has brought great convenience to, and improved the quality of, people's daily lives, but it has also changed people's behaviour. People spend more and more time on mobile phones every day, leaving them distracted, affecting their sleep quality, and thereby giving rise to the concept of smartphone addiction. As a major group of smartphone users, college students have also experienced situations in which the use of mobile phones has decreased their learning efficiency as they try to escape from academic pressure (Wu, 2018). As defined by Tuckman (1975), performance as the obvious expression or demonstration of sympathetic, ideas, skills and knowledge of a person and planned grade clearly indicate the performance of a student. So student's academic performances are given more emphasis and keeping in view all the factors adversely or

positively impacts on their academic performance. Majority of students use smartphones for leisure purposes and only few uses for educational development purposes.

A research done by Junco (2013), shows that Females tend to see technologies like cell phones and Internet as tools of communication - as a means to maintaining and nurturing relationships. Men, on the other hand, tend to see the Internet and related technologies as sources of entertainment. A research was conducted by Kirschner& Karpinski (2010), to study the relationship between academic performance and Facebook usage. Sample were taken from population of 219 university students and they found that Facebook users had lower Grade Point Averages and they were online most of the time and utilized very less time for their studies in comparison with students who did not use Social Networking Services (SNS). Only 26% of students reported that SNS impacted positively and helped to grow in their lives and 74% said that it had adverse impact like procrastination, lack of concentration or distraction and poor time management. In their research titled "Smartphone Addiction in University Students and Its Implication for Learning" Lee, Cho, Kim & Noh (2015), found that the higher the addiction level is, the lower level of selfregulated learning the students have, as well as low level of flow when studying. Further interview for smartphone addiction group was conducted, it has been found that the smartphone addict-learners are constantly interrupted by the other applications on the phones when they are studying, and does not have enough control over their smartphone learning plan and its process.

This clearly shows that majority of students spend more time on smartphone and use it to stay in touch with friends and family, to share / tag photos, to engage in social media and probably less for academic purposes. Smartphone addiction has the capacity to negatively affect an individual in his/her physical and mental health, relationships, productivity and academic performance. The smartphone today has become a lifeline for many. The relationship between Facebook use and grades was examined in a large sample by Junco (2012) and reveals that unlike previous research; his study used university records to collect GPA data. Time spent on Facebook was negatively related to overall GPA. Time on Facebook was also negatively related to time spent preparing for class. Some Facebook activities were positively and some negatively related to outcomes. Therefore, this study investigated impact of smartphone addiction on a cademic performance of students in senior secondary schools in Lagos state

#### To aid the study, one research question was asked:

• What is the smartphone addiction level of students in senior secondary schools in Lagos state?

#### Three research hypotheses were also raised and tested:

- There is no significant effect of smartphone addiction on academic performance of students in senior secondary schools in Lagos state.
- 2.There is no remarkable effect of gender on academic performance of students in senior secondary schools in Lagos state.
- 3. There is no significant effect of type of school on academic performance of students in senior secondary schools in Lagos state.

### **METHODOLOGY**

The study adopted the descriptive design to seek information about the impact of smartphone addiction on academic performance of students in senior secondary schools in Lagos state. The sample for the study consisted of 130 students drawn from four (4) senior secondary schools in Lagos state. The participants were randomly selected from two private and two public senior secondary schools. A 25-item questionnaire designed by the researchers titled "Addiction to Smartphone Inventory" (ASPI) was us ed to collect the data. It consisted of two sections: A & B was personally administered on the sample. Section A sought information on students' bio-data; section B sought students' information on the smartphone addiction. The researcher also collected a cademic performance records of the students during the last academic session. The researcher used their last session annual class average. The instrument was validated by experts in the field of psychometrics. The reliability of the instrument was tested using Cronbach's Alpha and its reliability coefficient stood at 0.91. The questionnaire was administered on individual basis. The collected data from the instrument was analyzed using percentage, ANOVA and t-test to test the hypotheses at 0.05 level of signi ficance.

#### RESULTS

This section presents the results of the findings. The level of significance was set at p<0.05.

**Research question** 1. What is the smartphone addiction level of students in senior secondary schools in Lagos state?

Table 1 above shows that, 31.5% of respondents (41 students) were highly addicted, 40.0% (52 students) were averagely addicted while 28.5% of the respondents (37 students) have low addiction. From this findings, it can be deduced that majority of students in senior secondary schools in Lagos state were addicted to smartphone.

#### **Testing Hypotheses**

Research hypothesis 1. There is no significant effect of smartphone addiction on academic performance of students in senior secondary schools in Lagos state. From table 2 above, F (2, 127) = 2554.441 and p < 0.05. This result showed that there is statistically significant effect of smartphone addiction on academic performance of students in senior secondary schools in Lagos state. Hence, the null hypothesis was rejected.

The chart below show where the effect lies

## Chart 1: Showing smartphone addiction on students' Academic performance

From chart 1 above, it could be seen that there is significant effect of smartphone addiction on academic performance of students in senior secondary schools in Lagos. Students who are highly addicted to smart phone performed low in their academic activities.

**Research hypothesis** 2. There is no remarkable effect of gender on academic performance of students in senior secondary schools in Lagos state. From table 3 above, the independent t-test conducted revealed that df=128, F=42.213,

Table 1. Smartphone addiction Level of students

		Frequency	Percent	Cumulative Percent
Valid	High Addiction	41	31.5	31.5
	Average Addiction	52	40.0	71.5
	Low Addiction	37	28.5	100.0
	Total	130	100.0	

Table 2. ANOVA of smartphone addiction on students' Academic performance

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	41589.558	2	20794.779	554.441	.000
Within Groups	4763.242	127	37.506		
Total	46352.800	129			

Table 3: Independent Samples Test of students' Gender and Academic performance

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	Т	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confi- Interval Difference Lower	of the	
Class Average	Equal variances assumed	42.213	.000	1.030	128	.305	-3.449	3.350	-10.077	3.179	
	Equal variances not assumed			1.086	122.915	.279	-3.449	3.175	-9.733	2.835	

Table 4: Independent Samples Test of students' Type of school and Academic performance

		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	
Class	Equal var ance s assum ed	4.319	.040	1.003	128	.318	3.414	3.405	-3.323	10.151	
Average	Equal var ances not assumed			.976	97.265	.331	3.414	3.497	-3.527	10.354	

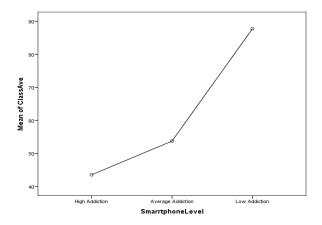


Chart 1: Showing smartphone addiction on students' Academic performance

p>0.05. This result showed that there is no statistically significant difference between the variables. Hence, the null hypothesis was accepted. In other words, there is no significant effect of gender on academic performance of students in senior secondary school in Lagos state. This implies that both male and female students are addicted to their smartphone performed the same way.

Research hypothesis 3. There is no significant effect of type of school on academic performance of students in senior secondary schools in Lagos state. Table 4 above shows that the independent t-test conducted revealed, df =128, F=4.319, p > 0.05. This result showed that there is no statistically significant difference between the variables. Hence, the null hypothesis was accepted. In other words, there is no significant effect of type of school on academic performance of students in senior secondary school in Lagos state. This implies that students from both private and public schools that are addicted to their smartphone performed the same way.

#### **DISCUSSION**

This study investigated impacts of Smartphone addiction on academic performance of students in senior secondary schools in Lagos state. The first research hypothesis which stated thatthere is no significant effect of smartphone addiction on academic performance of students in senior secondary schools in Lagos state was rejected. The findings from the study revealed that there is significant effect of smartphone addiction on academic performance of students in senior secondary schools in Lagos state.

This implies that smartphone addiction has negative impact on academic performance of students in senior secondary schools in Lagos state. This is in agreement with the findings of a research that was conducted by Kirschner& Karpinski in 2010. They studied the relationship between academic performance and Facebook us age and they found out that Facebook us ers had lower Grade Point Averages and they were online most of the time and utilized very less time for their studies in comparison with students who did not use Social Networking Services (SNS). The second research hypothesis which stated that there is no remarkable effect of gender on academic performance of students in senior Secondary School in Lagos state was accepted. The findings revealed that both male and female students are addicted to their smartphone in the same proportion and also performed the same way academically.

This finding is at variance with Junco (2013), who stated that females tend to see technologies like cell phones and Internet as tools of communication - as a means to maintaining and nurturing relationships. Men, on the other hand, tend to see the Internet and related technologies as sources of entertainment. Further, the third research hypothesis which stated that there is no significant effect of type of school on academic performance of students in senior secondary schools in Lagos state was accepted. The findings revealed students from both private and public schools that are addicted to their smartphone performed in the same proportion in their academic. This findings agrees with the positions of Park & Lee, (2011) who opined that smartphone addiction has become a more serious problem recently and in order to prevent the addiction and to provide new educational methods for the secondary school students, many researchers have proposed various kinds of research works such as new addiction measurement scales and the environmental or personal factors that cause the addiction.

#### Conclusion

From the discussion above, it is now easy to draw conclusion on the impact of Smartphone addiction on academic performance of students in senior secondary schools in Lagos state in which the results has showed that the smartphone addiction bring negative results on students' academic performance in Lagos state. There is therefore a need to evaluate, understand and educate senior secondary schools students on better ways to use their smartphones for higher academic achievement. There is also the need to properly guide them on the appropriate ways of using their smartphone so that it will not constitute an addition. Further, there is need for concerted efforts from parents, teachers, educational administrators and others to help the students improve on their academic performances even though they are with their smartphones. There is the need to make some restrictions and regulations that will guide them on how to use the smartphone.

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