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### Technological Addictions Among Secondary School Adolescents and Social Relationship

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#### Abstract

This study adopted a cross sectional research method. This method is considered suitable as data obtained from a sampling group relationship is identified and generalized back to the population. The population of this study consisted of the 21,682 SS2 students in public and private schools in Owerri Municipal, Council Imo State. The sample for this study comprised of 300 students (50 each), drawn from 3 private schools and three 3 public schools within the population. Purposive sampling technique was used to draw the schools while random sampling technique was used to select the students for the study. The instruments for data collection include: Internet Addictions Questionnaire by Kimberly Young, Social Media Disorder Scale by Kimberly Young, Researcher designed Digital Game Addiction Scale and Social Behaviour Scale. The reliability of the Internet Addictions Questionnaire and Social Media Disorder Scale was 0.73 and 0.68 respectively.

The reliability of the Digital Game Addition a social behavior were 0.76 and 0.83 respectively. The instruments were validated by two experts in Measurement and Evaluation and three in Educational Psychology who certified the instruments fit for administration. The data obtained were tested at 0.05 level of significance using Linear Regression and Analysis of Variance (ANOVA) using SPSS 16.0. The main findings of the study were that IA, SMA and DGA have significant relationship with social behavior of the subjects. The study recommends as follows: that teachers and must as a necessity mount serious surveillance on students' use of modern technologies with a view to saving them from technological addictions; there should regular talks in schools on the danger of excessive use of the internet, social media, digital games, smart phones among others.

**Keywords:** Adolescents, Social Relationship, Digital, Game

#### Introduction

The rate which students get attached to the internet and other related technological devices is alarming and as such has attracted the attention and concern of well-meaning citizens in Nigeria. Craft (2015) observed that millions of people on daily basis access the internet. He therefore foresaw that the whole world would soon be preoccupied by it. According to him, the internet has many activities that could make users glue to it; this will in turn lead addictive tendencies and pseudo relationship. When this is done, the individual real social relationship could be hampered. Studies have shown that excessive use of the internet is the cause of most strained relationship. It is obvious that when one gets enmeshed in online pseudo relationship, one hardly pays attention to other events or people around. This gradually degenerates to addiction Arando, Coecho and Silvaezoea, 2013; Craft, 2018<sup>[4]</sup> and Rouse, 2011).

Addiction is psychological phenomenon has attracted much attention in the recent time. More so now that many youth and adults show various signs of addiction to the technological addictions such as internet addiction, social media disorder addiction, digital game disorder addiction and smart phone addiction. Addiction has been defined as "persistent use or adherence to any substance or activities to the exclusion of other substances and activities which constitute harm to the individual (American Society for Addiction Medicine, 2015)<sup>[2]</sup>. The manifestation of technological addictions is physical and psychological in nature. The brain has been implicated in this kind of addiction. Arando, Coecho and Silvaezoea (2013) describe addiction as a chronic and relapsing disease which occurs as a result of come adaptive changes in brain structure and function caused by biological and environmental interaction.

The effects of addiction on the victims are too many and sometimes devastating. Rouse (2011) observes that addiction may be characterized by inability of one to control one's behavior, abstain from certain substances or activities, compulsive cravings, difficulty in recognizing serious problems, faulty relationships among others. Craft (2018)<sup>[4]</sup> states that victims of technological addiction can insensitive to their unmet needs, suffer depression and engage in drug and alcohol abuses, miss some health care issues and other life's benefits. According to Craft (2018)<sup>[4]</sup>, the following types of internet addiction can be a threat to marital relationship and home relationship: cyber relationship, cyber-porn and gambling. It can equally make one to lose touch with life and self-identity. The above reiterates the need to for urgent and drastic intervention to be made towards abating technological addiction. It is common knowledge that genuine social relationships are being ruined on a daily basis via the emotional, gaming and sexual relationships that are perpetrated on internet platforms.

The school child is not an exception to this type of addiction. In fact, adolescents in secondary schools have been implicated as well. Valkenburg and Peter (2011) admit that adolescence is the age group that usually subscribe to new technologies and are the most vulnerable to negative influences associated with them. Adolescents are persons within the age bracket of 11 – 25 years. By implication, they are students in the secondary and tertiary levels of education; hence the researchers decided to use secondary school students for this study. It has been noted that adolescents suffer social disconnectedness due to their use of virtual world via high-speed internet (Hosie, 2019). It is believed that the adolescents are more susceptible to negative influence than those at the higher level of education. The researchers equally believe that technological addictions begin at the secondary school level for most people. The social behavior of some students at that level of education gives some kind of clue to that. It is against that backdrop that the researchers set out to ascertain the influence of technological addictions among secondary school students on their social relationship.

Of all the technological addictions, the researchers decided to delimit study to internet addiction, social media disorder, digital games addiction among senior secondary school adolescents in public and private schools in Owerri Municipal Council, Imo State.

### Research Questions

The following research questions were posed to guide the study:

1. What is the relationship between Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) and the Social Behaviour (SB) of students in secondary schools in Owerri Municipal.
2. What is the difference in the Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) of students in public and private secondary schools in Owerri Municipal.

### Hypothesis:

The following hypothesis were formulated to guide the study:

H<sub>01</sub>: There is no significant relationship between Internet Addiction (IA), Social Media Disorder (SMD), Digital

Games Addiction (DGA) and the Social Behaviour (SB) of students in secondary schools in Owerri Municipal.

H<sub>02</sub>: There is a significant relationship between Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) and the Social Behaviour (SB) of students in public and private schools in Owerri Municipal.

H<sub>03</sub>: There is no significant difference in the Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) of students in public and private secondary schools in Owerri Municipal.

### Method

This study adopted correlation research method as it sought to ascertain the relationship between technological addictions and social behavior of students. The population for this study consists of the entire SS2 students in public and private schools in Owerri Municipal, Imo State which are 21,682. The researcher's choice of SS2 students for the study was based on the fact that they were adolescence between ages 13 to 19 who are influenced by social media. The sample for this study comprised of 300 students (50 each), drawn from 3 private schools and three 3 public schools within the population. Purposive sampling technique was used to draw the schools while random sampling technique was used to select the students for the study. The instruments for data collection include: Internet Addictions Questionnaire by Kimberly Young, Social Media Disorder Scale by Kimberly Young, researcher made digital games addiction scale and Social behaviour scale. The instruments had two sections - A and B. Section A elicited demographic data, while Section B had 20 question items which was designed to elicit information from the respondents for the study. The scales was formed along the 4-point scale response options of strongly agreed (SD), Agreed (A), Disagree (D), Strongly Disagreed (SD). weighted as 4, 3, 2 and 1 point(s) respectively. The reliability of the Internet Addictions Questionnaire and Social Media Disorder Scale is 0.73 while the face and content validity of the digital games addiction scale and Social behaviour scale was established by two experts in Measurement and Evaluation and three Educational Psychologist who certified the instruments fit for administration. To ensure the reliability of the digital games addiction scale and Social behaviour scale, the researcher administered it on thirty three (33) SS1 students from another school which were not part of the study. The same test was re-administered to the same students after two weeks. The pre-test and post-test scores were compared using the Kuder Richardson formula-20 method to ascertain the internal consistency, and the test retest method of the Pearson's Product Moment Correlation method (PPMC) to determine the temporary stability of the results obtained with the instrument. The Kuder Richardson formula-20 computed was 0.87, which signifies a very high and positive reliability, and the PPMC computed was 0.73 which was equally very high and reliable. The data obtained were tested at 0.05 level of significance using Linear Regression and Analysis of Variance (ANOVA) using SPSS 16.0.

### Results

**Research Question 1:** What is the relationship between Internet Addiction (IA), Social Media Disorder (SMD),

## Digital Games Addiction (DGA) and the Social Behaviour (SB) of students in secondary schools in Owerri Municipal.

**Table 1:** The relationship between Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) and the Social Behaviour (SB) of students in secondary schools in Owerri Municipal

Groups	Mean	Std. Deviation	N
SB	59.50	13.25	300
IA	59.26	15.53	300
SMD	60.10	12.26	300
DGA	59.01	12.04	300

Table 1 shows that IA, SMD and DGA was significantly related to SB as they had 59.26, 60.10, 59.01 and 59.50 mean scores which are almost the same.

**Research Question 2:** What is the difference in the Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) and the Social Behaviour (SB) of students in public and private secondary schools in Owerri Municipal.

**Table 2:** The difference in the Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) of students in public and private secondary schools in Owerri Municipal

Groups	N	Mean	Std. Deviation
Public	150	59.82	13.82
Private	150	59.10	12.71
Total	300	59.46	13.26

Table 2 shows that grand total mean value of IA, SMD, DGA in public schools was 59.82 while that of private school was 59.10 which is almost the same. However, the 0.72 mean difference indicates that IA, SMD, DGA was more in public schools than private schools.

**Hypothesis 1:** There is no significant relationship between Internet Addiction, Social Media Disorder, Digital Games Addiction and the Social Behaviour of students in secondary schools in Owerri Municipal.

**Table 3:** Model summary showing the relationship between Internet Addiction, Social Media Disorder, Digital Games Addiction and the Social Behaviour of students in secondary schools in Owerri Municipal

Model Summary <sup>c</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.914 <sup>a</sup>	.835	.834	5.40045	
2	.939 <sup>b</sup>	.881	.879	4.60399	2.254
a. Predictors: (Constant), IA					
b. Predictors: (Constant), SMD, DGA					
c. Dependent Variable: SB					

The data in Table 3 shows that there was a significant relation between IA and SB ( $R = .914$ ,  $p < .05$ ), SMD, DGA and SB ( $R = .939$ ,  $p < .05$ ).

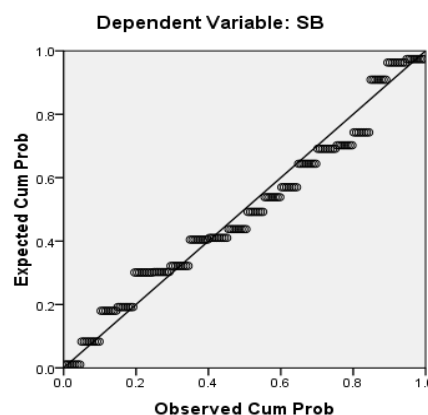
**Table 4:** Coefficient table showing the relationship between Internet Addiction, Social Media Disorder, Digital Games Addiction and the Social Behaviour of students in secondary schools in Owerri Municipal

Coefficients <sup>a</sup>											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations		
		B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Part
1	(Constant)	13.284	1.745		7.613	.000	9.836	16.732			
	IA	.780	.028	.914	27.375	.000	.724	.836	.914	.914	1.000
2	(Constant)	4.382	1.901		2.306	.023	-.627	8.138			
	IA	.492	.045	.576	10.836	.000	.402	.581	.914	.666	.308
	DGA	.440	.059	.400	7.526	.000	.325	.556	.886	.527	.287

a. Dependent Variable: SB

From Table 4, IA, SMD and DGA can be used to predict the social behaviour of secondary school students. This means that the null hypothesis is rejected, therefore there is a significant relationship between IA, SMD and DGA and the social behaviour of students in Owerri Municipal.

Normal P-P Plot of Regression Standardized Residual



**Fig 1:** Regression plot showing the relationship between between IA and SB

Fig 1 shows that there is a close relationship between IA and social behaviour of students in Owerri Municipal.

**Hypothesis 2:** There is a significant relationship between Internet Addiction, Social Media Disorder, Digital Games Addiction and the Social Behaviour of students in public and private schools in Owerri Municipal.

**Table 5:** ANOVA table showing the relationship between IA, SMD and SB in public and private schools in Owerri Municipal

ANOVA <sup>c</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21855.108	1	21855.108	749.366	.000 <sup>a</sup>
	Residual	4316.392	298	29.165		
	Total	26171.500	299			
2	Regression	23055.576	2	11527.788	543.847	.000 <sup>b</sup>
	Residual	3115.924	297	21.197		
	Total	26171.500	299			
a. Predictors: (Constant), IA						
b. Predictors: (Constant), SMD, DGA						
c. Dependent Variable: SB						

Table 5 shows that the sig. of f-ratio is .000 which is less than .05, we therefore reject the hypothesis, meaning that there is a significant relationship between IA, SMD DGA and SB in public and private schools in Owerri Municipal.

**Hypothesis 3:** There is no significant difference in the Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) of students in public and private secondary schools in Owerri Municipal.

**Table 6:** The significant difference in the Internet Addiction (IA), Social Media Disorder (SMD), Digital Games Addiction (DGA) of students in public and private secondary schools in Owerri Municipal

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	44.439	1	44.439	.252	.616
Within Groups	60655.572	344	176.324		
Total	60700.012	345			

Table 6 shows that the f ratio is .252 while the sig. of f-ratio is .616 which is greater than .05, we therefore accept the hypothesis, meaning that there is no significant difference between IA, SMD DGA in public and private schools in Owerri Municipal.

## Discussion

The finding from hypothesis one shows significant relationship between inter addiction, Social media addiction, digital game addiction and the social behavior of secondary school students. This goes to say that technological addictions exist in secondary schools in Owerri Municipal Council of Imo State and that they affect the social behavior of students subjects. The result is expected given the way most students in the area are fascinated by the new technologies. They are seen regularly using one form of the technologies or the other. Some during break time snick out of school compound to go to cyber cafes where they get connected to internet. Others who have smart phones are seen using them even in school compound. Furthermore, the study found significant relationship between the IA, SMDA, DGA and SB of students in public schools and those in private schools. This indicates that addictions exist in public and private schools and they affect addicts' social behavior. One would expect that students in private schools will be free from technological addictions. However, it should be noted that both students in private and public schools share almost the same environment. So, despite the restrictions private schools placed on their students, the fact remains that both students meet after

school some time somewhere. This particular finding stands out on its merit as the researchers could not find in available literature a study that compared addictions in private and public schools.

The implications of the study is for stakeholders like teachers, parents, curriculum planners and government to advance measures that could help to curb this ugly trend.

## Recommendations

Based on the findings, the following recommendations were made:

1. Students in public and private schools should be careful on the kind of attention they give to internet, social media and digital games as it may degenerate into addictions, which may in turn affect their social behavior and academics.
2. Teachers and must as a necessity mount serious surveillance on students' use of modern technologies with a view to saving them from technological addictions.
3. There should regular talks in schools on the danger of excessive use of the internet, social media, digital games, smart phones among others.

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