SOCIAL MEDIA USE AND REPRODUCTIVE KNOWLEDGE AND BEHAVIOUR OF UNDERGRADUATES IN THE UNIVERSITY OF IBADAN, IBADAN, NIGERIA

BY

Adebola Aderonke BANKOLE
B.Tech. Anatomy (LAUTECH)
MATRIC. NO.: 204501

A Project in the Department of Health Promotion and Education
submitted to the Faculty of Public Health

In partial fulfilment of the requirements for the degree of

MASTER OF PUBLIC HEALTH
(HEALTH PROMOTION AND EDUCATION)

Of the

UNIVERSITY OF IBADAN

JUNE, 2019

ABSTRACT

Social media, including Facebook, Whatsapp, and Twitter, have the ability to provide supportive environment for the exploration of friendship, romance, and social status, while at the same time giving young people the opportunity to share and discuss their opinion on so many subjects like music, knowledge of television programmes and movies, online videos/games, and so on. Young people tend to embrace the online world with much enthusiasm, as it represents a place where they are visible to and can communicate with their peer groups without adult supervision. The amount of time young people dedicate to social media could make them susceptible to information that could have negative or positive influence on their reproductive health. There has been few study exploring the relationship between social media and reproductive health knowledge and behaviour of young people hence, this study was aimed at exploring the relationship between social media use and reproductive knowledge and behaviour among undergraduates of the University of Ibadan.

The study employed a cross-sectional survey design involving a sample of 422, of which only 386 self-administered questionnaire were found valid for analyses, giving a response rate of 91.5%. A multi-stage sampling technique was used to select respondents. A 14 point knowledge scale was used to classify knowledge into three categories: $\geq$12 was classified as a good knowledge, a score of >5 to <12 was considered as fair knowledge while $\leq$ 5 was classified as having poor knowledge. Data on use of social media and reproductive behaviour were presented in percentages. Data were analysed using descriptive statistics and inferential statistics at $p<0.05$.

Mean age of respondents was 20.2$\pm$2.5 years and many (52.6%) were males. All respondents have at least one social media application on their Smartphones. A larger percentage (99.7%) of respondents have Whatsapp, 92.0%; Facebook, 80.0%; Instagram, 94.8%; YouTube, 34.7%; Snapchat, 21.5%; Telegram, 49.2%; Twitter, and the least was Hangout at 2.8%. The mostly used application is Whatsapp with 80.8%, followed by Facebook which 46.1% respondents claim to use always. Majority (65.8%) of respondents preferred Whatsapp to all other social media applications. A large majority (93.8%) had a good knowledge of

reproductive health (mean score of 12.8±1.1). More than a quarter of respondents (26.7%) claimed to have had sex before. Majority (70.9%) of respondents, who have had sex before, had their sexual debut within the age range of 15-19years. More than half of respondents (73.0%) who claimed to have had sex before were still sexually active as at the time of this study. Majority (64.8%) of those who were still sexually active do not use condom every time they have sex. There was no statistically significant association between the use of social media and reproductive behaviour; gender and reproductive knowledge; gender and reproductive behaviour. However, there was a statistically significant association between use of social media and reproductive knowledge.

The use of social media have an influence on reproductive knowledge but not on reproductive behaviour. Therefore, social media should be maximally used in communicating with young people about reproductive health.

Keywords: Social media, University undergraduates, Reproductive health.
Word count: 500

DEDICATION

This work is dedicated to Almighty God, my loving and caring husband, my ever supporting mother and my wonderful sister.

ACKNOWLEDGEMENT

My profound gratitude goes to Almighty God for His sustaining grace in my life to start and finish this work successfully. I would like to appreciate my understanding and patient supervisor, Prof. Ademola J. Ajuwon for his professional support and advise from the beginning to the end of this work; giving prompt response in assessing my work and also giving me appropriate suggestions when necessary.

My appreciation goes to other members of staff of the Department of Health Promotion and Education especially Dr. Mojisola Oluwasanu for her moral support during the process of carrying out this research work, The Ag. Head of Department, Dr. O.E. Oyewole, Prof. O. Oladepo, Prof. Oyedunni S. Arulogun, Dr. F.O. Oshiname, Dr. M.A. Titiloye, Dr. O. Dipeolu, Dr. Yetunde John-Akinola, Dr. Mrs. Adeyinka T. Desmenu, and Mr. John Imaledo for their intellectual contributions towards this work.

I am also grateful to the respondents that spared their time to participate in this research. This work would not have been possible without you all. Thank you.

To my friends and colleagues, Adesina Melody, Mamora Ayooluwakitan, Hussein Oluwatobi, Igbana Erdoo, Onuh Gloria, Alalade Akinola, I say a very big thank you for your contributions towards the success of this work.

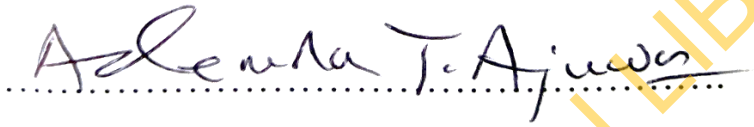
I will like to appreciate Mummy and Daddy Adesina, for their encouragement, moral and financial support, Rev'd Paul and Pastor Olaniyan for their moral support and prayers.

Most importantly, I want to appreciate my Mother, Mrs. Esther Bankole and my Husband, Mr. Ebenezer Ajayi for their financial and emotional contributions to this work and program.

To my baby sister, Victoria Bankole, thank you for your support.

CERTIFICATION

I hereby certify that this study was carried out by BANKOLE, Adebola Aderonke under my supervision in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria.



SUPERVISOR

Ademola J. Ajuwon

B.Sc. (Lagos); MPH, PhD (Ibadan)

Professor

Department of Health Promotion and Education,

Faculty of Public Health, College of Medicine,

University of Ibadan, Nigeria.

Table of contents

CHAPTER THREE: Methodology

CHAPTER FOUR: Results

CHAPTER FIVE: Discussion, Conclusion, and Recommendation

List of Tables

List of Figures

List of Appendices

CHAPTER ONE
INTRODUCTION

Background to the Study

Media was defined by Davies and Cranston (2008) as the communication channels through which news, entertainment, education, data, or promotion messages are circulated. The media includes all the various broadcasting and narrow casting medium such as newspapers, magazines, TV, radio, billboards, direct mail, telephone, fax, and internet (Davies and Cranston, 2008). Susan Greenfield, an Oxford University researcher in her article *The Quest For Identity In The 21st Century*, on Daily Mail UK 14th September, 2010, reveals that there will be a transformation in the current forms of communication as we know it, as more people discover the potential of the internet, and become active parts of the World Wide Web, and also as technology becomes more advanced, accessible, expanded, and sophisticated. Social media as we know it has become an absolutely necessary part of life as social websites and the various applications rapidly increases, which could be as a result of the increasing intricacies of our contemporary time (Kaur, 2015).

According to Livingstone (2008), young people tend to embrace the online world with much enthusiasm, as it represents a place where they are visible to and can communicate with their peer groups without adult supervision, and also it serves as a place where they can have opportunities to experiment with all sorts of ideas, scorn communicative norms, and engage in all sorts of behaviour.

Overtime, technology has evolved to the point of uniting people all over the world, and has bridged the gap in communication, which has given room for building relationship. Today, diverse messages can reach their target groups in no time at all, and these messages have the ability to generate changes and tendencies to acquire new behaviour (Livingstone, 2008)

Young people make use of the social media and social networking sites (SNS) to connect and relate with others, download, upload, and create information online. They also use the social media to express themselves, belong to a group and also to experiment with their identities which could be sexuality, ethnicity, gender, bodies, and so on (Davies and Cranston, 2008). Before social media came to be, the most common means of sending and receiving messages is the Electronic mail (email) and before then was letter writing and Telegram. But with time, just as development is a continuous thing, so also is the innovation of social media

applications, which makes information sharing not only easier but faster as well. Over time, so many applications has been invented and introduced to the public and all have been well received even in Nigeria, seeing as we humans are social animals. It is now understood that young people experience online and offline social worlds as "mutually constituted" (Collin *et al.,* 2011; Pascoe, 2011).

Young people negotiate intimate relationships online, including flirting, breaking up, and sexual encounters (Pascoe, 2011). Chatting is one of the more popular activities on the Internet- people can talk to anyone across the world. Introduction of social media networking sites has facilitated communication. These are web-sites where users can create a profile and connect that profile to others to form an explicit personal network. Through social media, people can use networks of online friends and group memberships to keep in touch with current friends, reconnect with old friends or create real life friendships through similar interests or groups. Besides establishing important social relationships, social media members can share their interests with other likeminded members by joining groups and forums. Most social media websites also offer additional features. In addition to blogs and forums, members can express themselves by designing their profile page to reflect their personality.

Young people access the social media through two major means which are the cell phones and the computer. These two tools for accessing social media, especially the cell phones, provide easy access and exposure to the young people, therefore, this study aims to explore the influence social media have on young people in relation to their knowledge and behaviour on reproductive health.

1.2 Statement of the Problem

One of the largest contributors to the burden of reproductive health problems in Nigeria is risky sexual behaviour among young people (NDCP, 1999). This became worsened with the invention of Smart phones, which enable the activation of different applications such as Whatsapp and the likes. Most of these applications have features like video, text, and audio which have made it easy to share different types of information in a group. Research has shown that the prevalence of HIV/AIDS is on the increase in young people and also many of the issues surrounding unsafe abortion focus on adolescents and unmarried young people

(Abiodun, 2011). Since the invention of "smart phones", there has been widespread use of these devices to browse the internet by the adolescents and young persons. Many in this population are known to spend hours on the internet, surfing the web and also communicating with their friends through the social media. The social media which consists of several social networks like *Facebook, Whatsapp, Instagram, snapchat, imo, blackberry Messenger (BBM), Twitter, you tube*, and so on, have been known to be a source of information, which encourage both positive and negative behaviour with several attractive features which may draw them more to the media and can even make them addicted to their phones (Schill, 2011). With over 1.2 billion users daily, Whatsapp is the most widely used app globally (Olsen, 2014; (SGM, 2018) because it has so many features like the voice call, video call, voice notes, status upload features, that have made it widely acceptable. These features have made communication easy with the ability to send and receive messages, videos, and pictures almost instantly. The amount of time young people dedicate to social media could make them susceptible to information that could have negative or positive influence on their reproductive behaviour.

Studies like the influence of social media on adolescent behaviour, influence of social media on the social behaviour, among post graduate students of Salford University, United Kingdom, among others have been conducted. But little has been done on the influence of use of social media on reproductive knowledge and behaviour of young people in Nigerian University, hence the need for this study.

1.3 Justification of the Study

There is little data on the effect the use of social media have on the reproductive knowledge and behaviour of young people. Therefore, it is hoped that the findings of this study will bridge the gap of lack of sufficient information on the influence of the use of social media on the reproductive knowledge and behaviour of young people. The findings of this study may also be useful to counselors working with young people to know which tools to use to effectively communicate with them. The results of the study are likely to influence further research by other researchers who may be interested in this field of knowledge.

1.4 Research Questions

The following research questions guided the study:

1. What is the prevalence of access to smartphones among undergraduates in the University of Ibadan?
2. What is the pattern of use of the different social media applications among undergraduates in University of Ibadan?
3. What sorts of Information do they send and receive on social media?
4. How have the information received on social media affected their knowledge on reproductive issues
5. What reproductive health actions have they taken as result of exposure to the information received from the social media site?

1.5 Research Objectives

The research objectives for this study are classified into two which are the Broad Objective or Goal and the Specific Objectives.

1.5.1 Broad Objective

The goal of this research is: To investigate the influence of social media on the reproductive knowledge and behaviour of undergraduate students of the University of Ibadan

1.5.2 Specific Objectives

This research is being carried out in order to;

1. Determine the number of undergraduate students in the University of Ibadan who have access to Smartphones
2. Identify the smartphone app mostly used and preferred by undergraduates in the University of Ibadan
3. Explore the types of information they share on social media
4. Describe the reported effect of the use of social media on their reproductive knowledge
5. Determine the reproductive actions they have taken as a result of exposure to the

information gotten on social media site.

1.6 Hypotheses

HO1: There is no significant difference between the use of social media by respondents and reproductive knowledge.

HO2: There is no significant difference between the use of social media by respondents and reproductive behaviour.

HO3: There is no significant difference between sex of respondents and reproductive knowledge.

HO4: There is no significant difference between sex of respondents and reproductive behaviour.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Social media

The Internet is the global system of interconnected computer networks which link devices and as a result, serves to connect people world-wide by providing an incredible amount of information which adolescents and young people can access (Arulogun et al. 2016). According to research, young people are known to use the internet to search for and gain answers to most of their health concerns like dieting, physical fitness information, and health topics that are difficult to discuss with others like, drug use and sexual health (Lenhart, 2010).The Internet carries many network services, most prominently mobile apps such as social media apps, the World Wide Web, electronic mail, multiplayer online games, Internet telephony, and file sharing services. For the purpose of my study, I will only be considering the Social media.

The word "social media" was used for the first time in 2005 and this reveals an interest in the growth and development of relatively more recent inter-relational parts of the internet, which is sometimes called the Web 2.0 (Ito et al., 2010). Generally, social media is the collective term used for the online communications channels which are mainly for community-based input, interaction, content-sharing and collaboration among people (Haddon, 2015).

According to Ito, (2008) Social media have the ability to provide a very supportive environment for the exploration of friendship, romance, and social status, while at the same time giving young people the opportunity to share and discuss their taste in so many things like music, knowledge of television programmes and movies, online videos/games, and so on. Since the invention of "smart phones", the use of social media via the internet by people to communicate, get information and connect with each other has increased greatly worldwide. The social media have features that make it attractive to everybody especially young people. These features appeals greatly to the young minds and it also make the social media easy to use. Some of these features include video viewing and sharing, chatting which includes, instant messaging, voice chat and video chat, and so on.

Some of the social media applications are; Facebook, you tube, Twitter, Instagram, Whatsapp, to mention but a few. Most of these applications are widely used by young people for academic, pleasure, and also to source for information. It is important to know that even when not actually looking for a particular information, some just pop up on the screen of the phone. Unsuspecting users could be victims of sexually explicit materials like pornography even without intending to view them. As curiosity is part of the human nature, the need to view to the end might over cloud better judgment and one might end getting addicted to and even practicing what is being viewed.

Although the use of media is a very important part of the daily life of adolescents and young people, there are some risks associated with the use of social media. Some of these risks are; cyber bullying, sexting, dangers of sexual solicitation, and exposure to sexually explicit materials. The risks faced by young people online are similar to that faced offline. However, the risk profile for the various types of social media applications depends on the person's use of the media and the psychological makeup of the persons using them. It is therefore important to know that young people more at risk often engage in risky behaviour offline (Berkman, 2010).

2.2 Social media and Youth

According to Haddon, 2015 (a senior researcher and part time lecturer in the Department of Media and Communications at the London School of Economics and Political Science), in his book *"The International Encyclopedia of Digital Communication and Society, First Edition*", a lot of young people have one time or the other pretended to be someone they are not which is usually someone older as a form of joke, a means of ensuring that their personal information remain private, as a way of avoiding adult surveillance, or to open accounts on social media like Facebook due to restrictions placed on those that are underage (under 13 years old). Due to the fact that most young people have online contacts on social media sites who are also their friends offline or in the least friends to their friends (Boyd, 2010) they tend to post profiles which contain real details of their lives (names, age, interests etc). Livingstone, 2009 opines that, there has been repeated argument that the physically immaterial space of the social media which give room for more flexibility and creative forms of sociability, has been a source of motivations for young people in the use of social media

2.3 Reproductive Health

Reproductive health is defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system.

According to the United Nations, a good reproductive health should include the following;

a. Freedom from the risk of having sexually transmitted diseases
b. The right to full knowledge of contraceptive choices, thereby ensuring the ability to regulate one's own fertility
c. Ability to control one's sexuality without discrimination as a result of one's age, sex, marital status, or similar considerations (Hall *et al.,* 2012).

In 2008, the WHO stated that "Reproductive and Sexual ill-health accounts for 20% of the global burden of ill-health for women, and 14% for men" (WHO, 2008). Ensuring that the reproductive health of young people is up to par has been a very difficult issue facing most developing countries (Akinfaderin-Agarau *et al*., 2012). Young people are known to be the group of people who are most affected by the reproductive health problems and in Nigeria, with 33.6% (47 million) of the total population being aged between 10 – 24 years (National Population Commission, 2006), this is a major challenge affecting the country. According to the findings from the National Demographics Health Survey (NDHS), 2013, the knowledge of contraception is widespread in Nigeria; with 85% of the female respondents and 95% of the male respondents reporting their knowledge about at least a contraceptive method. Despite this widespread knowledge, only 15% of the currently married use a contraceptive method, this only shows an increase of 2% from the 2003 NDHS. While just 10% of the currently married women reported using modern method Ten percent of currently married women report using a modern method. In Nigeria, 8 percent of women age 25-49 have given birth by age 15, and 49 percent have become mothers by age 20. Overall, 23 percent of women age 15-19 have begun childbearing (NPC & ICF Marco, 2014)

2.4. Sexually-related problems

Young persons in Nigeria are caught between tradition and changing cultures which are brought about by urbanisation, and a media-saturated environment. Traditional mechanisms that are to be put in place for coping with and regulating young people's sexuality, especially early marriage and norms of chastity before marriage have worn away. This has caused an increase in the rates of unprotected sexual activity, unwanted pregnancy, unsafe abortions, STDs, HIV and AIDS. The documented negative effects of these trends are very severe and affect not only young people but also their families, community members and the nation as a whole. (SRH-G, 2001)

2.5 Risky Sexual Behaviour

Almost everywhere, sexual activity begins for most men and women in the later teenage years (ages 15–19 years), this is confirmed by the NDHS, 2013 survey. For women, the age of onset of sexual intercourse could be linked to the age of marriage in countries where early marriage is encouraged. For men, age at first intercourse is, in general, not linked to age at marriage. In most African and Asian countries, men start to have sex later than women. Most of these young people, engage in risky behaviours such as having sex without protection, having multiple sexual partners, and so on all in the name of fun and adventure without putting into consideration that these practices could be detrimental to their reproductive health. Some of the consequences of risky sexual behaviours are described below.

2.6 Consequences of Risky Sexual Behaviour

2.6.1 STIs including HIV/AIDS

According to the NDHS 2013, in Nigeria, 26% of women and 37% of men have comprehensive knowledge about AIDS. This means they know that using condoms consistently during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV; they also know that a healthy-looking person can have the AIDS virus, and they reject the two most common local misconceptions about HIV transmission or prevention. According to the Centre for Disease Control (CDC), there are more than 600 million cases of STIs globally. Sexually transmitted infections (STIs) are infections that have the likelihood of being transmitted from a human to another by means of

sexual activity. The eight most common STIs analyzed by the Centre for Disease Control (CDC) are Chlamydia, gonorrhea, hepatitis B virus (HBV) herpes simplex virus type 2 (HSV-2), human immunodeficiency virus (HIV), human papillomavirus (HPV), syphilis, and trichomoniasis.(CDC, 2013)

In sub-Saharan Africa, HIV infection is primarily spreading through heterosexual relations, with secondary source being through homosexuality practices (gay men and other bi-sexual men who have sex with men), transgender people, people who inject drugs, sex workers, and clients of sex workers (UNAIDS, 2004). Although the immense decline has been recorded, there is still more to be done as huge challenges lie ahead (UNAIDS 2016). Out of the total population of 17% male and 17% female, in Sub-Saharan African young people between the ages 15-24, about 12% of the males were newly infected with HIV and about 25% of the females were newly infected with HIV (UNAIDS, 2016). This is really high when compared to the total population of young people globally. This could be due to their exposure to sexually explicit materials gotten from the internet.

2.6.2 Unwanted pregnancy and induced abortion

Findings from the NDHS 2013 revealed that Nigerian women have about one child more than the number they want. Contraceptive prevalence in Nigeria is low at 15%, which could be the reason for the recorded high fertility rate. This means that the total fertility rate of 5.5 children per woman is 15 percent higher than it would be if all unwanted pregnancies were avoided (Etokidem *et al*., 2017). Unwanted pregnancy and induced abortion are social problem that has existed for a long time in many societies. Due to various risky sexual behaviours engaged in by young people, there have been a lot of cases of unwanted pregnancies globally. When a thing is not wanted, the next course of action will be to get rid of it which leads to the problem of induced abortion. In Nigeria, the topic of abortion is a controversial issue which is frowned upon by almost all the population due to religious, cultural and moral beliefs and the laws of the country. Since abortion is illegal in Nigeria, many women resort to unsafe abortion methods, leading to abortion-related complications and increasing mortality and morbidity rates in the country. According to research done by the Guttmacher Institute, an estimated 456,000 unsafe abortions are done in Nigeria every year (Ogbu, 2013). In a joint study carried out by the Society of Gynecologists and

Obstetricians of Nigeria and Nigeria's Ministry of Health, estimates of women who engage in unsafe abortion were put at about 20,000 each year (Bankole *et al*., 2015). Research has revealed that only 40% of abortions are performed by physicians with improved health facilities while the remaining percentage is performed by non-physicians (Bankole *et al*., 2015). The consequences of these abortion practices can be as severe as death. Abortion accounts for 40% of maternal deaths in Nigeria, making it the second leading cause of maternal mortality in the country.

2.7 Conceptual framework

The conceptual framework adopted for this study is the Social Learning Theory. It is a theory which suggests that human beings can acquire a new behaviour by observing and imitating other humans (Bandura, 1971). This theory has three (3) contexts which are; the Environment, Individual and Behaviour. In relation to examine the influence of social media use on the reproductive health knowledge and behaviour among undergraduates, the following contexts will be applied as discussed below;

The Environment

The theory described how the environment, that is, factors that are physically external to a person could influence the knowledge and consequentially the behaviour of the individual. Factors such as the use of social media, religious beliefs, the need to be accepted by peers, and training from parents/guardians can influence the reproductive behaviour of an individual. Section B, C and D explored this context.

The Individual

This describes how the personal and cognitive characteristics of an individual can influence their knowledge and behaviour as regards reproductive health. These include age, sex, gender, religion, department, level, marital status. All these factors can affect the learning process and behaviour of an individual. Section A of the instrument explored this context.

Observational Learning

The theory suggests that learning can occur by observation of a behaviour and its consequences and thereby enabling an individual to make informed decisions, which means that learning can occur without any observable decision. Individual can increase their knowledge of reproductive health by observing the reproductive behaviour of friends,

relatives, and even strangers online. Questions exploring this context are reflected in section D, E and F on the instrument.

Behaviour

the reproductive behaviour of a person can be influenced by what has been observed in others or what has been taught in the environment. The questions exploring this context are reflected in section F of the instrument.

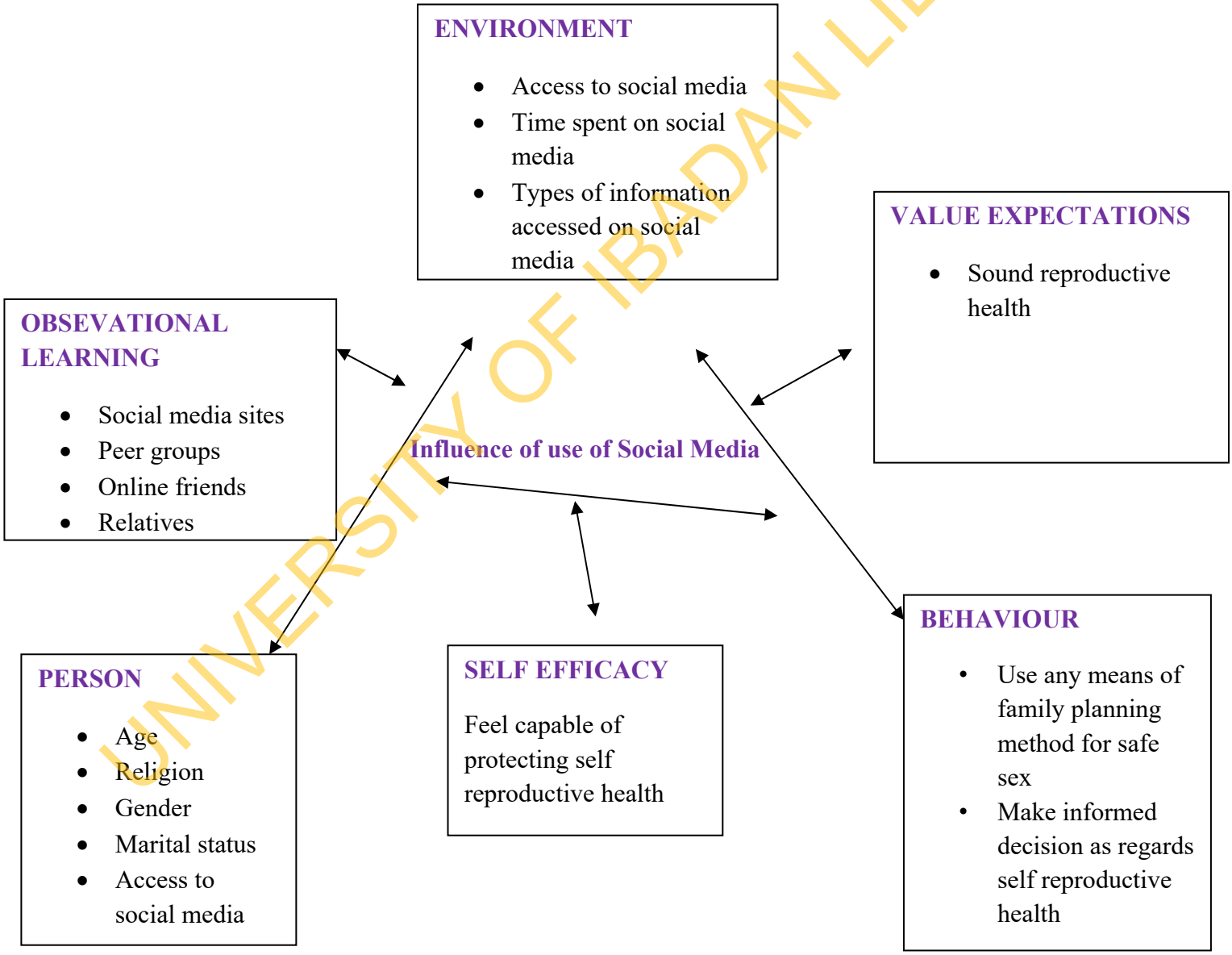


Figure 2.1: Social Learning Theory explaining factors influencing Reproductive knowledge and Behaviour

CHAPTER THREE
METHODOLOGY

3.1 Study design

The study was a descriptive cross-sectional survey which involved questionnaire administration among respondents.

3.2 Study Area

This research was carried out in the University of Ibadan. The campus is located in the city of Ibadan (5miles i.e. 8 kilometers from the centre of the city), the capital of Oyo state, in south western Nigeria. The institution occupying over 1,032 hectares of land and was originally established on the 17th of November, 1948 as an external University College, London. It was called University of Ibadan in 1962 and had over 12,000 undergraduate and post graduate students at that time. During the study, the institution had 16 faculties which include; Arts, Education, Law, Basic Medical science, Clinical sciences, Pharmacy, Public health, Dentistry, Veterinary Medicine, Technology, Agricultural sciences, Sciences, Economics, Renewable Natural Resources, Environmental Design, and Social sciences. The University of Ibadan has twelve halls of residence but there are ten (10) halls of residence for undergraduate students with seven (7) for males namely Bello, Tedder, Mellanby, Independence, Nnamdi Azikiwe, Kuti and three (3) for females namely Queen Elizabeth II, Obafemi Awolowo and Queen Idia and one (1) for both males and females i.e. Alexander Brown Hall. The halls of residence have a caring capacity of over 8,000 students as 8368 students reside in the halls at the time of the study.

3.3 Study Population

The study population involved in this study was the undergraduate students of the University of Ibadan, Ibadan, Nigeria.

3.4 Sampling Size Calculation

The sample size for this study is calculated using an assumed prevalence of 50% as there is no published prevalence of influence of social media use.

$$n = \frac{Z\alpha^2 p (1-p)}{d^2}$$

Where: Z= 1.96 p= 0.5 q= 1-p= 1-0.5=0.5

n= Sample size

d= Degree of accuracy set at 0.05 (precision set at 5% significant)

$$n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2} = 384.16$$

N is approximately 384

A non-response rate of 10% of 384=38.4 was initially added to the sample size calculated to make the sample size 422. This is to cover for the possible case of incomplete response from respondents. Due to cases of loss of questionnaire and incomplete response, a total number of 386 questionnaires were eventually gotten back.

3.5 Sampling Procedure

A multi stage sampling procedure was employed in this study for better representation of the respondents. The sampling procedure will involve the faculties and the departments.

Table 3.1: Profile of Faculties

S/No	Faculty	No of UG students
1.	Education	3286
2.	Agriculture	2385
3.	Science	3543
4.	Social sciences	2635
5.	Technology	2174
6.	Law	930
7.	Arts	2902
8.	Dentistry	213
9.	Basic Medical Sciences	980
10.	Pharmacy	618
11.	Veterinary medicine	605
12.	Clinical science	1474
13.	Public health	734
14.	Renewable Natural Resources	612
15.	Economics	433
16.	Environmental Management and Design	626
	Total	24,150

The Dentistry, Basic medical sciences, Pharmacy, Clinical sciences and Public health faculties are grouped under College of Medicine.

The faculties were distributed into three (3) clusters using a simple random sampling method and two (2) faculties were randomly selected from the clusters of faculties, which gives a total of faculties. From these faculties, two departments were randomly selected, and a total of twelve (12) departments were eventually used for this study.

Table 3.2: Profile of selected Departments

S/No	Faculties	Departments	Population size	Total
	Education	Human Kinetics & Health Education	264	
		Educational Management	249	513
	College of Medicine	Human Nutrition	190	
		Biochemistry	237	427
	Science	Computer Science	295	
		Chemistry	387	682
	Social sciences	Geography	224	
		Psychology	256	480
	Agriculture	Animal science	207	
		Agricultural extension	193	411
	Arts	Communication and Language Arts	218	
		History	165	483
	Total			2996

Proportionate sampling was used to select respondents from each department and the selected respondents were stratified into levels (100level to 400 or 500level as the case may be). Respondents were proportionally selected from each stratum and were finally stratified into two strata (male and female).

Table 3.3: Selection of respondents in each Department

S/No	Department	Population size	Sample size taken
1.	Human Kinetics & Health Education	264	$\frac{264 \times 422}{3286} = 34$
2.	Educational Management	249	$\frac{249 \times 422}{3286} = 32$
3.	Human Nutrition	190	$\frac{190 \times 422}{4019} = 20$
4.	Biochemistry	237	$\frac{237 \times 422}{4019} = 25$
5.	Computer Science	295	$\frac{295 \times 422}{3543} = 35$
6.	Chemistry	387	$\frac{387 \times 422}{3543} = 46$
7.	Geography	224	$\frac{224 \times 422}{2635} = 40$
8.	Psychology	142	$\frac{142 \times 422}{2635} = 23$
9.	Animal Science	282	$\frac{282 \times 422}{2385} = 50$
10.	Agricultural Extension	193	$\frac{193 \times 422}{2385} = 34$
11.	Communication & Language Arts	218	$\frac{218 \times 422}{2902} = 32$
12.	History	165	$\frac{165 \times 422}{2902} = 24$

Sample size of stratum = $\frac{\text{Sample population x Calculated Sample size}}{\text{Total Sample Population}}$

Table 3.4a: Proportionate distribution of target population by Strata

Faculty of Education

S/No	Department	Stratum	Population size	Sample size taken
1.	Human Kinetics & Health Ed.	100level	68	$\frac{68 \times 34}{264} = 9$
		200level	62	$\frac{62 \times 34}{264} = 8$
		300level	60	$\frac{60 \times 34}{264} = 8$
		400level	74	$\frac{74 \times 34}{264} = 10$
2.	Educational Management	100level	66	$\frac{66 \times 32}{249} = 9$
		200level	61	$\frac{61 \times 32}{249} = 8$
		300level	68	$\frac{68 \times 32}{249} = 9$
		400level	54	$\frac{54 \times 32}{249} = 7$

Table 3.4b: Proportionate distribution of target population by Strata cont'd
College of Medicine

S/No	Department	Stratum	Population	Sample size taken
1.	Human Nutrition	100level	55	$\frac{55 \times 20}{190} = 6$
		200level	34	$\frac{34 \times 20}{190} = 4$
		300level	55	$\frac{55 \times 20}{190} = 6$
		400level	46	$\frac{46 \times 20}{190} = 5$
2.	Biochemistry	100level	85	$\frac{85 \times 25}{237} = 9$
		200level	54	$\frac{54 \times 25}{237} = 6$
		300level	54	$\frac{54 \times 25}{237} = 6$
		400level	44	$\frac{44 \times 25}{237} = 5$

Table 3.4c: Proportionate distribution of target population by Strata cont'd
Faculty of Social Sciences

S/No	Department	Stratum	Population Size	Sample size taken
1.	Geography	100level	73	$\frac{73 \times 40}{264} = 13$
		200level	23	$\frac{23 \times 40}{264} = 4$
		300level	65	$\frac{65 \times 40}{264} = 12$
		400level	63	$\frac{63 \times 40}{264} = 11$
2.	Psychology	100level	54	$\frac{54 \times 23}{142} = 9$
		200level	45	$\frac{45 \times 23}{142} = 7$
		300level	95	$\frac{95 \times 23}{142} = 15$
		400level	62	$\frac{62 \times 23}{142} = 10$

Table 3.4d: Proportionate distribution of target population by Strata cont'd

Faculty of Agriculture

S/No	Department	Stratum	Population Size	Sample size taken
1.	Animal Science	100level	36	$\frac{36 \times 50}{282} = 6$
		200level	64	$\frac{64 \times 50}{282} = 11$
		300level	54	$\frac{54 \times 50}{282} = 10$
		400level	72	$\frac{72 \times 50}{282} = 13$
		500level	53	$\frac{53 \times 50}{282} = 9$
2.	Agricultural Extension	100level	25	$\frac{25 \times 34}{193} = 4$
		200level	49	$\frac{49 \times 34}{193} = 9$
		300level	43	$\frac{43 \times 34}{193} = 8$
		400level	39	$\frac{39 \times 34}{193} = 7$
		500level	37	$\frac{37 \times 34}{193} = 7$

Table 3.4e: Proportionate distribution of target population by Strata cont'd

Faculty of Arts

S/No	Department	Stratum	Population size	Sample size taken
1.	Communication & Language Arts	100level	53	$\frac{53 \times 32}{218} = 8$
		200level	59	$\frac{59 \times 32}{218} = 9$
		300level	58	$\frac{58 \times 32}{218} = 9$
		400level	48	$\frac{48 \times 32}{218} = 7$
2.	History	100level	38	$\frac{38 \times 24}{165} = 6$
		200level	26	$\frac{26 \times 24}{165} = 4$
		300level	52	$\frac{52 \times 24}{165} = 8$
		400level	49	$\frac{49 \times 24}{165} = 7$

Table 3.4c: Proportionate distribution of target population by Strata cont'd

Faculty of Science

S/No	Department	Stratum	Population size	Sample size taken
1.	Computer Science	100level	54	$\frac{54 \times 35}{295} = 6$
		200level	78	$\frac{78 \times 35}{295} = 9$
		300level	48	$\frac{48 \times 35}{295} = 6$
		400level	115	$\frac{115 \times 35}{295} = 14$
2.	Chemistry	100level	91	$\frac{91 \times 46}{387} = 11$
		200level	90	$\frac{90 \times 46}{387} = 11$
		300level	93	$\frac{93 \times 46}{387} = 11$
		400level	113	$\frac{113 \times 13}{387} = 13$

3.6 Inclusion/Exclusion Criteria

3.6.1 Inclusion Criteria

All undergraduate students who were in the full time programme in the University, as at October, 2018 when the study was conducted.

3.6.2 Exclusion criteria

All undergraduate students, who were running the sandwich programme or any other programme apart from the full time, were excluded.

3.7 Method and Instrument of Data Collection

A 6 item Questionnaire was used for data collection (See Appendix 1). The questionnaire consisted of six sections, namely; socio-demographic data of respondents, access to smartphones, the social media app mostly used by undergraduates, types of information shared on social media, reproductive health knowledge of respondents, and reproductive health behaviour of respondents

3.8 Procedure for Data Collection

The questionnaire was designed to be self-administered. Each student was given the questionnaire by the researcher through the assistance of the representative in each class. Data were collected in the selected Departments during lecture hours so as to be able to reach the target groups. Completed questionnaires were retrieved immediately after completion and checked if they were correctly filled.

3.9 Validity of Instrument

In this research, the questionnaire used was validated in terms of content validity by ensuring that proper review of pertinent literatures in the area of study was done in the construction of the instrument and appropriate corrections was made by the research supervisor. All the variables in the research objectives were well represented in the instrument. The questionnaire was constructed using simple English that was easy to understand.

3.10 Reliability of Instrument

In establishing the reliability of the instrument, the researcher applied the pre-test technique. The Pre-test technique is a process whereby the researcher shall administer the constructed questionnaire to 10% of the total study sample size in another representative population but the filled questionnaire for the pre-test shall not be used in the final analysis of the work. The pre-test of this study was carried out among the undergraduate students of the University of

Lagos, Lagos, Nigeria. The data obtained was analyzed using Cronbach's alpha to obtain a reliability coefficient, a result showing coefficient greater than 0.5 was considered reliable. The reliability obtained for this study was 0.78 Cronbach's alpha which indicated strong reliability of the instrument. This was done to determine whether the questions were clear and simple enough for respondents to understand and to also determine consistency of the questions.

3.11 Data management, analysis and presentation

Data collected were analyzed using Statistical Package for Social Sciences (SPSS) version 21 software after been serially numbered for easy identification. Data obtained was sorted, coded, entered and cleaned for errors. Descriptive statistics such as percentages and mean were used to summarize all the variables in each section such as, use of social media, information shared on social media, reproductive health knowledge, and reproductive health behaviour among respondents. Chi square was utilized for cross-tabulations between dependent and independent variables. Associations were also determined between the use of social media and reproductive health knowledge and behaviour.

Data on knowledge was analyzed using fourteen (14) point knowledge scale by allotting one (1) point to any correct answer and zero (0) point for any incorrect answer. Total score of $\geq$12 was classified as a good knowledge, a score of 6 to 11 was considered as fair knowledge while $\leq$ 5 was classified as having poor knowledge. Data was presented on tables.

3.12 Ethical Considerations

Ethical approval was obtained from the University of Ibadan/University College Hospital Ethics Review Committee to ensure the proposed study has met all the principles and National guidelines in research involving human participants (Appendix III).Informed consent was obtained from respondents after explaining the purpose of the research to them and assuring them that there are no identifiers on the questionnaire that could reveal their identity. They were also assured that the result will not harm them in any way.

3.13 Limitation of the study

Due to the sensitivity of some questions in the questionnaire such as those relating to sexual behaviour, it is possible that some respondents may provide normative answers. However, the questionnaire was made anonymous and respondents were assured that their responses will be kept confidential.

CHAPTER FOUR

RESULTS

This chapter presents the result of socio-demographics of the respondents, various social media applications used by respondents, reproductive health knowledge and behaviour among undergraduate students at the University of Ibadan.

4.1 Socio-demographic Characteristics of Respondents

The demographic profile of the study participants are shown on table 4.1. Their mean age was 20.23±2.5 years. There are approximately equal male (50.3%) and female respondents (49.7%). About 99.2% of respondents were single, while 0.8%was married. A large proportion of the respondents 85.0%practiced Christianity, and 15.0% were Muslims. Majority of the respondents were in 100level, a total number of 29.5%, 200level 24.6%, 300level 22.3%, 400level 19.7%, and respondents in 500level were 3.9%. Respondents from the Faculty of Education were 13.7%, Sciences 21.8%, Social sciences 15.5%, College of medicine 13.7%, Arts 15.0%, and Agriculture 20.2%. Respondents in the department of Human Kinetics and Health Education were 5.4%, while those in Educational Management were 8.3%, Chemistry 10.9%, Computer science 9.1%, Psychology 8.3%, Geography 9.1%, Agricultural extension 9.1%, Animal science 43 11.1%, Communication and language Arts 8.5%, History 6.5%, Human Nutrition 5.2%, Biochemistry 8.5%. Majority of the study participants were Yoruba 80.8% while the rest were distributed among other ethnic groups in the country.

Table 4.1a: Socio-demographic Characteristics

Variables	Frequency (n)	Percentage (%)
Age		
16-20	235	60.9
21-25	135	35.0
≥26	16	4.1
Sex		
Male	194	50.3
Female	192	49.7
Marital Status		
Single	383	99.2
Married	3	0.8
Religion		
Christianity	328	85.0
Islam	58	15.0
Faculty		
Education	53	13.7
Sciences	84	21.8
Social Sciences	60	15.5
College of Medicine	53	13.7
Arts	58	15.0
Agriculture	78	20.2
Level		
100	114	29.5
200	95	24.6
300	86	22.3
400	76	19.7
500	15	3.9

Table 4.1b: Socio-demographic Characteristics Cont'd

Variables	Frequency (n)	Percentage (%)
Department		
Psychology	32	8.3
Chemistry	42	10.9
Computer Science	35	9.1
Geography	35	9.1
Hum. Kinetics & Health Education	21	5.4
Educational Management	32	8.3
Agricultural Extension	35	6.5
Animal Science	20	5.2
Communication & Language Arts	33	8.5
History	25	6.5
Human Nutrition	20	5.2
Biochemistry	33	8.5
Ethnicity		
Yoruba	312	80.8
Hausa	10	2.6
Igbo	32	8.3
Ibibio	4	1.0
Urhobo	3	0.8
Edo	14	3.6
Others*	11	3.1

Others* - Idoma, Anaang, Tiv, Isan, Egbire, Isoko, Mbembe

4.2 Mobile Phone ownership

All of the respondents (100.0%) reported that they owned at least a mobile phone as shown in table 4.2. A large majority (81.1%) of the respondents, possess one mobile phone while 18.9% respondents possess more than one. Out of these number, 85.5% respondents own smartphones only while the remaining 14.5% own both a smartphone and the regular phone. A small number (8.0%) of respondents have had their smartphone for not more than 3months, 20.7% between 4-6months, while the rest of the respondents 71.2% have had their smartphones for over 6months. Majority (99.7%) of the respondents said they have been using their smartphones consistently since they got it, while 0.3% respondent has not been using it consistently.

Table 4.2 Mobile Phone Ownership

Variables	Frequency (n)	Percentage (%)
Own a mobile		
Yes	386	100.0
Number of phones owned		
1	313	81.1
2 or more	73	18.9
Type of mobile phone		
Smartphone	386	100.0
Feature phone	73	18.9
Duration of ownership		
0-3months	31	8.0
4-6months	80	20.7
>6months	275	71.2
Consistent use of Smartphone		
Yes	385	99.7
No	1	0.3

4.3 Pattern of use of social media

All (100.0%) respondents are on at least one social media. Respondents who have Facebook application were 92%, Whatsapp 99.7%, Instagram 80.8%, YouTube 94.8%, snapchat 34.7%, Imo 11.7%, Telegram 21.5%, LinkedIn15.3%, Twitter 49.2%, Messenger 8.0%, and Hangout 2.8%, as shown in Figure 4.1.

The mostly used social media application as shown in Table 4.4, by respondents was the Whatsapp, which 80.8% respondents claim to use all the time, this is followed by Facebook which 46.1% respondents used all the time, and the least is Hangout which no respondent uses at all, although 2.8% respondents have it in their smartphones.

Table 4.3 showed the social media application that is most preferred by respondents and average time spent on the application. Of all the social media applications used by respondents, Whatsapp happened to be the most preferred as 65.8% respondents said they prefer it to the rest of the applications, while 10.6% preferred Facebook, 8.8% preferred Instagram, 7.5%Twitter, 4.1%YouTube, 0.3% Telegram, 0.3% Messenger, and 2.6% preferred Snapchat. Respondents also gave the average time they spend on the social media application they preferred. Majority (63.7%) of respondents spend 1-3hours on their preferred application, 25.6% spend 4-7hours, 7.3% spend <one hour, and 3.4% spend 8-12hours.

Table 4.3: Pattern of use of Social media

Variables	Frequency (n)	Percentage (%)
Social media applications		
Preferred by respondents		
Facebook	41	10.6
Whatsapp	254	65.8
Instagram	34	8.8
Twitter	29	7.5
YouTube	16	4.1
Telegram	1	0.3
Messenger	1	0.3
Snapchat	10	2.6
Average Time spent on		
preferred application	28	7.3
<one hour	246	63.7
1-3hours	99	25.6
4-7hours	13	3.4
8-12hours		

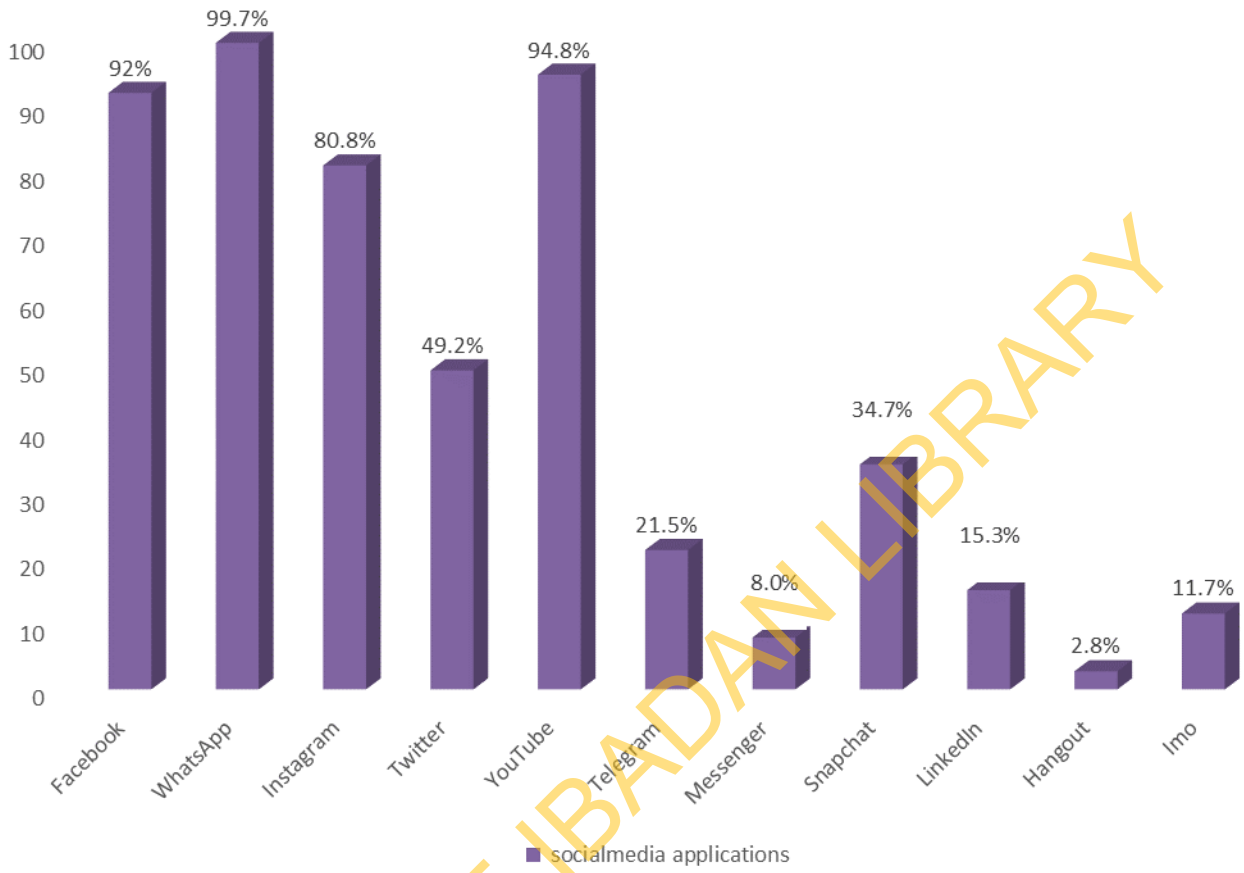


Figure 4.1: Social media applications respondents have on their mobile phones

Table 4.4a: Usage of various social media applications

Variables	Frequency (n)	Percentage (%)
Facebook		
Always	178	46.1
Often	101	26.2
Sometimes	51	13.2
Rarely	30	7.8
Never	26	6.7
Whatsapp		
Always	312	80.8
Often	68	17.6
Sometimes	5	1.3
Never	1	0.3
Instagram		
Always	84	21.8
Often	105	27.2
Sometimes	99	25.6
Rarely	27	7.0
Never	71	18.4
YouTube		
Always	11	2.8
Often	112	29.0
Sometimes	117	45.9
Rarely	64	16.6
Never	22	5.7

Table 4.4b: Frequency of usage of various social media applications Cont'd

Variables	Frequency (n)	Percentage (%)
Snapchat		
Always	18	4.7
Often	42	10.9
Sometimes	41	10.6
Rarely	30	7.8
Never	255	66.1
Imo		
Often	8	2.1
Sometimes	2.0	5.2
Rarely	14	3.6
Never	344	89.1
Telegram		
Often	11	2.8
Sometimes	47	12.2
Rarely	26	6.7
Never	302	78.2
LinkedIn		
Always	22	5.7
Often	76	19.7
Sometimes	54	14.0
Rarely	37	9.6
Never	197	51.0

Table 4.4c: Frequency of usage of various social media applications Cont'd

Variables	Frequency (n)	Percentage (%)
Twitter		
Always	22	5.7
Often	76	19.7
Sometimes	54	14.0
Rarely	37	9.6
Never	197	51.0
Messenger		
Always	3	0.8
Often	21	5.4
Sometimes	6	1.6
Never	356	92.2
Hangout		
Rarely	4	1.0
Never	382	1.0

4.4 Information shared on social media

Majority (81.3%) of the respondents said they have sent information different from the regular chats on social media, while the remaining (18.7%) claimed not to have sent any other information on social media safe for the regular chats. 23.6% respondents have sent sport news on time or the other on social media, 37.8% have sent health information, 59.3% have sent jokes, 28.5% have sent devotionals, 56.7% ; entertainment news, 27.1% have sent other information* (business, political, educational, and advertisements). More than half of respondents (54%) claimed to have received sport information before on social media, 87.3%; health information, 91.2%; jokes, 75.6%; devotionals, 90.7% entertainment information and 37.6% respondents have received other information** (advertisements, political news, educational information and food recipes). Asked if they have ever received any information on the various methods of contraceptives and means of preventing sexually transmitted infections on social media, 65.8% and 69.7% respondents respectively said they have, while 34.2% and 30.3% respectively, said they have never received any information related to the above mentioned on social media. Apart from social media respondents also get the information on contraceptives and sexually transmitted infections from friend (65.8%), parents/guardians (54.1%), mass media (89.9%), health facility (45.1%), and others (19.1%). Table 4.5, showed the various types information on reproductive health received by respondents on social media.

Table 4.5: Reproductive health messages received on social media

Variables	Frequency (n)	Percentage (%)
To abstain from sex	39	10.1
Practice safe sex	9	2.3
To know your HIV status	13	3.4
Mode of infection	19	4.9
I cannot remember	39	10.1
No cure for HIV/AIDs, stay safe	4	1.0
Practice safe sex and check status frequently	10	2.6
Use condom or abstain from sex	50	13.0
Ways of preventing the spread of STIs	62	16.1
It spoke of the dangers and preventive measured of STIs	9	2.3
Condoms are not 100% safe, abstinence is the best	6	1.6
How STIs spread and how to prevent them	10	2.6
	116	30.1

4.5 Reproductive knowledge of respondents

Table 4.6: showed the level of knowledge of respondents on reproductive health. Questions on reproductive health were asked the respondents; these questions were based on safe sex, types of STIs and the various types of modern contraceptives. A larger percentage 93.8% of respondents had good reproductive knowledge, while 5.4% respondents had fair knowledge, and 0.8% respondents had poor reproductive knowledge.

Respondents were also asked if they could clearly say that they got the reproductive information about sexually transmitted infections; types of contraceptives and safe sex from one of the social media applications. Of the total 386 respondents that were involved in this study, 222 (57.5%) respondents said yes while the remaining 164 (42.5%) said no as regards sexually transmitted infections while 198 (51.3%) respondents said clearly that they got the information on types of contraceptives and safe sex from social media, and 188 (48.7%) could not say clearly. Those who could clearly say that social media was their source of information, were further asked the exact social media application the information was gotten from. The largest proportion of respondents 139 (36.0%) said Facebook, followed by Whatsapp (41; 10.6%), then Instagram (22; 5.7%), and twitter (9; 2.3%). This is shown in Table 4.7 below;

Table 4.6: Reproductive knowledge of respondents

Variables	Frequency (n)	Percentage (%)
Level of knowledge		
Poor	3	0.8
Fair	21	5.4
Good	362	93.8

Table 4.7 Social media applications where respondents got Reproductive health Information

n=220

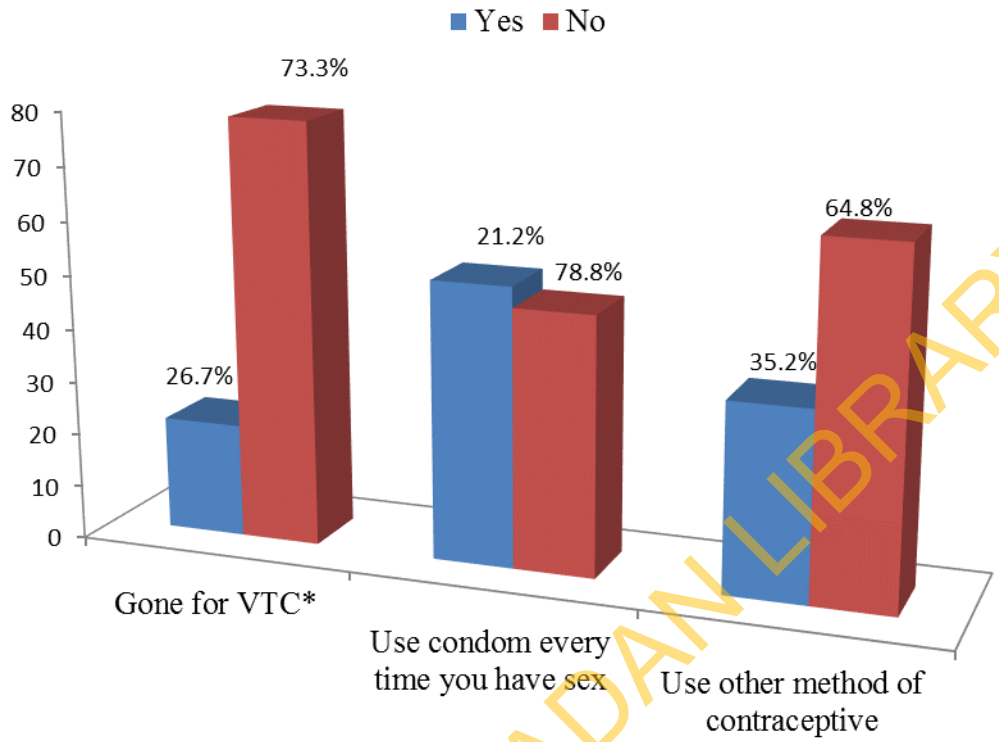
Variables	Frequency (n)	Percentage (%)
Facebook	139	63.2
WhatsApp	50	22.7
Instagram	22	10.0
Twitter	9	4.1

4.6 Reproductive behaviour

Table 4.8a &b and Figure 4.2 showed the various reproductive behaviours of respondents. When asked if they have ever had sex before, more than a quarter of the respondents (26.7%) said yes, while the remaining 73.3% said yes. In an attempt to find out the sexual debut of respondents, they were asked the age at which they first had sex, majority of the respondents fall within the age range 15-19years (70.9%), 18.4% fall` within the range of 20-24 years, while the remaining 10.7% fall within the range of 10-14years.

The respondents who said they have had sex before were further asked if they were still sexually active, 76.2% said yes, while 29.9% said no. when asked if they have had sex in the last 6months, 73.0% respondents claimed to have had sex in the past 6months while 27.0% have not. Those who have had sex in the past 6months were then asked if they or their partners use condom every time they have sex, 51.9% said they do while the remaining 48.1% said no. When asked if they use any other method(s) of contraceptives apart from condom, 19 (35.2%) said yes while majority (64.8%) said no. Those that have used other method(s) of contraceptives were further asked the ones they have used, 89.5% respondents said Postinol, while the remaining 10.5% said salt solution.

Majority (78.7%) of respondents had never gone for voluntary HIV test and counseling while the remaining (21.2%) had been tested at one time or the other. The females were asked if they have ever gone for cervical screening test, a larger percentage 47.7% said they have never been screened, while meager number 2.6% respondents claimed to have been tested.



VTC* Voluntary HIV Test and Counselling

Figure 4.2: Reproductive Behaviour among Respondents

4.7 Test of Hypothesis

Hypothesis I

There is no statistical significant difference between the use of social media and the reproductive knowledge among undergraduate students of the University of Ibadan, Nigeria.

This study shows that there is a statistical significant difference between the use of social media and the reproductive health knowledge among undergraduate students as the p values are lesser than 0.05. This is shown in table 4.8 below.

Table 4.8 Test of hypothesis 1: Social media use and Reproductive Knowledge

Use of Social media Applications		Level of knowledge Poor	Fair	Good	X^2	df	p-value
Facebook	Always	1(0.3)	7(1.8)	170(44.0)			
	Often	0(0.0)	7(1.8)	94(24.1)			
	Sometimes	0(0.0)	3(0.8)	48(12.4)	19.314	8	0.019*+
	Rarely	0(0.0)	2(0.5)	28(7.3)			
	Never	0(0.0)	2(0.5)	22(5.7)			
WhatsApp	Always	1(0.3)	19(4.9)	292(75.6)			
	Often	2(0.5)	1(0.3)	65(16.8)			
	Sometimes	0(0.0)	0(0.0)	4(1.0)	15.351	6	0.034*+
	Never	0(0.0)	1(0.3)	1(0.3)			

+Fisher's Exact Test

P value <0.05

Hypothesis II

There is no significant difference between the use of social media and the reproductive behaviour among undergraduate students of the University of Ibadan, Nigeria.

From this study, it could be seen that there is no association between the reproductive health behaviour of respondents and their use of social media as shown in Table 4.9a-c. In other words, the use of social media among respondents has no influence on their reproductive health behaviour.

Table 4.9a Test of hypothesis 2: Social media use and Reproductive Behaviour

N=386

Use of social media applications		Ever had sex before		X^2	df	p-value
		Yes	No			
Facebook	Always	54(14.0)	124(32.1)			
	Often	23(6.0)	78(20.2)			
	Sometimes	14(3.6)	37(9.6)	2.877	4	0.579
	Rarely	6(1.6)	24(6.2)			
	Never	6(1.6)	20(5.2)			
WhatsApp	Always	85(22.0)	227(58.8)			
	Often	15(3.9)	53(13.7)			
	Sometimes	2(0.5)	2(0.5)	2.461	3	0.733+
	Never	1(0.3)	1(0.3)			

[+]**Fisher's Exact Test**

P value <0.05

Table 4.9b Test of hypothesis 2 Social media use and Reproductive Behaviour cont'd

N=386

Social media Applications		Ever gone for HIV test Yes	Ever gone for HIV test No	X^2	df	p-value
Facebook	Always	38(9.8)	140(36.3)			
	Often	24(6.2)	77(19.9)			
	Sometimes	10(2.6)	41(10.6)	0.904	4	0.924
	Rarely	5(1.3)	25(6.5)			
	Never	5(1.3)	21(5.4)			
WhatsApp	Always	70(18.1)	242(62.7)			
	Often	11(2.8)	57(14.8)			
	Sometimes	1(0.3)	3(0.8)	1.882	3	0.788[+]
	Never	0(0.0)	2(0.5)			

Table 4.9c Test of hypothesis 2 Use of social media and Reproductive Behaviour cont'd

n=54

		Use condom during every sexual encounter		X^2	df	p-value
Social media Applications		**Yes**	**No**			
Facebook	Always	9(16.7)	18(33.3)			
	Often	8(14.8)	4(7.4)			
	Sometimes	5(9.3)	4(7.4)	8.968	8	0.394+
	Rarely	2(3.7)	1(1.9)			
	Never	4(7.4)	1(1.9)			
WhatsApp	Always	22(40.7)	26(48.1)			
	Often	5(9.3)	1(1.9)			
	Sometimes	1(1.9)	1(1.9)	8.342	6	0.388+
	Never	0(0.0)	0(0.0)			

+Fisher's Exact Test

P value <0.05

[+]Fisher's Exact Test

P value <0.05

Hypothesis III

There is no significant difference between the gender and the reproductive knowledge of respondents. According to this study, the gender of respondents is not statistically significant to their knowledge of reproductive health as the p value is 0.740 which is greater than 0.05. This is shown in Table 4.10 below

Table 4.10 Test of hypothesis 3 Relationship between Gender and Reproductive Knowledge

		Level of knowledge			
		Poor	Fair	Good	Total
Gender	Male	1(0.3%)	12(3.1%)	181(46.9%)	194(50.3%)
	Female	2(0.5%)	9(2.3%)	181(46.9%)	192(49.7%)
	Total	3(0.8%)	21(5.4%)	362(93.8%)	386(100%)

+Fisher's Exact Test

X^2 = 0.835, df = 2, p value = 0.740$^+$

Hypothesis IV

There is no significant difference the gender and reproductive behaviour of respondents. Results from this study showed that the gender of the undergraduate students of the University of Ibadan has no influence whatsoever on their reproductive behaviour as there is no statistical difference between both as shown in table 4.11 below.

Table 4.11 Test of hypothesis 4 Relationship between Gender and Reproductive Behaviour

Gender Variables		Male	Female	X^2	df	p value
Ever had sex	Yes	54(14.0)	49(12.7)			
	No	140(36.3)	143(37.0)	0.264	1	0.646
	Total	194(50.3)	192(49.7)			
Use of condoms during all sexual encounter						
	Yes	15(27.8)	13(24.1)			
	No	13(24.1)	13(24.1)	0.287	2	0.866
	Total	28(51.9)	26(48.1)			
Ever gone for VTC*						
	Yes	45(11.7)	37(9.9)			
	No	149(38.6)	156(40.4)	0.889	1	0.384

Total	194(50.3)	192(49.7)

4.8 Relationship between other Socio demographic variables and Reproductive Health Knowledge

This study shows that there is no statistical significant difference between any of the socio-demographic variables and reproductive health knowledge of undergraduates as none of the p values is lesser that 0.05. This is clearly represented in table 4.12a and b below.

Table 4.12a Relationship between other Socio-demography and Reproductive Health Knowledge

Socio demographic Variables	Level of knowledge poor	fair	good	X^2	df	p-value
Age						
16-20	2(0.5)	13(3.4)	220(57.0)			
21-25	1(0.3)	8(2.1)	126(32.6)	1.102	4	0.972+
26-30	0(0.0)	0(0.0)	16(4.1)			
Faculty						
Arts	1(0.3)	5(1.3)	52(13.5)			
Education	0(0.0)	4(1.0)	49(12.7)			
Sciences	1(0.3)	4(1.0)	79(20.5)	13.615	10	0.069+
Social Science	1(0.3)	6(1.6)	53(13.7)			
College of Medicine	0(0.0)	2(0.5)	51(13.2)			
Agriculture	0(0.0)	0(0.0)	78(20.2)			
Department						
Psychology	0(0.0)	5(1.3)	27(7.0)			
Chemistry	1(0.3)	3(0.8)	38(9.8)			
Computer Science	0(0.0)	0(0.0)	35(9.1)			
Geography	1(0.3)	3(0.8)	31(8.0)			
Human Kinetics & Health Education	0(0.0)	3(0.8)	18(4.7)			
Educational Management	0(0.0)	1(0.3)	31(8.0)	26.73	22	0.222
Agricultural Extension	0(0.0)	0(0.0)	35(9.1)			
Animal Science	0(0.0)	0(0.0)	43(11.1)			
Communication &Language Arts	1(0.3)	2(0.5)	30(7.8)			
History	0(0.0)	2(0.5)	23(6.0)			
Human Nutrition	0(0.0)	0(0.0)	20(5.2)			
Biochemistry	0(0.0)	2(0.5)	31(9.1)			

+Fisher's Exact Test

P value <0.05

Table 4.12b Relationship between Socio-demography and Reproductive Health Knowledge Cont'd

Socio demographic Variables	Level of knowledge Poor	Fair	Good	X^2	df	p-value
Level						
100	0(0.0)	9(2.3)	105(27.2)			
200	1(0.3)	5(1.3)	89(23.1)			
300	0(0.0)	5(1.3)	81(21.0)	6.855	8	0.489+
400	2(0.5)	2(0.5)	72(18.7)			
500	0(0.0)	0(0.0)	15(3.9)			
Marital status						
Single	3(0.8)	21(5.4)	359(92.2)	2.362	2	1.000+
Married	0(0.0)	0(0.0)	3(0.8)			
Religion						
Christianity	3(0.8)	18(4.7)	307(79.5)	0.140	2	1.000+
Islam	0(0.0)	3(0.8)	55(14.2)			

+Fisher's Exact Test

P value <0.05

4.9 Relationship between other Socio Demographic variables and Reproductive Health Behaviour

There is a statistically significant difference between the age, marital status and level of respondents and their reproductive health behaviour as shown in Tables 13a-e below. The p-values of these socio-demographic variables are less than 0.05.

Table 4.13ai: Relationship between other Socio Demographic variables and Reproductive Health Behaviour I

Variables	Ever had sex before		X^2	df	p-value
	Yes	No			
Age					
16-20	41(10.6)	194(50.3)			
21-25	50(13.0)	85(22.0)	36.738	2	0.000*+
26-30	12(3.1)	4(1.0)			
Faculty					
Arts	11(2.8)	47(12.2)			
Education	14(3.6)	39(10.1)			
Sciences	23(6.0)	61(16.0)	6.316	5	0.277
Social Science	12(3.1)	48(12.4)			
College of Medicine	8(2.1)	45(11.7)			
Agriculture	24(6.2)	54(14.0)			
Department					
Psychology	5(1.3)	27(7.0)			
Chemistry	6(1.6)	36(9.3)			
Computer Science	14(3.6)	21(5.4)			
Geography	9(2.3)	26(6.7)			
Human Kinetics & Health Education	5(1.3)	16(4.1)			
Educational Management	9(2.3)	23(6.0)	16.758	11	0.115
Agricultural Extension	14(3.6)	21(5.4)			
Animal Science	10(2.6)	33(8.5)			
Communication and Language Arts	7(1.8)	26(6.7)			
History	5(1.3)	20(5.2)			
Human Nutrition	4(1.0)	16(4.1)			
Biochemistry	4(1.0)	29(7.5)			

+Fisher's Exact Test

P value <0.05

Table 4.13aii: Relationship between other Socio Demographic variables and Reproductive Health Behaviour I Cont'd

Socio demographic Variables	Ever had sex before		X^2	df	p-value
	Yes	No			
Level					
100	11(2.8)	103(26.7)			
200	18(4.7)	77(19.9)			
300	22(5.7)	64(16.6)	36.630	4	0.000*
400	34(8.9)	42(10.9)			
500	7(1.8)	8(2.1)			
Marital status					
Single	89(23.1)	294(76.2)	9.662	1	0.019*+
Married	3(0.8)	0(0.0)			
Religion					
Christianity	75(19.4)	253(65.5)	1.128	1	0.184
Islam	17(4.4)	41(10.6)			

+Fisher's Exact Test

P value <0.05

Table 4.13bi: Relationship between other Socio Demographic Variables and Reproductive Health Behaviour III N=386

Variables	Ever gone for HIV test Yes	No	X^2	df	p value
Age					
16-20	38(9.8)	197(51.0)	11.525	2	0.003*
21-25	37(9.6)	98(25.4)			
26-30	7(1.8)	9(2.3)			
Faculty					
Arts	9(2.3)	49(12.7)			
Education	13(3.4)	40(10.4)			
Sciences	25(6.5)	59(15.3)	9.018	5	0.108
Social Science	9(2.3)	51(13.2)			
College of Medicine	7(1.8)	46(11.9)			
Agriculture	19(4.9)	59(15.3)			
Department					
Psychology	4(1.0)	28(7.3)			
Chemistry	10(2.6)	32(8.3)			
Computer Science	12(3.1)	23(6.0)			
Geography	8(2.1)	27(7.0)			
Human Kinetics & Health Education	4(1.0)	17(4.4)			
Educational Management	9(2.3)	23(6.0)	12.949	11	0.488
Agricultural Extension	11(2.8)	24(6.2)			
Animal Science	8(2.1)	35(9.1)			
Communication & Language Arts	6(1.6)	27(7.0)			
History	3(0.8)	22(5.7)			
Human Nutrition	4(1.0)	16(4.1)			
Biochemistry	3(0.8)	30(7.8)			

Table 4.13bii: Relationship between other Socio Demographic Variables and Reproductive

Health Behaviour III Cont'd					N=386
Socio demographic Variables	**Ever gone for HIV test**		**X^2**	**df**	**p value**
	Yes	**No**			
Level					
100	16(4.1)	98(25.4)			
200	19(4.9)	76(19.7)			
300	23(6.0)	63(16.3)	7.135	4	0.129
400	19(4.9)	57(14.8)			
500	5(1.3)	10(2.6)			
Marital status					
Single	79(20.5)	304(78.8)	11.209	1	0.009*+
Married	3(0.8)	0(0.0)			
Religion					
Christianity	67(17.6)	261(67.6)	0.870	1	0.351
Islam	15(3.9)	43(11.1)			

+Fisher's Exact Test

P value <0.05

Table 4.13ci: Relationship between other Socio Demographic Variables and Reproductive

Health Behaviour IV

n=54

Socio demographic Variables	Condom use during sex		X^2	df	p value
	Yes	No			
Age					
16-20	15(26.8)	8(14.3)			
21-25	12(21.4)	14(25.9)	23.114	4	0.000*+
26-30	1(1.8)	4(7.4)			
Faculty					
Arts	4(7.1)	7(12.5)			
Education	8(14.3)	0(0.0)			
Sciences	5(8.9)	7(12.5)	14.086	10	0.169
Social Science	2(3.6)	4(7.1)			
College of Medicine	2(3.6)	3(5.6)			
Agriculture	6(11.1)	6(11.1)			
Department					
Psychology	1(1.8)	2(3.6)			
Computer Science	4(7.1)	6(11.1)			
Geography	2(3.6)	3(5.6)			
Human Kinetics & Health Education	4(7.1)	0(0.0)			
Educational Management	3(5.6)	0(0.0)	31.944	22	0.078
Agricultural Extension	4(7.1)	3(5.6)			
Animal Science	3(5.6)	4(7.1)			
Communication & Language Arts	1(1.8)	3(5.6)			
History	3(5.6)	4(7.1)			
Human Nutrition	0(0.0)	1(1.8)			
Biochemistry	2(3.6)	2(3.6)			

Table 4.13cii: Relationship between other Socio Demographic Variables and Reproductive

Health Behaviour IV Cont'd

n=54

Socio demographic Variables	Condom use during sex		X^2	df	p value
	Yes	No			
Level					
100	6(11.1)	2(3.6)			
200	7(12.5)	4(7.1)			
300	6(10.7)	4(7.1)	31.610	8	0.000*
400	8(14.3)	15(23.8)			
500	1(1.8)	3(5.6)			
Marital status					
Single	26(48.1)	25(44.6)	15.494	2	0.001*+
Married	0(0.0)	3(5.6)			
Religion					
Christianity	22(40.7)	21(37.5)	2.352	2	0.308
Islam	4(7.1)	7(12.5)			

+Fisher's Exact Test

P value <0.05

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

The outcome of this study suggests the level of knowledge of undergraduate students and their behaviour as regards reproductive health issues and the influence social media use could have on both.

5.1.1 Socio-demography profile of respondents

The mean age of respondents was 20.23 with a large proportion between the ages of 16 and 20years. This could be due to the University policy of admitting students from the age of 16years and above, this finding corresponds to previous study by Jegede and Dosunmu (2003) that revealed the age limit of students admitted into higher institutions in Nigeria as 16-17years. A large proportion of the respondents (99.2%) were single, this could be as a result of the fact that majority of the students are in their late teens and early twenties. Majority of the study participants were Yoruba 312 (80.8%), this could be attributed to the location of the study area which is located in the Southwestern part of Nigeria, a part predominantly occupied by the Yoruba ethnic group (Arowojolu *et al*., 2002).

5.1.2 Pattern of social media use among undergraduate students

Since the invention of "smartphones", the use of social media via the internet by people to communicate, get information and connect with each other has increased greatly worldwide. The pattern of use of social media among undergraduate students include the social media applications they have on their phones, the frequency of use of these applications, the most preferred application, reason for preference and time spent on the applications. Findings revealed that all undergraduate students involved in this study have at least a smartphone thereby have different social media applications on their smartphones. Majority of respondents are on Facebook, Whatsapp, Instagram, and YouTube, while some are on Snapchat and Twitter, only few are on Imo, Telegram, LinkedIn, Messenger and Hangout. Of all these applications, Whatsapp is the most widely used and preferred by respondents according to this study which corroborated Olsen, 2014 and Smart Geek Media, 2018 statement that "With over 1.2 billion users daily, Whatsapp is the most widely used app

globally because it has so many features like the voice call, video call, voice notes, status upload features, that have made it widely acceptable". Followed by Whatsapp is the Facebook application, which supports the study by Ekpenyong *et al*., 2016 and another study by Gapsiso and Kolo, titled "The Use of Social Media by Students of Capital School Maiduguri, Nigeria, 2017, which showed students preference for Whatsapp and Facebook. Also this study showed some of the reasons for respondents preference of their favourite social media application, and one of the reasons was "most of the people I know are on this application" which is consistent with Gapsiso and Kolo, 2017, where respondents reason for preferring some social networking sites is because their friends are on the site.

5.1.3 Information shared on social media among undergraduate students

This study showed that majority (81.3%) of undergraduates; actually send other information apart from the regular chats. The information sent and received on social media among undergraduates in this study included sport news, devotionals, entertainment news, jokes, advertisements, business information, food recipe, health information and educational information. This supports Haddon, 2015 claim that young people have been known to increasingly use the social media for communication purposes and also as a source of information, but the extent of social media use vary in young people from one country to another. Over half (59.3%) of respondents claimed to send "jokes" on social media, this is the most sent information and its followed by entertainment with a total of 56.7%. while almost all the respondents (91.2%) claimed to have received "jokes" on social media. Despite respondents being students, educational information happens to be among the least information shared among undergraduates. Health information also happen to be one of the widely received information on social media by respondents at 87.3%, this could clearly explain why majority of the respondents could clearly say that they have received information related to family planning and sexually transmitted infections on social media.

Respondents also said that they get their information on family planning methods and sexually transmitted infections from other sources like friends, parents/guardians, mass media, health facility, religious institutions, school and books. Of these sources the most popular source is the mass media with about 89.9% of respondents claiming they have received reproductive health information from it.

5.1.4 Influence of Social Media on the Reproductive Health Knowledge of Undergraduates

This study reported the level of knowledge among Undergraduate students of the University of Ibadan. Respondents were asked to mention four modern methods of contraceptives they know, define safe sex, reproductive health, and made to choose the types of STIs from a list of ailments.

Majority of the respondents were able to mention at least one method of contraceptive which is consistent with the study conducted by Araoye *et al*., 1998 among students in tertiary institutions.

The contraceptives method mentioned ranged from vasectomy, tubal ligation, use of condom, implants, intra-uterine devices, withdrawal, rhythm to post sex drugs, being faithful to ones partner, use of spermicide, herbs and family planning. Out of all that was mentioned, the most common response was between the use of condom. The level of knowledge scale ranges from poor to good, and almost all the respondents (93.8%) have a good knowledge of reproductive health which is consistent with the findings of Hassan *et al*., 2015, while a negligible number of 0.8%has poor knowledge. This study revealed that there is a statistical significant difference the use of social media and the reproductive health knowledge of undergraduates in the University of Ibadan.

5.1.5 Influence of Social Media on the Reproductive Health Behaviour of Undergraduates

The results from this study showed the different behaviour of undergraduates as regards their reproductive health. Majority of the respondents (78.8%) have never gone for Voluntary HIV test and counseling which does not correspond with their knowledge at all. This finding supports that of Hassan et al., 2015 which showed that the knowledge of respondents about the prevention of HIV has not motivated them to go for HIV test. The highest influence on those that have actually gone for the test was from health workers at 3.6%, followed by parents (3.1%) and then friends (2.6%). Out of 192 female respondents that participated in this study, only 10 of them had ever gone for cervical cancer screening test. 92 respondents have had sex before and majority of them fall in the age range of 15-19 years old, and more than half of this number were still sexually active as at the time this study was conducted. The major influential factor to have sexual intercourse is boyfriend/girlfriend as claimed by

almost half of the respondents that have had sex before. Despite their knowledge of contraceptives, there were some of the respondents who said they do not use condom every time they have sexual intercourse, and a little have used other contraceptives (salt solution and postinol) apart from condom.

The study also showed that there is no statistical significant difference between the use of social media and the reproductive health behaviour among undergraduate students as the p values were all greater than 0.05.

5.2 Implication of the Study for Health Promotion and Education

Findings from this study revealed that respondents have access to social media applications, as every one of them owned a smartphone. A large majority of respondents have good reproductive knowledge but this has in no way improved their reproductive behaviour as a large number reported that they have never gone for voluntary HIV testing and counselling. Also, many of the female respondents reported that they have never gone for cervical cancer screening. This calls for more sensitization and behavioural change approaches on reproductive behaviour.

This study revealed that apart from social media and mass media, "friends" happen to be a source of reproductive health information for most young adults. This shows that peers can influence decisions made by young people as regards their reproductive health as they spend more time with one another.

5.3 Conclusion

From this study, all undergraduate students are registered on at least one social networking site, which implies that they have at least one social media application on their mobile phones. The study shows that the use of social media can affect the reproductive health knowledge as there is a statistical significant difference between social media use and reproductive knowledge of respondents. Howbeit, the use of social media has no relationship with their reproductive health behaviour. Also gender has no relationship with reproductive health behaviour and knowledge.

5.4 Recommendation

Reproductive health counselors working with young people should use the social media application mostly used by this group of people to communicate with them as regards issues of reproductive health as this could help reach a larger portion of the population.

The results obtained from this study were limited to just a University in Nigeria which is a Federal Institution. This means that students are admitted to the university from across the whole nation of Nigeria. Although it might be quick to rely on the results gotten from the sample of this study to represent and generalize as regards all Nigerian students, doing so may not be quite appropriate. I therefore recommend that more studies should be conducted to explore the influence of social media use on the reproductive health and knowledge among this group while putting all necessary factors into consideration.

REFERENCES

Abiodun, R. 2011. "Unsafe abortions cause 20 000 deaths a year in Nigeria"; *"National Center*

For Abortion policy - Nigeria". The United Nations, Population Division of the Department for Economic and Social Affairs United Nations Secretariat

Akinfaderin-Agarau, F., Chirtau, M., Ekponimo, S., and Power, S. 2012.Opportunities and Limitations for Using New Media and Mobile Phones to Expand Access to Sexual and Reproductive Health Information and Services for Adolescent Girls and Young Women in Six Nigerian States, 2012

Araoye M.O., Fakeye O.O., Jolayemi E.T. 1998. Contraception method choices among adolescents in a Nigerian tertiary institution. *West Afr. J. Med.,* 1998, 17: 227-231.

Arowojolu, A.O., Ilesanmi, A.O., Roberts, O.A., and Okunola, M.A. 2002. Sexuality, contraceptive choice and AIDS awareness among Nigerian undergraduates.*African Journal of Reproductive Health*, 6(2): 60-70.

Arulogun, O.S., Ogbu, I.A., Dipeolu, I.O. 2016. Influence of internet exposure on sexual behaviour of young persons in an urban district of Southwest, Nigeria. *Pan African Medical Journal* – ISSN: 1937- 8688

Bandura, A. 1971. *"Social Learning Theory". General Learning Corporation.* Retrieved 25, December 2013

Bankole, A., Adewole, I.F., Hussain, R., Awolude, O., Singh, S., Akinyemi, J.O. 2015. "The incidence of Abortion in Nigeria". International Perspectives on sexual and Reproductive Health. *A journal of peer-reviewed research.* Vol. 14, issue 4. December, 2015. Pg. 170 – 181. Guttmacher institute.

Berkman Center for Internet and Society, Harvard Law School, Internet Safety Technical Task

Force, (2008). Enhancing safety and online Technologies, 2008. *Final Report of the Internet Safety Task Force to the Multi-State Working Group on Social Networking*

for the State Attorneys General of the United States. Retrieved on May 30, 2011 from MacArthur Foundation.

Boyd, D. 2010. "Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications." In Networked self: identity, Community, and culture on Social Network Sites. *(Ed. Zizipapacharissi),* pp. 39-58.

Collin, P., Rahilly, K., Richardson, I. 2011. The Benefits of social Networking Services: Literature Review. Ydney: Cooperative Research Centre for Young People, Technology and wellbeing, 2011.

Davies, T., Cranston, P., 2008 Youth Work and Social Networking - Final Research Report Sept. 2008 accessed from: http://www.nya.org.uk/wp-content/uploads/2014/06/Youth-Work-and-Social-Networking-Final-Report-August-2008.pdf last accessed on 16/7/2015.

Ekpeyong, A.S., and Turnwait, M.O. 2016. Social media and Sexual Reproductive Health Behaviour Among Adolescents in Bayelsa St ate, Nigeria. American International Journal of Research in Humanities, Arts and social sciences ISSN:2328-3734-2016.

Etokidem A.J., Ndifon W., Etowa J., Asuquo EF. 2017. Family planning practices of rural community dwellers in Cross River State, Nigeria. *Niger J Clin Pract* 2017;20:707-15

Gapsiso, N.D., and Kolo, A. 2017.The Use of Social Media by Students of Capital School Maiduguri, Nigeria. 2017

Greenfield, S. 2010. The Quest For Identity In The 21st Century, *on Daily Mail UK* 14th September, 2010.

Hall K.S., Monreau C., Trussell J. 2012. "Determinants of and disparities in reproductive health service use among adolescent and young adult women in the United States, 2002-2008". *American Journal of Public Health.* 120 (2): 359-67

Haddon, L., 2015. *The International Encyclopedia of Digital Communication and Society,*

First Edition. Edited by Robin Mansell and PengHwa Ang.© 2015. Published 2015 by

John Wiley & Sons, Inc.

Hassan A.O., Oladeji A.O., Atibioke O.P., Ehimatie B., Ojomo O.A., Lannap F., Osinowo K.A., Ajuwon A.J., Uzuegbunam E., Ladipo O.A. 2015. Sexual behavior and knowledge of reproductive health and HIV prevention among secondary school students in Nigeria. ISSN 2326-7291 Vol. 5 (1), pp. 231-238, January, 2016.

Ito, M., Horst, H., Billanti, M. 2008. Living and learning with new media: Summary of Findings from the Digital Youth Project. Cambridge: Massachusetts Institute of Technology, 2008.

Ito, M., Antin, J., Finn, M., Law, A., and Manion, A. 2010. Hanging out, messing around, and

geeking out: Kids living and learning with new media, Cambridge, MA: *MIT Press*.

Kaur, J. 2015. Social media: precedenting the human life. *International Journal of Social Science and Humanities Research* ISSN 2348-3164 (online) Vol. 3, Issue 3, pp: (142-151), Month: July - September 2015

Leedy, P.D. 1993. Practical research: planning and design.6' ed. *New Jersey: Prentice Hall*.

Livingstone, S. M., and Drotner, K. 2008. International handbook of children, media and culture. London: SAGE.

Livingstone, S. 2009. Children and the Internet: Great expectations, challenging realities. *Cambridge, UK: polity*.

National AIDS and STDs Control Programme (NDCP). 1999. HIV/Syphilis sentinel Sero-Prevalence Survey in Nigeria. Abuja, Nigeria.

National Population Commission, 2006. 2005 Population census of the Federal Republic of Nigeria. National Population Commission Abuja, Nigeria.

Ogbu, R. 2013. "Illegal abortion in Nigeria: The cringing reality". *YNaija* Retrieved 11 August 2015. *Biotechnology Information*. Retrieved 11 August, 2015.

Olsen, P. 2014. "Whatsapp Hits 600 Million Active Users, Founder Says". *Forbes*. Retrieved October 2, 2014

Pascoe, C. J. 2011. Resource and risk: Youth sexuality and new media use. *Sexuality Research and Social Policy*, 8(1), 37–50.

Population Reference Bureau (PRB). 2014: analysis of data from the Nigeria DHS 2013, calculated in the manner of Kerry L.D. MacQuarrie, Unmet Need for Family Planning Among Young Women: Levels and Trends (*Rockville, MD: ICF International*, 2014).

Schill, R. 2001. Social Networking Teens More likely to drink, use drugs, study finds. http://jjie.org/teens-on-facebook-more-likely-drink-or-use-drugs-study finds/20713

Smatt Geeks Media (SGM). 2018 "Whatsapp users spend an average of 646 years on video calls". 2017-05-09. Retrieved 2018-03-08.

Sexual Reproductive Health Guide (SRH-G). 2001. Meeting the Sexual and Reproductive Health Needs of Young People in Nigeria. A guide for Action

United Nations. "2008 MDG Progress Report" (PDF). pp. 28–29. Archived from the original (PDF) on 2009-02-03. Retrieved 2009-02-04

UNAIDS, 2016. Review of data from People Living with HIV Stigma Index surveys conducted in more than 65 countries, 2016.

"Incidence, Prevalence, and Cost of Sexually Transmitted Infections in the United States" (PDF). *CDC STI, Fact Sheet, United States Centers for Disease Control (CDC)*. February 2013

"Reproductive Health Strategy". *World Health Organization.* Retrieved 2008-07-24

APPENDIX I

DEPARTMENT OF HEALTH PROMOTION AND EDUCATION

FACULTY OF PUBLIC HEALTH

COLLEGE OF MEDICINE

UNIVERSITY OF IBADAN

Dear respondent,

I am a Masters of Public Health Student from the Department of Health Promotion and Education, University of Ibadan. I am carrying out a research titled. ***INFLUENCE OF USE OF SOCIAL MEDIA ON REPRODUCTIVE KNOWLEDGE AND BEHAVIOUR, AMONG UNDERGRADUATE STUDENTS IN THE UNIVERSITY OF IBADAN, NIGERIA*** Information gotten from this study will be used in planning programmes to promote positive health outcome of the youth in Nigeria. You are therefore invited in this research, participation involve providing answers to the questions below, information provided will be safeguarded and used for research purposes only. The questionnaire would be self-administered.

Should you decide not to continue with the research, for any reason, be assured that you will not be penalized in any way. You are free to withdraw at any stage of the research if you so wish, as there is no conflict of interest whatsoever. You are however, assured that your response will be treated with utmost confidence and will be used only for academic purposes.

Thank you for your cooperation.

SECTION A: DEMOGRAPHIC CHARACTERISTICS

INSTRUCTION: *Please kindly tick [√] appropriately and supply adequate responses to the questions provided.*

1. Age as at last birthday: _____ years old
2. Gender: Male [ ] Female [ ]
3. Faculty: _____
4. Department: _____
5. Level: _____
6. Marital status: Single [ ] Married [ ] Others (specify) _____
7. Religion: Christianity [ ] Islam [ ] Others [ ]
8. Ethnic Group: 1. Yoruba [ ] 2. Hausa [ ] 3. Igbo [ ] 4. Others (specify)_____

SECTION B: ACCESS TO SMARTPHONES

INSTRUCTION: *Please kindly tick [√] appropriately and supply adequate responses to the questions provided.*

9. Do you own a mobile phone? Yes [ ] No [ ] (If No, stop here)
10. How many mobile phones do you own? One [ ] More than one [ ]
11. What type of phone do you have? Regular [ ] Smartphone [ ] Both [ ]
    (If smartphone continue, if not stop here)
12. For how long have you owned the Smartphone? 0-3months [ ] 4-6months [ ] above 6 months [ ]
13. Have you been using the smartphone consistently since you got it? Yes [ ] No [ ]

SECTION C: SOCIAL MEDIA APPLICATION COMMONLY USED BY STUDENTS

INSTRUCTION: *Please kindly tick [√] appropriately and supply adequate responses to the questions provided.*

14. Are you on any social media? Yes [ ] No [ ]

The following are the social media applications I have on my smartphone

S/N	ITEMS	YES	NO
15.	Facebook		
16.	Whatsapp		
17.	Instagram		

18.	You tube		
19.	Snap chat		
20.	Imo		
21.	Telegram		
22.	LinkedIn		
23.	Twitter		

Others (please indicate all that applies)

_____

How frequently do you use these social media applications?

S/N	ITEMS	Often	Sometimes	Rarely	Never
24.	Facebook				
25.	Whatsapp				
26.	Instagram				
27.	You tube				
28.	Snap chat				
29.	Imo				
30.	Telegram				
31.	LinkedIn				
32.	Twitter				

Others (please indicate all that applies)

_____

33. Out of the ones you often use, which is app do you prefer most? _____

34. What is the average time you spend on this app in a day?

Minut☐ ☐ ☐

OR

Hou☐ ☐

35. Why do you prefer this particular app to the rest?

_____

SECTION D: TYPES OF INFORMATION SHARED ON SOCIAL MEDIA

INSTRUCTION: *Please kindly tick [√] appropriately and supply adequate responses to the questions provided.*

36. Have you ever sent any information apart from regular chats on any of the social media apps?
    Yes [ ] No [ ] (If No, skip to question 37)
37. If yes, what type of information do you send on social media?
    Sport News [ ]
    Health Information [ ]
    Jokes [ ]
    Devotionals [ ]
    Entertainment News [ ]
    Others _____ (Multiple response allowed).

38. What sorts of information do you receive on social media?
    Sport News [ ]
    Health Information [ ]
    Jokes [ ]
    Devotionals [ ]
    Entertainment News [ ]
    Others _____ (Multiple response allowed).
39. Have you ever received any information about the various means of preventing pregnancy on any of the social media app? Yes [ ] No [ ]
40. Have you ever received any information about the means of preventing Sexually Transmitted Infections (STIs) including HIV/AIDS on any of the social media app?
    Yes [ ] No [ ] (If no skip to question 42)
41. If yes, what message did the information contain?
    _____
42. Have you ever received any information on the various Sexually Transmitted Infections there are, on any social media app? Yes [ ] No [ ]
43. Apart from social media, what other sources did you get the above mentioned information from?
    Friends [ ]

Parents/Guardians [ ]

Mass Media (Television/Newspaper/Radio, etc) [ ]

Health facility [ ]

Others (Please specify) _____ (multiple response allowed)

SECTION E: INFLUENCE OF INFORMATION GOTTEN ON SOCIAL MEDIA ON REPRODUCTIVE KNOWLEDGE OF STUDENTS

INSTRUCTION: *Please kindly tick [√] appropriately and supply adequate responses to the questions provided.*

44. Reproductive health involves having a full knowledge of contraceptive choices and ability to regulate one's fertility Yes [ ] No [ ]

45. List four modern methods of preventing pregnancy that you know. _____

_____ _____

46. Safe sex helps promote healthful reproductive health Yes [ ] No [ ]

47. Safe sex is having unprotected sex with a faithful partner true [ ] false [ ]

48. The use of condom during sexual intercourse is a means of having safe sex true [ ] false [ ]

49. The following are sexually transmitted infections

Syphilis	Yes [ ]	No [ ]
Gonorrhea	Yes [ ]	No [ ]
Headache	Yes [ ]	No [ ]
Malaria	Yes [ ]	No [ ]
HIV	Yes [ ]	No [ ]
Human Papilloma Virus (HPV)	Yes [ ]	No [ ]

50. Can you clearly say that you got the information about prevention of pregnancy from any of the social media apps? Yes [ ] No [ ]

51. Can you clearly say that you got the information about prevention of sexually transmitted disease from any of the social media apps? Yes [ ] No [ ]

52. If yes, which of the social media apps? (Indicate all that apply)

_____

SECTION F: INFLUENCE OF INFORMATION GOTTEN ON SOCIAL MEDIA ON REPRODUCTIVE BEHAVIOUR

INSTRUCTION: *Please kindly tick [√] appropriately and supply adequate responses to the questions provided.*

53. Have you ever gone for Voluntary HIV test and counseling? Yes [ ] No [ ]
54. Who or what prompted you to go for voluntary HIV test and counseling?
    Friends [ ] Social media [ ] Boyfriend/Girlfriend [ ] Parents [ ] Health worker [ ] Mass media [ ] Others (please specify)_____
55. Have you ever gone for cervical cancer screening test? (females only)
    Yes [ ] No [ ] (If no skip to Q. 36)
56. Who or what prompted you to go for the screening test?
    Friends [ ] Social media [ ] Boyfriend/Girlfriend [ ] Parents [ ] Health worker [ ]
    Mass media [ ] Others (please specify)_____
57. Have you ever had sex before? Yes [ ] No [ ] (If no, stop here)
58. At what age did you first have sex? _____years
59. Who/what influenced your decision to have sex?
60. Friends [ ] Social media [ ] Boyfriend/Girlfriend [ ] Parents [ ] Health worker [ ] Mass media [ ] Others (please specify)_____
61. Are you still sexually active? Yes [ ] No [ ]
62. Have you had sex in the last 6months? Yes [ ] No [ ]
63. Do you or your partner(s) use condom every time you have sex? Yes [ ] No [ ]
64. Have you or your partner ever used any other method(s) of contraceptives apart from condom? Yes [ ] No [ ]
65. If yes, kindly indicate the one used. _____
66. Who/what prompted you to use contraceptives?
    Friends [ ] Social media [ ] Boyfriend/Girlfriend [ ] Parents [ ] Health worker [ ] Mass media [ ] Others (please specify) _____

67. Where did you get the information on the contraceptive method(s) you mentioned?

Friends [ ] Social media [ ] Boyfriend/Girlfriend [ ] Parents [ ] Health worker [ ] Mass media [ ] Others (please specify) _____

APPENDIX II

INFORMED CONSENT FORM

Title of the research:

Influence of the use of social media on the Reproductive Knowledge and Behaviour among Undergraduate Students in the University of Ibadan, Nigeria

Name(s) and affiliation(s) of researcher(s) of applicant(s):

This study is being conducted by **BANKOLE Adebola Aderonke** from the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Oyo State.

Sponsor(s) of research:

The research is self- sponsored.

Purpose(s) of research:

The research is aimed at exploring the influence of the use of social media on the reproductive knowledge and behaviour among undergraduate students.

Procedure of the research, what shall be required of each participant and appropriate total number of participants that would be involved in the research:

Multi-stage sampling technique will be applied in selecting 422 study participants among undergraduate students residing in the hall of residence within the campus. The study will adopt the quantitative method using semi-structured, self-administered questionnaire for data collection. The questionnaire will assess the social media application used by

undergraduates, their knowledge and behaviour as regards reproductive health. The study will only require the participant to provide adequate information.

Expected duration of research and of participant(s)' involvement:

The study will require a maximum of about 10 minutes of your time to fill the questionnaire.

Risk(s):

The study will not involve any risk as it does not involve use of any invasive material.

Costs to the participants, if any, of joining the research:

Your participation will not cost a little time required to provide relevant information.

Benefit(s):

There is no direct benefit to the participants but will help inform recommendations that will be used in improving the reproductive health knowledge and behaviour of young people.

Confidentiality:

Information collected from the participants will be kept confidential as there is no means of identification on the instrument and all data will be kept under lock and assessed by only authorized individuals.

Voluntariness:

Your participation in this study is strictly voluntary and may choose to withdraw from the study at any time.

Alternatives to participation:

Your non-participation will not affect you in any way.

Consequences of participant's decision to withdraw from research and procedure for orderly termination of participation:

You may choose to withdraw from the research at any time. Please note that some of the information that has been obtained about you before you chose to withdraw may have been modified or used in reports and publications. These cannot be removed anymore. However the researchers promise to make effort in good faith to comply with your wishes as much as is practicable.

What happens to research participants and communities when the research is over:

The outcome of the research would be pasted on the notice board of each faculty after obtaining permission from the appropriate authority.

Statement of the person obtaining informed consent:

I have fully explained this research to…….. and have given sufficient information, including risks and benefits to make an informed decision.

DATE……. SIGNATURE…….

NAME…….

Statement of person giving consent:

I have read the description of the research and had it translated into the language I understand. I understand that my participation is voluntary. I know enough about the purpose, methods, risks and benefits of the research to judge that I want to take part in it. I understand that I may freely stop being part of this study at any time. I have received a copy of this consent form and additional information sheet to keep for myself.

DATE……. SIGNATURE…….

NAME…….

Detailed contact information including contact address, telephone, fax, email and other contact information of researcher(s), institutional HREC and head of the institution:

The research has been approved by the Ethics Committee of the University of Ibadan and the Chairman of this committee can be contacted at Biode Building, Room 210, 2nd floor, Institute for Advanced Medical Researcher and Training, College of Medicine, University of Ibadan, E-mail: uiuchirc@yahoo.com and uiuchec@gmail.com

In addition, if you have question about your participation in this research, you can contact the principal investigator,

Name……

Department……Phone……

…

Email……

…

PLEASE KEEP A COPY OF THE SIGNED INFORMED CONSENT

APPENDIX III

ETHICAL APPROVAL

INSTITUTE FOR ADVANCED MEDICAL RESEARCH AND TRAINING (IAMRAT)
College of Medicine, University of Ibadan, Ibadan, Nigeria.

Director: **Prof. Catherine O. Falade,** *MBBS (Ib), M.Sc., FMCP, FWACP*
Tel: 0803 326 4593, 0802 360 9151
e-mail: cfalade@comui.edu.ng lillyfunke@yahoo.com

UI/UCH EC Registration Number: **NHREC/05/01/2008a**

NOTICE OF FULL APPROVAL AFTER FULL COMMITTEE REVIEW

Re: Influence of use of Social Media on the Reproductive Knowledge and Behaviour among undergraduate students in the University of Ibadan, Nigeria.

UI/UCH Ethics Committee assigned number: UI/EC/18/0301
Name of Principal Investigator: **Adebola A. Bankole**
Address of Principal Investigator: Department of Health Promotion & Education, College of Medicine, University of Ibadan, Ibadan

Date of receipt of valid application: 20/07/2018
Date of meeting when final determination on ethical approval was made: **N/A**

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and *given full approval by the UI/UCH Ethics Committee.*

This approval dates from **11/09/2018 to 10/09/2019.** If there is delay in starting the research, please inform the UI/UCH Ethics Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the* UI/UCH EC *assigned number and duration of* UI/UCH EC *approval of the study.* It is expected that you submit your annual report as well as an annual request for the project renewal to the UI/UCH EC at least four weeks before the expiration of this approval in order to avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the UI/UCH EC. *No changes are permitted in the research without prior approval by the* UI/UCH EC *except in circumstances outlined in the Code. The* UI/UCH EC *reserves the right to conduct compliance visit to your research site without previous notification.*

UI/UCH EC
11 SEP 2018
APPROVED
COLLEGE OF MEDICINE, U.I.

Professor Catherine O. Falade
Director, IAMRAT
Chairperson, UI/UCH Ethics Committee
E-mail: uiuchec@gmail.com