



Research Article

JMR 2018; 4(3): 146-150

May- June

ISSN: 2395-7565

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www.medicinarticle.com

Received: 11-03-2018

Accepted: 23-05-2018

A cross sectional study on internet addiction, locus of control and psychological distress in a sample of Nigerian undergraduates

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Abstract

Reports have shown that the internet apart from its benefits to the educational development of young people is also associated with some negative effects on their psychological wellbeing. The most noticeable and troubling negative effect of the internet on young people is internet addiction which is the inability of an individual to control his or her use of the internet. Locus of Control (LOC) refers to an individual's personal belief that the events which occur in his or her life are either as a result of personal control and effort, or outside forces such as fate and luck.

The Young internet addiction scale, Locus of control scale, and the GHQ-12 were used to assess internet addiction, locus of control and psychological distress among 835 undergraduates. Result revealed various levels of internet addiction, locus of control, and psychological distress among the respondents.

Keywords: Internet addiction, Locus of control, Psychological distress, Undergraduates.

INTRODUCTION

The development of the Internet has revolutionized the spread of information across the globe. In Nigeria, report has revealed that with about 45.04 million people that use the internet, Nigeria has been named among the 20 top countries that use the internet in the world. Furthermore, according to this report, on a population penetration of 170.2 million people Nigeria's internet penetration ratio was put at 26.5 percent [1]. Generally young people are seen as the most active users of the internet [2]. The internet apart from its benefits to the educational development of young people is also associated with some negative effects on their psychological wellbeing. The most noticeable and troubling negative effect of the internet on young people is internet addiction [3]. Internet addiction is said to be the inability of an individual to control his or her use of the internet [4-6]. It has also been described as a multidimensional syndrome that manifests with both cognitive and behavioural symptoms [7-9]. Furthermore, Bidi and his colleagues [10] have posited that internet addiction is one of the harmful effects of the internet and a new form of psychological disorder causing both physical and mental health problems. Young [11] pointed out some of the signs of internet addiction to include preoccupation with the internet, use of the internet in an increasing amount of time in order to achieve satisfaction, repeated unsuccessful efforts to control, cut back or stop use as well as feelings of restlessness, depression or irritability when attempting to stop use. Researchers observed that most internet dependent users are young people especially university undergraduates [12]. Reasons adduced for this excessive use include available free time, no monitoring because of being away from parents and at times attempts to get away from tough university routines [5]. It was equally reported that compared with other segments of the society, university students appeared to be more vulnerable to internet addiction apparently due to the psychological and developmental variables of adolescents and young adults as it relates to easy access to the internet and the expectation of internet use [13-15]. Locus of Control (LOC) refers to an individual's personal belief that the events which occur in his or her life are either as a result of personal control and effort, or outside forces such as fate and luck. A person is said to have internal LOC when he has the perception that events that happen in his life are under his control, while it is external when an individual believes that his actions or events that happen to him are as a result of external causes. That is the events are due to powers beyond his control [16, 17, 18, 19, 20]. Psychological distress is said to be characterized by continuous experience of unhappiness, nervousness, irritability and problematic interpersonal relationship [21, 22]. Shaw and Black [23] have reported high levels of co morbidity between problematic Internet use and psychological distress such as mood and anxiety disorders, whereas Ceyhan and Ceyhan [24] found a positive correlation between psychological distress and severity of problematic Internet use. Furthermore, Davis [4] in his

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cognitive behavioral model proposed that psychological distress, such as depression and anxiety, is an essential and significant catalyst of problematic Internet use. Variations in locus of control among university students may be related to the concurrent trends toward increased depression and anxiety, drug abuse, and diminished academic achievement [25]. Furthermore, Yeng *et al.* [26] reported a high correlation between depression and internet addiction. Internet use and addiction were equally found to increase the risk of depression among adults and is related with depression and suicide among adolescents [26, 27, 28, 29]. Reporting from Gaza, Bashir [30] posited that 30.1% of his subjects experienced high addiction to the internet, while 23.8% of them experienced high psychological morbidity. Locus of control has been related to depression [31]. Griffin [32] in his study of locus of control and psychological wellbeing among university students reported that external LOC predicted unique variance in self-esteem, depression, and stress, while internal LOC was found to have no unique association with psychological well-being. Furthermore, Emmons and Diener [33] posited that individuals who are low in self-esteem are more likely to believe that outcomes are not under their own influence and control, whereas Emmons [34] concluded that different variables influence well-being if they affect a person's ability to achieve his or her own goals. Similarly Klonowicz [35] in his study of locus of control as a determinant of subjective well-being, concluded that high internal locus of control relates to more positive affect. These studies suggest that internal and external locus of control each have a unique relationship to psychological well-being. The present study looks at internet addiction, locus of control and psychological distress in a sample of Nigerian university undergraduates bearing in mind that no known study on this subject matter has been conducted among this population group within the study area. The study will produce baseline data for these variables among undergraduates within the study area in particular and Nigeria in general. Recommendations will be made based on the findings on how to reduce the negative impacts of internet addiction, locus of control and psychological distress among undergraduates. The research hypotheses are: (1) there will be significant difference between internet addiction, locus of control and psychological distress among university undergraduates. (2) There will be significant gender difference between internet addiction, locus of control and psychological distress among the respondents. (3) There will be significant difference between internet addiction, locus of control and psychological distress and year of study of the undergraduates.

METHOD

Design

This is a cross sectional descriptive study carried out between the months of February and March 2018.

Subjects

Subjects for the study are male and female undergraduates of university of Nigeria, who are studying various disciplines and are at various years of study ranging from first to final years. This university was the first indigenous university established by the federal government of Nigeria in 1960. The university has a population of over ten thousand undergraduate and post graduate students. However, only undergraduate students were used for the present study because they constitute the bulk of the student population. Using the formula for prevalence study [36] a total of 835 undergraduates were selected and surveyed for the study. Inclusion criteria were undergraduate students who gave their consent to participate in the study, while exclusion criteria are post graduate and undergraduate students who did not consent to participate and those who were sick as at the time of data collection. Participants who met the inclusion criteria were then enrolled consecutively until the sample size was reached. All the subjects were assured that their responses will be treated with the

strictest confidence and no respondent will be identified in person, thereby assuring them of the anonymity of their responses. Ethical permit for the study was obtained from University of Nigeria research Ethics Committee.

Measures

Data for the study was collected between the months of February and March 2018, by the authors with the assistance of two psychology students, who were conversant with how to administer the research instruments. The subjects were given self administered instrument that was made up of four parts. Part one contained basic socio-demographic information such as age, gender, religion and year of study. Part two was the Young's internet addiction test (IAT) developed by Young [37]. This 20 item test is one of the most popular standardized instruments for assessing internet addiction among a wide range of population groups including university undergraduates. The scale was originally scored on a 5-point Likert scale, but was later modified to a 6-point scale following the addition of one item [38]. The six point version of the scale was used for this study. The response options are: 0= does not apply; 1= rarely; 2 = occasionally; 3 = frequently; 4 = often and 5 = always. Obtainable scores ranged from 0-100. Scores ranging from 0-30 indicate normal internet use; 31-49 indicate mild internet addiction; 50-79 indicate moderate internet addiction and scores ranging from 80- 100 indicate severe internet addiction [39]. Many studies reported its test-retest reliability to be satisfactory, ranging between $r = .73$ and $r = .88$, as well as excellent internal consistency ranging between $\alpha = .88$ and $\alpha = .93$ [40, 41, 42]. This instrument has been validated and used for studies in Nigeria [43, 44]. Part three was the Locus of control scale by Rotter [45]. This is a 29 item inventory comprising of 23 forced choice and 6 filler items that measures internal and external belief systems of individuals. Sample items in the scale include, 'Many of the unhappy things in people's lives are partly due to bad luck' and 'People's misfortunes result from the mistakes they make'. High scores indicate external locus of control while low scores indicate internal locus of control. Using internal consistency and test-retest reliability, Rotter [45] obtained a correlation that ranged from .65 to .79, and .49 to .83, respectively. This scale has been validated and used for studies in Nigeria [19, 46, 47]. Part four was the General Health Questionnaire (GHQ-12). The GHQ-12 [48] is an instrument used to screen for psychiatric morbidity. Although it does not yield a diagnosis, positive scores are indicative of psychological distress. Each item is rated 0 or 1 on the basis of the frequency with which the subject had experienced the symptom in the recent past, yielding a maximum score of 12. In the GHQ-12 subjects are asked to indicate, for instance, how recently they have been able to concentrate on whatever they have been doing. The response options include; better than usual, same as usual, less than usual and much less than usual. A score of 1 or above is suggestive of psychological distress. The GHQ has been validated and used for studies in Nigeria [49].

DATA ANALYSIS

Data for the study was analyzed using the Statistical package for social science, SPSS version 20.0. Percentages and the Pearson's chi squared test were performed to find relationships between variables. The level of significance chosen for this study was $p \leq 0.05$ at 95% confidence interval.

RESULTS

Age of respondents ranged from 16-31 years (mean age= 22.06; SD =3.16). 47.4% are males, while 52.6% are females. Majority are Christians. The years of study of the respondents ranged from first to final years with 40.7% being in the second year. In terms of internet addiction 27.4 % showed mild addiction while 12.9% and 9.8% showed moderate and severe addiction to the internet respectively. Furthermore, 69.3% of the respondents had internal locus of control as

against 30.7% who had external locus of control. Equally, result also revealed that 75.8% of the respondents had no psychological distress as against 24.2% who had psychological distress. This is shown in table 1 below. Result further revealed significant association between locus of control and age group, $\chi^2 = 45.94$; $P \leq 0.05$, psychological distress and age group $\chi^2 = 34.51$; $P \leq 0.05$, whereas the association between age group and internet addiction was not significant as shown in table 2 below. Equally there was significant association between gender and internet addiction, $\chi^2 = 31.10$; $P \leq 0.05$; gender and locus of control, $\chi^2 = 6.22$; $P \leq 0.05$, but not between gender and psychological distress. See table 3 below. Interestingly significant association was noticed between year of study and internet addiction $\chi^2 = 105.57$; $P \leq 0.05$; year of study and locus of control, $\chi^2 = 55.54$; $P \leq 0.05$, but not between year of study and psychological distress as shown in table 4 below.

Table 1: Distribution of Socio Demographic Variables, Internet addiction, Locus of control and Psychological distress among the Respondents

VARIABLE	FREQUENCY	PERCENTAGE (%)
GENDER		
Male	396	47.4
Female	439	52.6
AGE (In years)		
16-24	654	78.3
25-31	181	21.7
RELOGION		
Christianity	755	90.4
Islam	73	8.7
Others	7	0.9
YEAR OF STUDY		
First year	224	26.8
Second Year	340	40.7
Third Year	134	16.0
Fourth Year	50	6.1
Final Year	87	10.4
INTERNETADDICTION		
No Addiction	417	49.9
Mild Addiction	229	27.4
Moderate Addiction	108	12.9
Severe Addiction	81	9.8
LOCUS OF CONTROL		
Internal	579	69.3
External	256	30.7
PSYCH. DISTRESS		
Absence of distress	633	75.8
Presence of distress	202	24.2

Table 2: Internet Addiction, Locus of control and Psychological distress Among the Age Groups

Internetaddiction	Age group 16-24 years	25-31 years
No addiction	336 (51.4)	81 (44.8)
Mild addiction	175 (26.8)	54 (29.8)
Moderate addiction	83 (12.7)	25 (13.8)
Severe addiction	60 (9.1)	21 (11.6)
$\chi^2 = 55.27$; $P \geq 0.05$ ^{n/s}		
LOCUS OF CONTROL		
Internal	449 (68.7)	130 (71.8)
External	205(31.3)	51 (28.2)
$\chi^2 = 45.94$; $P \leq 0.05$ *		
PSCH. DISTRESS		
Absence	496 (75.8)	137(75.7)
Presence	158 (24.2)	44(24.3)
$\chi^2 = 34.515$; P value ≤ 0.05 *		

*= Significant NS= Not Significant

Table 3: Internet Addiction, Locus of control and Psychological distress Among Gender

	GENDER	
	MALE (N=396)	FEMALE (N=439)
Internet Addiction		
No addiction	230 (58.1)	187 (42.6)
Mild addiction	74 (18.7)	155 (35.3)
Moderate addiction	53 (13.4)	55 (12.5)
Severe addiction	39 (9.8)	42 (9.6)
$\chi^2 = 31.1$; $P \leq 0.05$ *		
LOCUS OF CONTROL		
Internal	258(65.2)	321(73.1)
External	138 (34.8)	118 (26.9)
$\chi^2 = 6.22$; $P \leq 0.05$ *		
PSYCH. DISTRESS		
Absence	297 (75.0)	336 (76.5)
Presence	99 (25.0)	103 (23.5)
$\chi^2 = .268$; $P \geq 0.05$ ^{n/s}		

*= Significant NS= Not Significant

Table 4: Internet Addiction, Locus of control and Psychological distress And Year of Study

	Year of study				
	First year	Second year	Third year	Fourth year	Final year
INT.ADD.					
Non	144(64.3)	140(41.2)	62(46.3)	24(48.0)	47(54.0)
Mild	37(16.5)	79 (23.2)	54(40.3)	26(52.0)	33(37.9)
Moderate	20(8.9)	73(21.5)	8(5.9)	0	7(8.1)
Severe	23(10.3)	48 (14.1)	10(7.5)	0	0
	$\chi^2=105.57; P \leq 0.05^*$				
LOC					
Internal	171(76.3)	234(68.8)	111(82.8)	28(56.0)	35(40.2)
External	53 (23.7)	106(31.2)	23(17.2)	22(44)	52(59.8)
	$\chi^2=55.54; P \leq 0.05^*$				
Psy.Dist.					
Absence	179	257	95	42	60
Presence	45	83	39	8	27
	$\chi^2 =7.87; P \geq 0.05^{n/s}$				

DISCURSION

The study had revealed various levels of internet addiction, locus of control and psychological distress among the respondents. For instance 27.4%, 12.9% and 9.8% had mild, moderate and severe internet addiction respectively. 69.3% had internal locus of control as against 30.7% with external locus of control; similarly 24. 2% had psychological distress. This pattern of findings was in line with previous reports. For instance it has earlier been observed that the most noticeable and troubling negative effect of the internet on young people is internet addiction and that generally young people are seen as the most active users of the internet. Furthermore, it was reported that compared with other segments of the society, university students appeared to be more vulnerable to internet addiction apparently due to the psychological and developmental variables of adolescents and young adults as it relates to easy access to the internet as well as the expectation of internet use [3, 2, 12, 13, 14]. Equally Twenge, Zhang & Im [25] had earlier posited that variations in locus of control among university students may be related to the concurrent trends toward increased depression and anxiety, drug abuse, and diminished academic achievement. Result revealed that respondents aged 16-24 years were more addicted to the internet and also had more psychological distress than those aged 25-31 years. This may imply that being young is a contributory factor in becoming addicted to the internet with the associated psychological distress as was previously reported. Furthermore,

Kawa and Shafi [21] had argued that among other things, students aged 18-22 years are usually away from parental control and are not being monitored or censored by anyone on what they do or say online. The pattern of result noticed among the age group in this study corroborates Kawa and Shafi's findings. The stress of academic work may impinge more on the younger undergraduates due to their inability to have adjusted adequately to the daily hassles associated with university life. Moreover in the University of Nigeria students usually live far away from the campus and had to shuttle to and fro the campuses everyday to attend lectures and go back to their places of abode in the evenings, this extra stress of shuttling to the university can produce additional stress on them thereby making them to experience psychological distress. There was significant association between internet addiction and year of study. This may not be surprising because in Nigeria ownership of a laptop is a prerequisite for all newly admitted undergraduates in universities. Furthermore,

incoming students automatically get an email address and Internet access account. Access to the university's network is often provided free of charge or for a nominal fee. This makes it an affordable and convenient option. Moreover, most Nigerian universities have the latest technologies in their computer labs, which usually have high-speed connections, allowing for faster downloads and Internet surfing. Over dependence on the internet by the students can predispose them to internet addiction. With regards to gender differences we discovered significant difference in internet addiction between male and female students. Other researchers had equally reported similar findings [50, 51]. However this finding was contrary to that of Beranuy, et al. [52] who reported no gender difference among their subjects.

CONCLUSION

Generally the study noticed various levels of internet addiction, locus of control and psychological distress among the respondents. Since the result of this study had revealed that 9.8% of the respondents had severe internet addiction, 30.7% had external locus of control and 24.2% had psychological distress, there is need to introduce regular psychological evaluations and counseling in universities with a view to identifying those with internet addiction, external locus of control and psychological distress so that adequate measures will be put in place to help uplift their positive self image and improve their mental health profile.

Acknowledgement

The authors thank all the respondents who gave their consent to participate in this study.

Funding: No form of funding to carry out this research work was received by the authors.

Conflicts of Interest The authors declare no conflict of interest

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