

**BEHAVIORAL PROBLEMS ASSOCIATED WITH USE OF SMARTPHONE  
BY MALE AND FEMALE CHRISTIAN UNDERGRADUATES IN THE  
UNIVERSITY OF JOS, NIGERIA.**

**Omede, J and Akintunde, O.O**

**Department of Educational Foundations, Faculty of Education, University of Jos,  
Nigeria**

**(Omede, J: [jacobomede@gmail.com](mailto:jacobomede@gmail.com))**

**Abstract**

*This study examined the behavioral problems associated with use of Smartphone by male and female Christian undergraduates in the University of Jos, Nigeria. The population for the study was 2500 two hundred level students in the Faculty of Education of the university. 264 respondents were purposively sampled for the study. Students that made up the sample for the study were the Christians who had phones that could access the internet. The instrument designed by Omede in 2023 titled “Level of Knowledge and Involvement in Behavioral problems associated with use of Smartphone (LOKIBPAUS)” was adapted for use. Section B of the instrument was ignored while sections A and C were used. The instrument was administered by the two researchers in two separate classes during one of the lectures on Education 202. The data collected were analyzed and findings included that the male Christian respondents had higher moral and social behavioral problems than the female Christian respondents. Conversely, the female Christian respondents had higher religious behavioral problems than their male counterparts. The result of the test of the null hypotheses revealed a significant difference between the male and the female Christian respondents only in social behavioral problems. But in all, apart from the social behavioral problems that the male Christian respondents had high engagement, engagements in the remaining two variables were low for these two categories of respondents. Based on the findings, recommendations that addressed the roles of Christian parents, church pastors and elders, Christian teachers and lecturers as well as the Christian students were put forward to include that Christian parents should be actively involved in monitoring the online behaviors of their children particularly the undergraduates and educate them about the use of social media in more decent and godly ways and that church pastors and elders should not minimize church teachings and periodic sermons on holiness and righteousness while the Christian teachers and lecturers are to mentor and disciple the Christian students to live like their master, the Lord Jesus Christ.*

**Keywords: Smartphone, behavioral problems, Christian, male undergraduates, female undergraduates**

1.0

**INTRODUCTION**

Technological advancement has made Smartphone usage popular among people, including students. Smartphone is a technological tool that has caught the attention of many people (Omede, 2023). It is a sophisticated mobile phone with computer features and soft-screen interface that enable the user to access the internet, download apps and send emails. This is in addition to its traditional function of being a two-way communication device (Omede, 2020). Smartphone is in many hands. In fact, it is more common than laptops probably due to its features such as relative portability and the ease of mobility, relative affordability among others. In spite of its small size like human palm,

a Smartphone is a powerful communication tool for both oral and textual messages and also functions as radio, television, a library, a camera, a calendar, a voice and video recorder and player, a calculator, a timepiece, a notepad, as well as a tool for playing electronic games and entertainments. These probably could be why Smartphone has endeared itself to many users added to the fact that it is a social status booster (Omede, 2014).

With the Smartphone, users can access the internet using the various social media multifarious platforms such as the Face book, WattsApp, Youtube, Snapchat, Instagram, Tiktok and others. Users, more particularly the young adults and the university undergraduates, explore the limitless benefits and opportunities that this tool affords. With this tool in hand, educational and learning opportunities-formal and or informal could be explored, relationships could be established and sustained, and business ideas such as selling and buying of goods and services could be promoted and grown. The tool is widely used in nearly all aspects of people's lives including entertainment, education, decision making, information seeking, trading and business (Alnjadat, Hmaid, Samha, & Hasswaro, 2019). These researchers rightly noted that social media technology has become an inseparable part of people's daily activities and has warranted that many researchers and scholars study the effects on different aspects of people's lives. Social media is indeed, a major communication channel for exchange of information, opinion statement, social network enabling, decisions influencing and business promotion (Karatsoli, & Nathanail, 2020). The Smartphone and other technological devices that utilize the social media platforms have inexhaustible benefits that people including the university students explore and take advantage of these benefits or opportunities as they go about their daily activities and transactions The social media has inundated lives and is the battle field of the new generation (Kladia, 2023).

Exploring the endless opportunities that Smartphone offer is dependent on how this tool is used and regulated. Its usage exerts both positive and negative impacts on the users that it is, the effects could be double-edged. For instance, its effective use could enhance collaborative learning among learners (MoKoena, 2012) and recording of information during lessons (Ifeanyi & Chukwuere, 2018). Students can easily interact and communicate with classmates, friends, and families within and outside their immediate environment. Also, students can access the internet, using Smartphone to search additional educational resources that are relevant to their courses of study and to augment lecture information received in class. Smartphone, via social media, can be used to disseminate information widely within a short time (Bere, 2012, Devi & Tevera, 2014). Moreover, in Nigerian tertiary institutions, students use their Smartphone to access their class WhatsApp pages for information about lectures and submission of assignments (Akintunde & Eseyin, 2020).

All these benefits notwithstanding, there are negative impacts of Smartphone usage on students' well-being. Use of Smartphone can prompt many behavioral problems among students. It causes distractions for students (Ifeanyi & Chuwuere, 2018). Some students play games or keep browsing the social media (Facebook, Instagram and WhatsApp) instead of listening to lectures or reviewing their lecture notes. Again, some students experience decreased sleep quality because of late night use of Smartphone (Barnwell, 2016). Inadequate sleep can affect cognitive functioning by hindering academic performance. Some students use Smartphone to cheat during examinations or tests (Buck, McInnis & Randolph, 2013) while some relationships have been strained or destroyed due to excessive use of Smartphone. Furthermore, Smartphone usage by students, via social media, can lead to cyber bullying and fraud (Ahad & Lim, 2014).

The focus of this study is the Christian undergraduates in the University of Jos. These are the set of students in the university that go to church and it is assumed that they have given their lives to the Lord Jesus Christ. They are considered as individuals that have realized that they are sinners and had consciously confessed to the Lordship of Jesus Christ and had put off the old nature that delights and so quickly yields to sin and instead, puts on the new nature that pants after holiness and righteousness in Christ Jesus (Omede, 2023). These Christian undergraduates are not exempted from using the Smartphone and accessing the social media to explore the many opportunities (positive and negative) that it offers. But the issue is how these Christian undergraduates utilize their phones in view of the many evils that are promoted on many media platforms of today.

As noted earlier, there are lots of behavioral problems that users of Smartphone engage in. These problems are put into the categories of moral, social and religion in this study and they are so prevalent among the young adults as they access the social media services or platforms using their Smartphone. In the same vein, Onah and Uche (2014) noted that the use of social media had given rise to moral issues in Nigeria especially among the youths. Through the use of the Smartphone and social media, users, particularly the youths seemed to be running low on moral, social and religious societal approved behaviors or values (Omede, 2023). They date online illicitly, cheat in examinations, defraud people, tell lies unapologetically, send sexualized text messages, post false information about themselves, conceal their real identities, hack into people's account, bully, follow wrong models, kidnap victims and through the phone negotiate ransom, forward unverified text, audio and video messages as well as sleep deprivation, watching of pornographic videos and pictures, playing and listening to endless music through the plugged in earpieces or phones, promoting online nudity, and being addicted to the phone and the social media (The American College of Obstetricians and Gynecologists, 2016, Mamak, et al, 2018, Oxford Learning, 2019, Iroanusi, Adimora, Andor, Ube, & Audu, 2020, Researchclue.com, 2021, & Play by the rules, 2021) are common behavioral problems noticeable among many users, particularly the young adults. In addition, adolescents minimize verbal communication with physical contact when glued to their phones (Omede, 2021) and even remain silent and quiet in the classrooms not interacting with their classmates before the arrival of the instructor or teacher (News wise, 2018). In actual sense, these students or users are connected to people but not to the people they are physically with (Caplan in News wise, 2018). To greet and answer greetings look burdensome to them. Even when in church and church services are on, many of these young adults are seen fingering their phones. A peep into what they could be doing with the phones will reveal so many things that may not be connected with what goes on in the service. If it is not that they are on WhatsApp, they could be taking selfie, or sending and reading text messages or even playing computer games among other funny but irrelevant things they shouldn't be doing at that material time.

The use of Smartphone to access the social media platforms cut across gender. Men and women use the social media platforms without discriminations or gender hindrances or restrictions. However, there are studies that have established gender differences in the usage of the social media platform services and contents. In India, for instance, 67% men are internet users compared to only 33% women with even fewer numbers in rural areas (Kala, 2019 in Majumdar, et al, 2022). This is unlike what was reported in the western country where social media usage was becoming increasingly gender-equal (Greenwood, et al, 2016, Tankovska, 2021). In general, several researchers have found that women tend to use social network services more than men and for different and more social purposes (Wikipedia, undated). In a related statement, Anderson (2015) noted that

historically, women have been more avid users of social media than men and this finding is consistent across several Pew Research Center Surveys.

Gender has been found to have a significant impact on why people accept new technologies (Asante, 2021), so gender is a significant factor to consider in studies that relate to technology and use of social media via the Smartphone. In specific terms and services where the media is explored, there are studies that have established gender variations. For instance, it is reported that males are more addicted to social media than females (Alnjadat, Hmaid, Samha, & Hasswaro, 2019). Girls have reported to be significantly higher than boys on the measure of social media use as well as on chatting, online sociability and self presentation while boys are reported to be significantly higher on an instrument that measures playing of games (Svensson, Johnson, & Olsson, 2022). Previous studies carried out revealed that boys commit more cyber verbal bullying, cyber forgery and more violence based on hidden identity or presenting themselves as other person (Sincek, 2014). Other studies on gender differences in social media user behavior discovered that males used social media platforms to meet new friends, network, look for partners, and play computer games while females use them for maintaining their relationships (Psylla, et al, 2017, and public message posting (Kircaburun, et al, 2020). The study conducted by Asante (2021) discovered that male students used face book, WhatsApp, and Twitter more than the female students while in the use of Instagram, Snapchat, Youtube and Tiktok, the female students used them more than the male ones. In addition, the study of Asante found that the male students are attracted to social media for socialization, and making new friends, listening to songs and watching videos or movies, expressing and showing opinions to friends and the public and interacting with friends, classmates, and relatives while the female students are enticed to adopt social media to kill boredom, and loneliness, exchange information and feelings, shop online, share pictures and songs, learn new things, and do assignments, and learn information about improving health and living a better life. The concluding finding of Asante, was that the overall mean for all the variables showed that female students have adopted social media more than male students.

The dimensions of these reviewed studies are different from this current study that is to compare the behavioral problems of the use of Smartphone by the male and female Christian undergraduates as they access the social media. These Christian undergraduates are expectedly regenerated people. By implication, they are not supposed to be involved in using their Smartphone for wrong purposes or anti-social behaviors. But they do sometimes. According to the study embarked upon by Omede (2023), in-school Christian adolescents were found to have high knowledge of the behavioral problems that adolescents engage in while using their Smartphone on social media and that some Christian adolescents also promote such behaviors online. But the direction of this study is to examine the role of gender in these behavioral problems. Who promotes online behavioral problems more, the male or the female Christian undergraduates in the University of Jos? Consequently, this study investigated the behavioral problems associated with use of Smartphone by male and female Christian undergraduates in the University of Jos, Nigeria.

### **Aim and Objectives of the Study**

The aim of this study was to compare the behavioral problems associated with use of Smartphone by the male and female Christian undergraduates in the University of Jos, Nigeria. Specifically, the study compared the extent of involvement in:

1. Moral behavioral problems associated with the use of Smartphone by the male

- and female Christian undergraduates in the University of Jos, Nigeria
2. Social behavioral problems associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos, Nigeria
  3. Religious behavioral problems associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos, Nigeria

### **RESEARCH QUESTIONS**

The following research questions were answered in the study:

1. What are the moral behavioral problems mean scores associated with the use of Smartphone for the male and female Christian undergraduates in the University of Jos, Nigeria?
2. What are the social behavioral problems mean scores associated with the use of Smartphone for the male and female Christian undergraduates in the University of Jos, Nigeria?
3. What are the religious behavioral problems mean scores associated with the use of Smartphone for the male and female Christian undergraduates in the University of Jos, Nigeria?

### **Hypotheses**

The following null hypotheses were raised and tested at 0.05 level of significance

HO1: The moral behavioral problems mean scores associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos will not differ significantly

HO2: The social behavioral problems mean scores associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos will not differ significantly

HO3: The religious behavioral problems mean scores associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos will not differ significantly

### **2.0 METHODOLOGY**

This study employed the descriptive research design. Specifically, it was a survey that sought to compare the extent of involvement in behavioral problems associated with use of Smartphone by the male and female Christian undergraduates in the University of Jos, Nigeria. The Christian undergraduates in the Faculty of Education with Smartphone that offer Education (EDU 202) and who are in 200 level made up the population for the study. The population size is about 2, 500 for the 2021/2022 academic session. EDU 202 is one of the compulsory foundational courses for all the students in the Faculty of Education. The sample for the study was made up of 264 undergraduates in the faculty streamed into 110 males and 154 females and the sample was composed using purposive and accidental sampling procedures. It was purposive because only Christian students with Android or Smartphone were eligible for the study and those available in the classes during the Lecture for EDU 202 were provided with the instrument to respond to. The instrument for data collection was a questionnaire designed by Dr. Jacob Omede in 2023 for use in collecting data on behavioral problems associated with use of Smartphone. The questionnaire was titled "Level of Knowledge and Involvement in Behavioral problems associated with use of Smartphone" (LOKIBPAUS). The instrument was divided into three (3) sections, A, B, and C. Section A, introduced the LOKIBPAUS to the respondents. Sections B, asked questions on the level of knowledge of respondents about the moral, social and religious behavioral problems associated with the use of Smartphone by in-school Christian adolescents while section C was on their level of involvement in the said moral, social and religious behavioral problems as they use their

Smartphone. This instrument was adapted and only two sections were used, namely, Sections A and C. The section C of the instrument fielded 24 question items for the three variables examined in the study. Ten (10) questions were tied to variable one, while variables two and three fielded 7 question items each. The instrument was rated on a five point rating scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD). The LOKIBPAUS was administered when students gathered for EDU 202 lesson and this was done before the commencement of the lesson in two different classes manned by these two researchers. Collection was done on the spot and so there was no instrument mortality. The data were analyzed using mean, standard deviation and t-test statistical tools. Mean and standard deviations answered the research questions while t-test tested the significance of each of the three hypotheses at 0.05 levels. The criterion mean was 3.00 and this was used to compare the extent of involvement of the male and female Christian undergraduates.

### 3.0 RESULTS AND DISCUSSION

The findings of this study are presented according to the research questions asked and the hypotheses formulated thus:

#### Research question 1

What are the moral behavioral problems mean scores associated with the use of Smartphone for the male and female Christian undergraduates in the University of Jos, Nigeria?

The analyses that answered this question are shown on Table one

**Table 1:** The online moral behavioral problems mean scores of male and female Christian undergraduates in the University of Jos

S/NO	Items: Moral Behavioral Problems associated with use of Smartphone	Male		Female	
		- X	SD	- X	SD
1.	I sometimes lie using my Smartphone	4.2	1.07	4.3	1.10
2.	I sometimes use my Smartphone to post false information online about myself	2.3	1.41	2.1	1.33
3.	I sometimes use my Smartphone to post false information online about other people	1.8	1.11	1.6	0.88
4.	I cheat sometimes in examinations using my Smartphone	1.9	1.37	1.7	1.09
5.	I use my Smartphone sometimes to plagiarize (Cut and paste answer to assignments/projects from online resources verbatim)	3.9	1.19	3.5	1.45
6.	I use my Smartphone sometimes for making vulgar comments/expressions online	3.3	1.38	2.6	1.45
7.	I use my Smartphone sometimes to forward unverified messages/videos online	2.5	1.46	2.4	1.35
8.	I use my Smartphone sometimes to send/read inappropriate contents	3.2	1.42	2.9	1.50
9.	I use my Smartphone sometimes to make defamatory statements about somebody online	2.2	1.30	1.9	1.32
10.	I use my Smartphone sometimes to view pornographic videos/pictures	3.0	1.52	2.5	1.46
<b>Grand mean</b>		<b>2.8</b>	<b>1.32</b>	<b>2.6</b>	<b>1.29</b>

**Source: Field survey, 2023, N= Male (110), Female (154)**

Table 1 is a reflection of the analyses carried out to determine the online moral behavioral problems mean scores of the male and female Christian undergraduates in the University of Jos, Nigeria. The analyses revealed that both the male and female Christian undergraduates in the university had grand means of  $X= 2.8$  and  $2.6$  respectively. These grand mean scores are below the criterion mean of  $X = 3.0$  implying low engagement in the identified online moral behavioral problems. However, the item by item analyses revealed the specific involvements of both the male and female Christian undergraduates in some of the moral behavioral problems. The analyzed data on the table showed that the male undergraduate Christians scored above the average mark in five out of the ten items namely, items 1, 5, 6, 8 and 10, and had higher engagement in online moral behavioral problems than their female counterparts whose engagements were high only on two items namely, 1 and 5.

**Research question 2**

What are the social behavioral problems mean scores associated with the use of Smartphone for the male and female Christian undergraduates in the University of Jos, Nigeria?

The analyses that answered this question are shown on Table two

**Table 2:** The online social behavioral problems mean scores of male and female Christian undergraduates in the University of Jos

S/NO	Items: Social Behavioral Problems associated with use of Smartphone	Male		Female	
		- X	SD	- X	SD
11.	I am addicted to my Smartphone	3.9	1.24	3.5	1.36
12.	I use my Smartphone sometimes to date illicitly online	3.0	1.48	2.3	1.30
13.	I use my Smartphone sometimes to follow wrong models online	2.9	1.53	2.1	1.25
14.	I use my Smartphone sometimes for cyber bullying	2.2	1.36	1.7	1.03
15.	I use my Smartphone sometimes to send sexualized text messages	2.6	1.51	2.1	1.33
16.	I sometimes have less time for people when I am using my Smartphone	3.9	1.41	3.8	1.32
17.	I use my Smartphone to listen to music, watch and play games regularly	4.3	1.01	4.4	1.00
<b>Grand mean</b>		<b>3.3</b>	<b>1.36</b>	<b>2.8</b>	<b>1.22</b>

**Source: Field survey, 2023, N= Male (110), Female (154)**

Table 2 showed the analyses of data on the responses of the male and female undergraduate Christians in the University of Jos to the online social behavioral problems of the use of their smart phones. The male undergraduate Christians engage more in promoting online social behavioral problems than the female Christian undergraduates with mean scores of  $X = 3.3 > 3.0$  and  $2.8 < 3.0$  respectively. Out of seven (7) items on the instrument, the male Christian undergraduates had mean scores of 3.0 and above in four (4) items, namely, items 11, 12, 16 and 17 while for the female Christian undergraduates, it was in three (3) items namely, 11, 16 and 17. The common

online social behavioral problems to both the male and the female respondents were addiction to the phone (Male, X = 3.9, Female, X = 3.5), not caring for people while on the phone (Male, X = 3.9, Female, X = 3.8) and listening to music, watching and playing online games regularly (Male, X = 4.3, Female, X = 4.4).

**Research question 3**

What are the religious behavioral problems mean scores associated with the use of Smartphone for the male and female Christian undergraduates in the University of Jos, Nigeria?

Table 3 showed the analyses that provided answers to this question.

**Table 3:** The religious behavioral problems mean scores associated with use of Smartphone by male and female Christian undergraduates in the University of Jos

S/NO	Items: Religious Behavioral Problems associated with use of Smartphone	Male		Female	
		- X	SD	- X	SD
18.	I am addicted more to cyberspace using my Smartphone than I have personal time/relationship with God	3.4	1.42	3.5	1.36
19.	I sometimes read text messages on my Smartphone while church service is on	3.5	1.42	3.7	1.21
20.	I sometimes send text messages on my Smartphone while church service is on	3.5	1.36	3.6	1.32
21.	I sometimes listen to music using the earpiece while church service is on	1.7	1.12	1.7	1.08
22.	I sometimes take selfie on my Smartphone while church service is on	2.2	1.45	2.7	1.48
23.	I use my Smartphone to do WattsApp while church service is on	3.2	1.47	2.9	1.55
24.	I use my Smartphone to play mobile games while church service is on	2.3	1.44	2.3	1.43
<b>Grand mean</b>		<b>2.8</b>	<b>1.37</b>	<b>2.9</b>	<b>1.34</b>

**Source: Field survey, 2023, N= Male (110), Female (154)**

The analyses on Table 3 about religious behavioral problems of the Christian undergraduates in the University of Jos revealed a below the average engagement (Male, X = 2.8 < 3.0, Female, X = 2.9 < 3.0) on the identified behavioral problems. However, the data analysed revealed the involvements of the male Christian respondents in four (4) out of the seven (7) problems identified while it was in three (3) items for the females. The common religious problems that scored above the criterion mean for the male and female respondents are three (3) namely, items 18, 19 and 20.

**Results of the test of Hypotheses**

HO1: The moral behavioral problem mean scores associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos will not differ significantly

**Table 4:** t-test analyses on the moral behavioral problems associated with the use of Smartphone by male and female Christian undergraduates in the University of Jos

Variables	NO	- X	SD	t- Calculated	t- Critical	DF	Dec.
Christian male undergraduates	110	2.8	1.32	1.226	1.650	263	Accepted
Christian female undergraduates	154	2.6	1.29				

Table 4 tested the null hypothesis on moral behavioral problems associated with the use of Smartphone by male and female Christian undergraduates in the University of Jos. The calculated  $t = 1.226$  was less than the critical  $t = 1.650$  at 0.05 level of significance and the degree of freedom of  $(df) = 263$ . This implied an acceptance of the stated null hypothesis. The online moral behavioral problem was not significantly gender bias as both the male and female Christian undergraduates in this university were all amenable to these problems. Although, the item by item analyses on Table 1 showed some mean gender differences, these differences were not seen to be statistically significant.

HO2: The social behavioral problem mean scores associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos will not differ significantly.

The result of the analyses that tested this hypothesis is shown on Table 5.

**Table 5:** t-test analyses on the social behavioral problems associated with the use of Smartphone by male and female Christian undergraduates in the University of Jos

Variables	NO	- X	SD	t- Calculated	t- Critical	DF	Dec.
Christian male undergraduates	110	3.3	1.36	3.073	1.650	263	Rejected
Christian female undergraduates	154	2.8	1.22				

The data on Table 5 showed that the calculated  $t = 3.073$  is far higher in value than the critical  $t = 1.650$  at 0.05 level of significance and a degree of freedom of  $(df) = 263$ . This showed a significance difference between the online social behavioral problems of the male and female Christian undergraduates in the University of Jos and so, a rejection of the stated null hypothesis. The male Christian undergraduates in the university statistically promoted or engaged more in online social behavioral problems such as dating illicitly online (Male,  $X = 3.0$ , Female,  $X = 2.3$ ), following wrong models online (Male,  $X = 2.9$ , Female,  $X = 2.1$ ), engage more in cyber bullying (Male,  $X = 2.2$ , Female,  $X = 1.7$ ) and sending of sexualized text messages (Male,  $X = 2.6$ , Female,  $X = 2.1$ ) than their female counterparts in the same university.

Ho3: The religious behavioral problems mean scores associated with the use of Smartphone by the male and female Christian undergraduates in the University of Jos will not differ significantly

**Table 6** : t -test analyses on the religious behavioral problems associated with the use of Smartphone by male and female Christian undergraduates in the University of Jos

Variables	NO	- X	SD	t- Calculated	t- Critical	DF	Dec.
Christian male undergraduates	110	2.8	1.37	-0.590	1.650	263	Accepted
Christian female undergraduates	154	2.9	1.34				

Data on Table 6 showed there was no significant difference in religious behavioral problems of the male and female Christian undergraduates in the University of Jos as they use their smart phones. This was because the calculated  $t = -0.590$  was less than the critical  $t = 1.650$  at 0.05 level of significance and a degree of freedom of (df) = 263.

### Discussion of findings

This study examined the behavioral problems associated with use of Smartphone by male and female Christian undergraduates in the University of Jos, Plateau state, Nigeria. The variables addressed and considered as behavioral problems in this study were put into three categories, namely, moral, social and religion that the male and female Christian undergraduates in the university are likely to promote as they use their Smartphone to process some online and off-line social media activities. To execute this study, three research questions were asked and three corresponding null hypotheses were formulated and tested at 0.05 level of significance.

Research question 1 sought information on the moral behavioral problems mean scores of the male and female Christian undergraduates in the University of Jos. The data collected were analyzed using mean and standard deviation statistics and the result on Table 1 showed a grand mean of  $X = 2.8$  for the male respondents and  $X = 2.6$  for the female respondents. The criterion mean was  $X = 3.0$ . This therefore implied that both the male and the female respondents had grand mean scores that were below the criterion mean suggesting that they had low engagements or involvements in some of the identified online moral behavioral problems in the use of their Smartphone. But this is not to deny the existence of these moral problems among some of these Christian respondents as a grand mean of  $X = 2.8$  for the males and  $X = 2.6$  for the females are just a little distance away from  $X = 3.0$  that is the criterion mean. The test of null hypothesis was not significant as the calculated  $t = 1.226$  was less than the critical or tabled  $t = 1.650$  at 0.05 level of significance and a degree of freedom of  $df = 263$  (see Table 4). This finding corroborates the one of the findings of the study by Omede (2023) that in-school Christian adolescents even though have high awareness about the moral behavioral problems that go on online as adolescents utilize their Smartphone, they were not significantly involved in the promotion of such moral behavioral problems. Earlier, Omede (2018) examined the outcome of growth and developmental challenges on the behavioral dispositions of in-school Christian adolescents in Nigeria and found out that this set of students passed through these developmental challenges with little or no stress because of how their knowledge of the word of God in the bible had prepared them ahead of this time.

But item by item analyzes on Table 1, showed that the respondents accepted being involved in the promotion of these identified online moral behavioral problems. For instance, they accepted lying sometimes while using their Smartphone (Male,  $X = 4.2$ ,

Female,  $X = 4.3$ ), sometimes plagiarize by downloading answers to assignments and submitting same without their inputs (Male,  $X = 3.9$ , Female,  $X = 3.5$ ), making vulgar comments or expressions online (Male,  $X = 3.3$ , Female,  $X = 2.6$ ) and sometimes send and read inappropriate contents using the Smartphone (Male,  $X = 3.2$ , Female,  $X = 2.9$ ) and as well view pornographic videos and pictures on their Smartphone (Male,  $X = 3.0$ , Female,  $X = 2.5$ ). Some of these findings are consistent with previous findings such as that of Ifeanyi and Chuwure (2018) that the use of Smartphone can cause distraction for students and according to Buck, McInnis and Randolph (2013), some students use the Smartphone to cheat during examinations or tests. That some students engage in these online moral behavioral problems are worrisome not to talk more of Christian students also being involved. It is not a Christian conduct to tell lies, to cheat as some of them do in examinations, or secretly watching and enjoying pornographic videos, nude and immoral pictures, plagiarize and insult or talk rudely to other online viewers. Christians expectedly are the regenerated individuals whose style of living should reflect that of the Lord Jesus Christ, they are to abhor sins and other appearances of evil and be good moral exemplars. The knowledge and practice of Christianity should be sufficient enough to exclude the Christian students from engaging in these online behavioral problems if they are to be Christians enough.

Research question 2 and hypothesis 2 analyzed data and ran test on the social behavioral problems promoted by the male and female Christian undergraduates as they use their Smartphone. The analyses on Tables 2 and 5 provided the required answers. The male Christian undergraduates had the grand mean  $X = 3.3$  that was higher than the criterion mean  $X = 3.0$ . The grand mean of  $X = 2.8$  for the female Christian undergraduates was below the criterion mean of  $X = 3.0$ . The test of the null hypothesis on Table 5 showed there was a significant difference in the online social behavioral problems as the male Christian undergraduates had higher engagement or involvement than their female counterparts. For instance, the male Christian undergraduates date illicitly more online (Male,  $X = 3.0$ , Female,  $X = 2.3$ ), Follow wrong models online (Male,  $X = 2.9$ , Female  $X = 2.1$ ), engage more in cyber bullying (Male,  $X = 2.2$ , Female,  $X = 1.7$ ) and send sexualized text messages more (Male,  $X = 2.6$ , Female  $X = 2.1$ ). Some of these findings are consistent with findings of earlier studies by The American College of Obstetricians and Gynecologists (2016), Oxford Learning (2019), Iroanusi, Adimora, Andor, Ube, and Audu (2020), Research clue.com (2020) and Play by the rules (2021) that acknowledged the existence of these problems online among the youths and adolescents of nations. In fact, Ramli (2011) noted that internet was reputed for social and ethical problems among students. There are studies that have established variations in social media usage and their contents that the findings of this study corroborate. For instance, Sincek (2014) noted that boys commit more cyber verbal bullying, cyber forgery and more violence based on hidden identity than girls. Similarly, Psylla, et al (2017) asserted that males use social media platforms to meet new friends, network, look for partners and play computer games while females use them for maintaining their relationships. As pointed out earlier, the existence of these online social behavioral problems is not surprising because of the depraved nature of man. Wickedness has become so fully grown that people defraud others by the use of technology today. But the central concern of this paper is the involvement of Christians in floating and patronizing some of these unchristian behaviors.

On religious behavioral problems, research question 3 and its corresponding hypothesis 3 addressed the issue and findings as shown on Tables 3 and 6. The grand mean for the male respondents was  $X = 2.8$  while it was  $X = 2.9$  for the females. These scores are below the

criterion mean but high enough to be of concern in view of the category of the people that this study focused-Christian undergraduates. In the church, what is obvious among many youths is that they are seen to be fondling their phones sometimes for none-religious purposes (Techwalla, 2019 & Computer Hope, 2019). Three religious behavioral problems were common to these male and female respondents namely, they have less time relating with God than they relate with their phones (Male,  $X = 3.4$ , Female,  $X = 3.5$ ), read text messages on their phones during church services (Male,  $X = 3.5$ , Female,  $X = 3.6$ ), and also send text messages or reply text messages while church services are ongoing (Male,  $X = 3.5$ , Female,  $X = 3.6$ ). Both the males and female respondents declined listening to music using their earpiece while in a church service (Male,  $X = 1.7$ , Female,  $X = 1.7$ ). On the whole, the female respondents engaged more in religious behavioral problems than their male counterparts. The test of hypothesis reported on Table 6 however showed that there was no significant difference in behavioral problems engaged by the male and female Christian undergraduates in the university. The religious behavioral problems associated with the use of Smartphone are common to both the male and female Christian undergraduates in the university.

## **4.0 CONCLUSION AND RECOMMENDATIONS**

### **4.1 Conclusion**

This study examined the behavioral problems associated with use of Smartphone by the male and female Christian undergraduates in the University of Jos, Plateau state, Nigeria. The variables examined in the study and considered as behavioral problems were the moral, social and religious behavioral problems. Three questions were asked and three hypotheses were tested. The study found out that the identified online behavioral problems existed among this category of students in the university but not so much at alarming rates. For instance, the male Christian undergraduates were found to have below the average engagements in moral, and religious behavioral problems and above average engagements in social behavioral problems while their female counterpart had below the average engagements in all the three variables (moral, social and religious) measures. There was a significant difference between the involvements of the male and female Christian undergraduates on the measure of social behavioral problems as the males were found to have higher involvement than the females. Although the male and the female Christian undergraduates' mean scores on the variables examined were mostly below the criterion mean, it's still not a healthy development for the Christendom that these behavioral problems are found among Christians who expectedly are to abhor sins and all appearances of evils because of the new life they have in Jesus.

### **4.2 Recommendations**

It is not a wholesome development to know that some Christian undergraduates-male and females-are involved in some online behavioral problems. This finding has therefore implications for parents who are Christians, church pastors and elders as well as the Christian teachers, lecturers and students in these following ways:

1. Christian parents should be actively involved in monitoring the online behaviors of their children particularly the undergraduates. Educate them on how to use the social media in more decent and godly ways, correct and instruct them from the word of God as appropriate. This can be effectively done during the family devotion periods when at home on holidays.
2. Church pastors and elders are not to minimize church teachings and periodic sermons on holiness and righteousness. Holiness is a Christian character or virtue that must not be

demeaned under any condition or guise. The consequences of living a depraved, debased and riotous life should always be emphasized and made plain to these set of students.

3. Christian teachers and lecturers should know that they have moral and religious obligations to the Christian students aside their conventional teachings in the classroom. It will be of eternal benefit to Christian students if they are disciple and mentored appropriately by the Christian teachers to live like Jesus Christ. Christianity is a life style of Jesus Christ.

4. Christian students need to know this and be guided with this fact, that they will one day stand to give account of their lives to God. Sin is sin, not minding the form, size, color and the way it comes. God hates sin eternally. The things they do with their phones-in secret or in the open-should be what will bring glory and honor to God.

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