

Full Length Research Paper

Application of ICTs in family planning and birth control in Awka-South L.G.A, Anambra State, Nigeria

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The power of information and communication technology in information dissemination cannot be overemphasized. ICTs are the new technologies that have significantly changed today's landscape by being a driving force that stimulates developmental change in digital age. This great transformation has served as a tool for information dissemination in the world and has carried information on family planning and birth control to Nigerian citizens. This study is therefore an attempt at examining the application of ICTs in family planning and birth control in Awka-South L.G.A, of Anambra State. The technological determinism theory formed the theoretical framework for the study. Survey method was employed in the study and a sample size of 200 residents of Awka-South L.G.A. was randomly selected through a multi-stage sampling technique. The findings of the study indicate that respondents agree that they are aware that information and communication technologies have helped in the dissemination of relevant information on family planning in Nigeria particularly in urban centres which the Awka - South L.G.A represents. The study thus recommends that ICTs should be massively deployed to disseminate relevant messages on issues such as contraceptives alternatives, distended family size, and female genital mutilation among others that have the potential of destroying family hood. Ultimately, the redress of these challenges would rebound to the cohesion and progress of the average urban family.

Key words: ICTs, Family planning, application, birth-control.

INTRODUCTION

The practice of birth control or preventing pregnancy is as old as man. Humans from existence have been enjoying the gift of procreation; they have been fruitful and multiplying. This human multiplication or increase has allowed the people to live together in a particular area, city or country forming their population. However, the population of people in a given country should be controlled to avoid over population which can in turn have

an adversely effect on the country's resources and as well boast an increase in maternal mortality. Experts observed that high rate of any given population pose tremendous socio-economic problems for the maintenance of minimal standards of living. Therefore, to avoid a country being overpopulated, it will be necessary to encourage the citizens to have the number of children they can manage. Osakue (2010) might be right when he

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said that if the nation's population is left to grow uncontrolled, that the national resources will sooner or later be outstripped by the increasing demand of the growing population. For centuries, humans have relied upon their imagination to avoid pregnancy. All over African continent, plans, projects and programme are designed to provide high quality family planning counselling to the populace. Many Nigerians have resorted to the use of family planning to control fertility, more so some believe it is not necessary to control the number of children a family should have and this has been frustrating the efforts of the Federal Government of Nigeria in formulating birth control and family planning policy in the country. Experts observe that some Nigerians believe that it should be left for the family to decide the number of children they should have while others were of the opinion that the number of children a family should have depend on the income level of the family. It is assumed that a rich family should have greater number of children than the poor or average family but on the contrary, it is the poor family that have the greater number of children with their little income to cater for the family and as a result of that many children are sent to the streets to hawk, some are sent out of their home as house helps where they face some kind of abuses etc.

The provision of family planning is a key means by which two of the Millennium Development Goals (a reduction of under-5 mortality rates by two-thirds and maternal mortality rates by three-quarters by 2015) may be achieved. Experts observed that reducing both unplanned and higher risk pregnancies is a way of reducing both maternal and infant mortality. They further stated that voluntary family planning has profound health, economic, and social benefits for families and communities, protecting the health of women by reducing unwanted or high risk of pregnancies, protecting the health of children by allowing sufficient time between pregnancies, reducing abortions, supporting women's rights and opportunities for education, employment and full participation in society and protecting the environment by stabilizing population growth.

Today, the voluntary control of fertility is of paramount importance to modern society. This was probably the fear of Obinna (2011) when he laments on the global perspective countries currently facing the crisis of rapid growth of human survival population that has begun to threaten human survival. Studies have shown that Nigeria as the most populous country in Africa has been among the seventeen most populated countries on earth with an estimation of 160- 170 million people, and also has the highest maternal mortality rates in the world. This has been attributed to the inability of Nigerian women to adequately use family planning and birth control methods to assist them in successfully spacing of their children. They further observed that Nigerian population exceeds

that of Russia and is more than twice the population of Germany and that the Nigerian population has been projected to grow so rapidly that Nigeria may have over 400 million people by the year 2015.

In an attempt to remedy the situation, some researchers reviewed that the Federal Government of Nigeria in 1988 and 2001, adopted the National Population Policy and National Reproductive Health Policy respectively, both of which seek to achieve quality reproductive and sexual health for all Nigerians. The policies were developed to address the unacceptable rate of maternal and infant morbidity and mortality in Nigeria as well as creating awareness on the use of family planning services. The policy also sought to ensure that every man and woman has the opportunity to obtain and use any contraceptives of their choice "at the right place, at the right time, and at the right cost.

Also in 2002, the Federal Government of Nigeria came out with a population policy paper which states that the value of family planning and child spacing on the stability and wellbeing of the family shall be promoted and family services shall be incorporated in maternal and child health care. Since the policy paper of 2002 did not succeed, on June 29th 2012, Nigerian President Goodluck Jonathan made headlines that caused controversy on the need for "birth control legislation" in lines of China's one child policy. Jonathan has recommended that the newly formed National Population Commission should pursue a campaign of "advocacy" and "sensitization" to promote birth control and the idea of child spacing. This is not the first time someone influential has proposed such a policy for Nigeria. Last year, American economist Jeffrey Sachs suggested that "Nigeria should work towards attaining a maximum of three children per family," an idea that also drew criticism and debate.

The aim of the formulation of population policy in Nigeria is to reduce rapid population growth as well as maternal, infant morbidity and mortality. In Nigeria, family planning and birth control can improve the likelihood of survival of life of the populace at all stages. Commenting on the importance of family planning in Nigeria, Julius Neyerere cited in Centre for Disease Control (1983) said that,

It is important for human beings to put emphasis on caring for children and the ability to look after them properly, rather than thinking only about the number of children and the ability to give birth. For it often happens that man's ability to give birth is greater than their ability to bring up the children.

In view of this, it has been noted that Nigerians can apply information and communication technologies (ICTs) which comprise Internet services, mobile phone devices, e-mail, DVD, CD-Rom among others in family planning and birth control in the country. ICT has become part of our daily lives, as well as the driving forces that stimulate

development and change in the digital age (Emenari, 2004). Commenting further on the use of ICTs for family planning Mohini (2010) observes that:

the mobile phone devices can be information-based pertaining issues of family planning, that it can serve as (text message)-based delivery of information on family planning because of its information based, low-cost, and non-hormonal method of family planning... The CycleTel system is designed to send users a message to let her know which days she can get pregnant. Additionally, a helpline number is available for one-on-one consultation over the phone.

Therefore, this confirms ICTs as technological devices or computer enabled communication technologies used for the acquisition, processing and dissemination of information to heterogeneous audience regardless of time, space, and distance as well can be used rapidly to impact on the lives of the people in meaningful way through disseminating information to the citizens on family planning and birth control in the country and this forms the bedrock of the study.

Statement of problem

Today, with the new communication facilities, news comes and is sent to anywhere and everywhere in the world in fractions of a second in other words as it occurs (Ndolo, 2006). The reasoning in the above assertion is that information and communication technologies (ICTs) have become a viable means of using the Internet by all to reach out to one another instantly and have been seen as a media form that has contributed much in information dissemination particularly on matters that concern family planning. It is on this strength that the ICT has played and would continue to play a key role in spreading the messages to the citizens.

Even though Nigeria as country has embraced family planning and birth control and has integrated it into its primary health care system like the rest of the world, family planning matters are arguably still very thorny and thin-skinned in Africa, particularly in Nigeria. Unfortunately, before the enactment of the policy, issues, particularly, the use of birth control and family planning methods presumably to predict on the right of couples and individuals to decide fully the number and spacing of their children remains a great concern. These controversies have been hindering the success of birth control and family planning in the country, a lot of Nigerians have been determined to control fertility but could not do so because they have no access to information on modern birth control methods.

Now, the thrust of the research is to find out if Nigerians are aware of the application of ICTs in family planning and birth control services? To what extent do the

residents of Awka-South L.G.A. agree that ICTs can be relevant in family planning and birth control services in the country?

Objectives of the study

The general objective of the study is to examine the application of ICTs in family planning and birth control services in Nigeria. To meet the general objective, the study will focus on the following:

1. To find out if the residents of Awka-South L.G.A. are aware and know of the application of ICTs in family planning and birth control services in Nigeria.
2. To investigate the application of ICTs in family planning and birth control services in Nigeria.
3. To find out their views on the application of ICTs in family planning and birth control services in Nigeria.
4. Do the factors of age, sex, educational background, religious affiliations, socio-economic status, culture and superstitions constitute barriers to the application of family planning and birth control services in Awka –South L.G.A.

Research questions

1. Are the residents of Awka-South L.G.A. aware and know of the application of ICTs in family planning and birth control services in Nigeria?
2. To what extent do they apply ICTs in family planning and birth control services in Nigeria?
3. What is their views on the application of ICTs in family planning and birth control services in Nigeria.
4. To find out if factors such as age, sex, educational background, religious affiliations, socio-economic statuses, culture and superstitions constitute barriers to the application of family planning and birth control services in Awka-South L.G.A.

Significance of the study

The study of application of ICTs in family planning and birth control is therefore, significant in many aspects. The world today is fast paced and much of that is attributed to power of ICTs in making the world a global village. It is believed that the residents of Awka-South L.G.A form a sizable fraction of people that may apply ICTs in family planning and birth control services in Nigeria. There have been several forms of initiatives, programs and packages on methods of family and birth control on the Internet showing that the citizenry particularly residents of Awka-South L.G.A. may apply ICTs in family planning and birth control.

This study therefore, will greatly help in creating awareness, knowledge as well as understanding on the

application of ICTs in family planning and birth control services in the country. Findings from this study would enlighten the populace on the need for family planning and birth control in the country aimed at reducing rapid population growth that poses a major hindrance to economic development in the country.

Secondly, the study will contribute to the existing literature on the application of family planning and birth control in the country. It will also help to enhance the use of ICTs on health issues in the country.

THEORETICAL FRAMEWORK

For the purpose of this study, a socio-psychological theory, Health Belief Model (HBM), was used to produce a framework for data collection, analyses and interpretation. The Health Belief Model (HBM) developed by Rosenstock (1974) holds that prevention and cure of illness, acting together with people's perception of vulnerability to health problems form a set of related problems and a set of related elements which can influence health behaviour in individuals. Individuals' perceptions of perceived susceptibility/seriousness of disease has strong link to the likelihood of behaviour change in human beings. Also, the media information on health related issues leads to public awareness and enlightenment on perceived threats of the disease. The shows that online messages on family planning and birth control methods can lead to full adoption of the family planning and birth control methods.

The model further shows that the key to the application of health information is the readiness to adopt such messages. This adoption of health information includes among others, peoples' readiness to act which is determined by individual's exposure to such information. The individual's perception of information also depends on how acceptable such information is to the individual which indirectly influences health-related behaviour. Glanz et al. (2002) see all these as cues to action-events either bodily (e.g. a health symptom or environment (e.g. a media message) that motivate people to take action.

With regards to the relevance of the use of ICTs in family planning and birth control services in Nigeria, the health belief model is a valuable tool in exploring how the new media audience can source information on methods of family planning and birth control online and this actually shows the people's readiness to use or not to use ICTs in seeking out information on family planning and birth control methods.

LITERATURE REVIEW

This chapter gives us an insight into the findings, writings and reasonings of scholars in relation to application of ICTs in family planning and birth control particularly as it

concerns the family size reduction in the country.

Importance of family planning and birth control in Nigeria

The importance of family planning and birth control cannot be overemphasized. Obionu (2007) remarked that family planning is an important measure against maternal and childhood mortality and morbidity. He went further to stress that it is a vital and integral component of primary health care, which aims at promoting responsible parenthood, controlling population and improving the quality of life. Family planning has been defined variously by various authors and authorities. Also, family planning was seen as a measure by which individuals or couples space the process of conception, pregnancy and childbirth at intervals mutually determined by both husband and wife in order to have the desired number of children that they can conveniently maintain.

Commenting on the benefits of family planning, Umegbolu (2010) declares that family planning helps everyone. The impact of family planning and birth control can be affirmative on both the society and the social beings; the beneficiaries of family planning are the women, children, men and society.

Women: Family planning helps women to protect themselves from unplanned pregnancies. In addition, some family planning methods have other health benefits. For example, some hormonal methods help to prevent certain cancers and condoms help to prevent sexually transmitted infections including HIV/AIDS.

Children: By spacing births, family planning helps to save the lives of children.

Men: Family planning helps men to provide a better life for their families.

Families: Family planning improves family well-being by enabling couples to provide their families with enough food, clothing, housing and schooling.

Nations: Family planning helps in national development. In countries with controlled population growth, standards of living are usually higher because economic situations of citizens improve at a faster rate than in countries with uncontrolled population.

The Earth: Controlled population of the earth will place less pressure on natural resources such as water and fertile soil. In the end everyone will have a better opportunity for a good life.

Over the years, family planning has undergone various evolutions in different civilizations. Closely related to family planning is birth control which is considered an aspect of family planning. Birth control is defined as a regimen of one or more actions, devices, sexual practices, or medications followed in order to deliberately prevent or reduce the likelihood of pregnancy or child birth (Wikipedia, 2014).

It is against this backdrop of evident benefits of family planning to the individual, family, community and the nation as a whole that Nigeria like the rest of the world embraced family planning as an acceptable way of birth control.

Application of ICTs in family planning and birth control in Nigeria

No nation can progress meaningfully without communication which is vital to the socio-economic development of man. Presently, the world today has embraced information and communication technologies (ICTs) which serve as a means for effective communication. This ICTs according to nOkunna (2004) are those technologies which make possible computer mediated communications (CMC) and have given rise to the information superhighway. These new media technologies are bringing about remarkable changes in every aspect of development, therefore, to develop a people, a panoply of communication strategies through ICTs can be employed to facilitate the exchange of information needed to enhance the improvement of the people in socio-economic or socio-political terms.

The emergence of information and communication technologies as an integral part of human communication has been attributed to the shifts in perception in mass communication around the world brought about by the new media. These ICTs platforms are gradually challenging the monopoly of information gathering and dissemination from the traditional, corporate mass media to a more interactive media, thus undermining the powers of the big media and the companies that own or operate them. The result is the shifting in the sovereignty of mass communication from media empires to the public; hence the citizens can easily use ICTs for family planning and birth control and other matters revolving around it. For instance, through the use of ICTs, Nigerians can seek information on various birth control and family planning methods that suit them and also can have access to campaign messages on family planning, thereby creating intercommunication among the people and feedback to the government or development agents.

In other words, the decentralization of information would involve the use of smaller, less expensive and less cumbersome media technologies. Moemeka (1981, 1989) has made the point that development whether at the socio-economic or socio-political levels is not an easy task because it involves several variables or factors. To him, development communication (which also subsumes family planning issues) is not merely a matter of transmitting information about raising aspirations or how things can be done better but can involve opportunity for people to be able to access the right information regarding family planning and birth control. Contributing to the issue, Anyangu (2009) observes that:

The use of ICTs in family planning is aimed at reaching more people with information on family planning more especially the use of mobile phone.

With the cost of mobile technology steadily falling the growth of cell phone use, particularly in the developing world, is providing health experts with a new channel of communication to provide family planning information.

Though there is a growing interest with the intense efforts of the government to popularize the use of modern family planning methods by integrating it into maternal and child health in Nigeria, it seems many people still do not apply family planning methods. Lindroos and Luukkainen (2004) contend that Nigeria is a country where modern family planning usage is in one of the lowest in the world. This may be due to lack of useful information to those who really need the information, as majority of the Nigerian populace live in the rural areas where there is poor access to modern means of communication including ICTs. Family planning provides the society with some socio-economic and health benefits (Odaman, 2005). Application of ICTs in family planning and its usage by the populace will greatly enhance such benefits and can significantly improve the use of birth control methods, which in turn, will reduce population growth and overtime have positive effects on national development. Ugoji (2008) supporting the importance of family planning observes that family planning programmes strive to prevent unwanted pregnancies, help achieve birth spacing and help couples limit family size so as to reduce maternal/infant mortality.

According to Umeogbolu (2010) in Oji River LGA, the awareness of the people about family planning services appears to be low. More awareness could be created through sensitization of the people on the benefits of family planning and the disadvantages of not planning one's family, misconception would be cleared and in the end the uptake of the services would be improved in order to reap the positive impacts of family planning on the lives of the adult female population in Nigeria and this sensitisation could be done through the application of ICTs in family planning and birth control.

Religious views on family planning and birth control

Religions vary widely in their views of the application of family planning and birth control. To the Roman Catholics, only natural family planning is acceptable. Protestants maintain a more liberal stand. Views in Judaism range from the stricter orthodox sect to the more relaxed Reform sect. Islam approves the use of contraceptives if they do not threaten life, although some discourage their uses. Hindus may use both natural and artificial contraceptives. A common Buddhist view is that preventing contraception is ethically acceptable, while intervening after conception may have occurred is not

(Umegbolu, 2010).

In Nigerian situation, the history of family planning is relatively more recent. About 5 decades ago, family planning in Nigeria was considered a taboo because children were seen as gifts from God and any attempt at birth control was considered sinful. According to the Federal Ministry of Health (FMoH, 1994), family planning service was initiated in Nigeria in the 1950s by concerned and influential group of women, the Federation Women Council of Nigeria. This group later metamorphosed into the present National Council of Women Societies (NCWS) and inaugurated the Planned Parenthood Federation of Nigeria (PPFN). It is hoped that through the identification and eradication of the barriers to family planning, there would be a better application of family planning and birth control.

METHODOLOGY

This chapter discusses how the data for the study were collected, collated and analysed. Research is increasingly tilting towards the use of mixed methods to facilitate the validation of data. To achieve the study’s objectives, this research adopted a mixed methodological approach of investigation to facilitate the validation of data. This study uses two designs, namely: survey and focus group discussion.

Population

Survey

Survey is also considered appropriate for this study because the work seeks to reveal the audience extent of use of ICTs in family planning and birth control and their perception of family planning as a means of childbirth control. Ohaja (2005) makes the point that whenever the source of primary data for a study would be, the views of members of the public or any particular group, a survey would be required. Therefore, the survey method enables the researcher to empirically gauge the respondents’ perception of the subject under investigation.

The population comprises the residents of Awka, the capital of Anambra State, Nigeria. The choice of the residents of Awka is to possibly generate more diversity of thoughts and responses. It is a cosmopolitan city which hosts the Nnamdi Azikiwe University and other notable government institutions. Predominantly a civil servants and traders city, Awka remains a quiet but lively city in the South-East of Nigeria. Awka is a major representative location for literate publics that may make use of ICTs. Besides, the city hosts experts and postgraduate students in diverse disciplines; who are arguably among the most informed, the most critical and the most analytic segment of any society. Therefore, their views on any issue will yield reliable results. The population of Awka-South L.G.A. according to the 2006 National Population Census is 189,049.

Focus group

In order to further examine the use of ICTs in sourcing information on family planning, the researcher equally engaged the respondents in focus group discussion. Two sessions of focus group discussion involving a representative sample of users of family planning and birth control services from different socio-economic groups were undertaken. The participants range according to age, sex, and

educational level, and are all married. Thus, the participants in the first group, Participants 1 (20 - 34 years), which is the first session, were postgraduate students studying at both “Masters” and “PhD” level on full time and part time basis at the Nnamdi Azikiwe University, Awka. The second group, Participants 2 (34 – 49 years) was participants who are public servants at Awka-South L.G.A secretariat. Due to literacy barriers observed in the proof of concept testing, the target audience focuses on literate participants with higher educational background. Each set comprises eight respondents – four males and four females. The participants shared some characteristics – are computer literate, are still in their productive stage and are all married.

Although selecting samples or participants for this kind of qualitative research should not necessarily be through probability techniques, the participants in the first and second groups were selected through systematic and cluster random sampling techniques respectively. The aim of using these techniques was not to achieve statistical representation, but was rather meant to ensure that diversity was inherent in the composition of the groups. The participants in the second group were selected through a non-probability sampling technique (purposively) from their offices. Having been exposed to family planning and birth control methods as stimulus, the participants were asked several questions arising from the research questions and their answers were critically quizzed in the study’s analysis, alongside a discussion of the literature and theories pertinent to the discussion. Each set of the discussion lasted for about an hour. The group interviews were recorded with an audio midget transcribed into text and then was thematically analyzed.

Sampling size and sampling procedure (Survey)

Sampling is the selection of some elements, subjects or respondents from the population to represent that population for actual investigation of the study. This selection is done because of the impracticability of studying the entire population.

Taro Yamane’s formula for researchers in determining the sample size from a given population was adopted in this study. The formula is:

$$n = \frac{N}{1 + N (e)^2}$$

Where;

- n = Sample size sought
- N = Population size
- e = Level of significance (0.05)

Using the above formula, the sample size was determined as 396. The proportional stratified sampling was used to arrive at the number of respondents to be selected from different strata of the population. This was done in proportion to the population of the study.

Instrument for data collection (Survey)

The instrument for data collection was the questionnaire. Hansen et al. (1998) remark that the questionnaire “standardizes and organizes the collection and processing of information.”

Methods of data analysis

Data analysis is the transformation of the observations gathered in the field into a system of categories and the translation of these categories into codes that could be quantitatively analysed (Babbie,

Table 1. Awareness and knowledge of the application of ICTs in family planning and birth control.

Response	Respondents who are computer literate	Respondents accessing the Internet	Respondents' awareness of the application of ICTs in family planning	Respondents' knowledge of the application of ICTs in family planning
Yes	98.0%	78.0%	68.0%	60.0%
No	2.0%	22.0%	32.0%	40.0%

1986). The research questions were analysed using descriptive statistics such as frequency tables and simple percentages to ensure objective interpretation of data as well as the validity and reliability of the study.

ANALYSIS AND DISCUSSION OF FINDINGS FROM QUANTITATIVE DATA

The presentation and analysis of data generated for this study are presented in tables; each table represents and answers a research question. The analysis is based on the research instrument distributed to 400 respondents in Awka with a 100% return rate.

Table 1 shows that the greater percentage of the respondents are computer literate, have access to the Internet, are aware and know the application of ICTs in family planning. While a greater percentage of the respondents (98.0%) said that they are computer literate, only (2.0%) said that they are not computer literate. Interestingly, majority of the respondents (78.0%) agreed that they have access to the Internet. This evidently reflects in their awareness of the application of ICTs in family planning as majority of the respondents (68.0%) said that they are aware of the application of ICTs in family planning and also a considerable number of the respondents agree to know of the application of ICTs in family planning, indicating a high level of awareness and knowledge of the application of ICTs in family planning and birth control among the respondents.

To what extent do they apply ICTs in family planning and birth control in Nigeria?

A basic assumption underlying this study is that the respondents may actively engage in the application of ICTs in family planning and birth control but it was discovered that even though the respondents claim to be computer literate, have access to the Internet, are aware and know of the application of ICTs in family planning that yet the extent in which they apply ICTs in family planning is still very low. The study thus sought to find out if the extent of application of ICTs in family planning and birth control among the respondents, and majority of the respondents (70.0%) indicate a low level in their extent of application of ICTs in family planning and birth control,

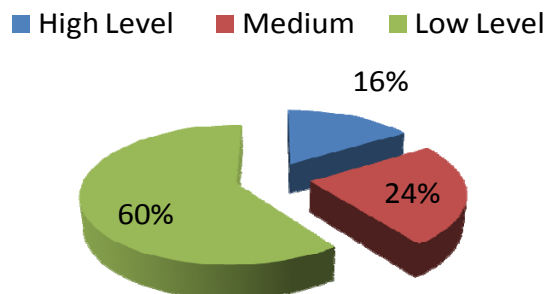


Figure 1. Chart showing the extent of application of ICTs in family planning.

(24.0%) were in the medium range while only (16.0%) of the respondents indicated a high level of extent of application of ICTs in family planning (Figure 1).

What is their view on the application of ICTs in family planning and birth control in Nigeria?

A close look at Figure 2 shows that majority of the respondents believe that the Internet, mobile phone, computers, etc can be relevant in issues of family planning and birth control in Nigeria. Greater percentage of the respondents (82.0%) believe that the Internet, mobile phone, computers, etc can be relevant in issues of family planning and birth control in Nigeria while only (18.0%) were of the opinion that the Internet, mobile phone, computers, etc cannot be relevant in issues of family planning and birth control in Nigeria.

It is apparent in Figure 3 that the Internet, mobile phone, e-mail, DVD,CD-Rom among others were identified as some of the information communication technologies that can enhance the family planning services in Awka-South L.G.A. Greater percentage of the respondents (78.0%) said that the application of the Internet, mobile phone, e-mail, DVD,CD-Rom among others in family planning services can enhance the family planning services in Awka-South L.G.A while a minimal percentage of the respondents (22.0%) were of the contrary view.

In answering the fourth research question on the factors that constitute barriers to the application of family planning and birth control in Nigeria, the data on Table 2 reveals

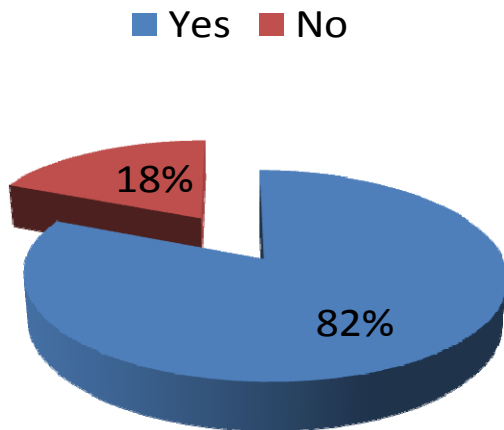


Figure 2. Chart showing that the internet, mobile phone, computers, etc can be relevant in family planning and birth control.

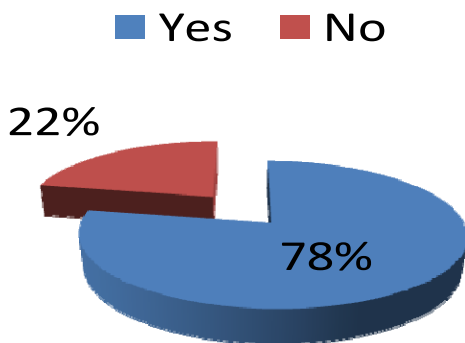


Figure 3. Chart showing that the Internet, Mobile Phone, E-mail, DVD will enhance the family planning and birth control services.

that some factors constitute barriers to the application of family planning and birth control in Nigeria. Majority of the respondents representing (90.5%) percent believe that some factors constitute barriers to the application of family planning and birth control in Nigeria while only (9.5%) do not believe that some factors constitute barriers to the application of family planning and birth control in Nigeria. Among some of the factors identified include educational level (81.0%), religious affiliations (85.5%), culture (86.5%) and superstitions (78.0%). This finding which shows that there exist some factors that constitute barriers to the application of family planning and birth control in the country.

ANALYSIS AND DISCUSSION OF FINDINGS FROM FOCUS GROUP DISCUSSION

Responses from both the married male and female

audience in this study conform to the idea of that attitude to family planning could be positive, neutral or negative. As earlier stated, the focus group discussion was used to identify previously unknown issues or concerns or to explore reactions to potential actions, benefits, or concepts on issues as regards family planning and birth control in Nigeria. Some of these emerging issues about family planning and birth control through ICTs, and factors that constitute barriers to the application of family planning are further explored in the focus group discussion include the following:

1. Residents of Awka-South L.G.A of Anambra State awareness of the application of ICTs in family planning and birth control.
2. The extent of applying ICTs in family planning and birth control in Nigeria.
3. Their views on the application of ICTs in family planning and birth control
4. Whether factors such as age, sex, educational background, religious affiliations, socio-economic statuses, culture and superstitions constitute barriers to the application of family planning in Nigeria.

“Awareness of the application of ICTs in family planning”

Since we are in the information age, it might not be least expected that the respondents would be aware of ICTs. Many of the participants understood ICTs from the standpoint of the ability to use the computer, the Internet and the mobile phone. The following highlights encapsulate the cumulative gist of their responses:

Participant 1: A computer does a lot of functions. It helps in typing of materials. It helps in the banks; without it we can't access accounts. It helps in information dissemination particularly the use of mobile phone and the Internet has reduced the world into a global village. The Internet is very important to human life. It is a very necessary something.

We need Internet to get Information. (Focus group discussion, Oct., 3 2012)

In this study also, the attitude of majority of the respondents surveyed was positive as almost all of them agreed that they have access to the Internet. Discussion with the respondents laid credence to this as they agreed to surf the Internet on a daily basis, many spending between 2 – 3 hours on the internet daily.

Moderator: Do you have access to the Internet?

Participant 4: Yes, I do.

Moderator: Like how many hours do you access the Internet in a day?

Table 2. Factors constituting barriers to the application of family planning and birth control in Awka-South L.G.A.

Response	Factors affecting the effective utilisation of ICTs in family planning service delivery	Educational level constituting barrier to the application of family planning and birth control in Awka-South L.G.A	Religious affiliations constituting barrier to the application of family planning and birth control in Awka-South L.G.A	Culture constituting barrier to the application of family planning and birth control in Awka-South L.G.A	Superstitions constituting barrier to the application of family planning and birth control in Awka-South L.G.A
Yes	90.5%	81.0%	85.5%	86.5%	78.0%
No	9.5%	19.0%	32.0%	13.5%	22.0%

Participant 4: With my laptop and modem, I spend like 2-3 h on the Internet

Participant 3: Surprised, do you mean that you spent up to 2-3 h on the Internet in a day, when do you have time to read your books?

Participant 14: Good question. Most times, I read online too, like the online books and journals...I also do my assignments on the computer so, while I do the assignments; I also browse at the same. The most important Thing is that I coordinate the two. (Focus group discussion, Oct., 3 2012).

The suggestion here is that, the respondents are aware of ICTs generally, agreeing that they have access to the Internet through their laptops and modem and more so, spend hours on the Internet every day browsing and reading. Most times too they seek out information on some issues on the Internet. As one of the respondents said:

Participant 8: I love browsing; there are lots of information on the Internet that I seek. I'm so addicted to the Internet that I fall sick whenever I cannot log on the "net" to do one thing or the other. Thanks to the computer age which has made ICTs very useful to human life. Today, if you don't have a computer, you can have smart phones such as blackberry, you can also have iphone or ipad which one can use to access information online.

Moderator: Since you have agreed that you access information on the Internet, are you aware that you can apply ICTs in family planning and birth control?

Participant 5: Yes, I am aware that I can seek such information online, I have sought information from the Internet on other issues, but have not thought of using it to seek information on family planning and birth control methods but can now access such information's when the need arises. You see, I strongly see ICTs as an effective informative tool and search engine.(Focus group discussion, 8 Oct.,2012)

Such comments show that when used effectively, the

Internet can be used to disseminate information on family planning to the people. It therefore rests on perceptions of the respondents that the Internet is a tool for information seeking. The respondents also noted that their practical usage of the Internet was revolving around its use as effective information tool. This supports the view of (Sharma, 2001) that ICTs can work as a novel opportunity to enhance women's access to information and knowledge, as women are the least educated and marginalized, especially in developing countries. In the same vein, Abbasi (2001) observes that ICTs represent a unique "knowledge-based social infrastructure". This emphasises the need for ICTs in the formulation of national information-technology policies.

This shows that ICTs can play a major role as a tool of dissemination of messages on family planning and birth control method choice to the populace. It provides information that can promote the choice for family reproductive choices. Supporting the use of ICTs in information dissemination, Goggin and Newell (2003) observe that the availability of information technology can necessarily ensure equitable access to information

"Their extent of applying ICTs in family planning and birth control in Nigeria"

If the respondents agree that they are computer literate, have access to the Internet and seek information through the Internet, there is the possibility that they may have been applying ICTs in family planning and birth control.

Today, ICT has gone a long way in getting the modern trends round to everybody. The respondents agree that they use the Internet through their computers, mobile phones, iPhone, iPad etc But, not prioritizing the application in their choice of family planning and birth control method. This was interesting as majority of the participants said that they have not bothered to apply ICTs in family and birth control methods. The following highlights reflect this observation:

Participant 7: I am aware that I can apply ICTs in family planning and that I can get some information on family planning and birth control through ICTs but have not

bothered to do so rather I consult the experts physically in their various hospitals and health centers. There is no doubt that the Internet can carry a lot of information on this issue but that it never occurred to me.

Moderator: Are you sure that if you have the need that you are going to access Information on the Internet on family planning and birth control, and as well see those information as credible.

Participant 7: Yes of course, as I said earlier, it has never occurred to me to do so, but am ready to utilise it when I need it. You see I would commend this research; it has opened my eyes to the applications ICTs in family planning (Focus Group Discussion 3 Oct., 2012).

The notion here is that more awareness on the application of ICTs in family planning service should be created. The people should be made to know that government agencies and other concern bodies as means of having positive impacts on the lives of the people apply ICTs in family planning and birth control methods by posting lots of programs on the Internet for public consumption. Baron (1993) observes that there is still low prevalence of the use of modern birth-control in Gambia and Kenya. And that is why aggressive awareness should be created on the use of ICTs in family planning and birth control methods. The application of ICTs in family planning should not be seen as frivolous activity but as something that can have a large positive impact on both individual lives and their societies too.

“Their views on the application of ICTs in family planning and birth control”

The respondents showed that awareness on family planning through ICTs should be created and encouraged. The perception of one of the participants is that:

I have never thought of seeking information on family planning through the Internet, but now that I have resolved to put a stop to child bearing and have determined to control my fertility. I think that I can now have access to such information through the Internet.

This would subsequently lead to more and more people applying ICTs in their choice of family planning. There is a consensus that people can receive information on family planning and birth control through ICTs and not depending only on the information taught in the church. ICTs can now be seen as a way of embracing and adopting voluntarily information on family planning upon the basis of knowledge, attitudes and responsible decisions by individuals and couples in order to promote health and welfare of the family group and thus contribute

effectively to social development of the country (WHO). The participants also were of the opinion that the application of ICTs in family planning will make such services relatively cheap and accessible at any time. Yunus and Khayal (2000 p. 84) explain the power of the Internet in impacting positively on the people explained the Internet as a force that is transforming the lives of people and promises to deliver tumultuous impact as a constant in the future. Scholars observe that the Internet provides the largest reservoir of vital information in all kinds of disciplines all over the world.

Besides these conventional methods of family planning, there are now new methods which are still in development. The search for newer more effective and more acceptable methods of family planning can be done through the application of ICTs in family planning. For instance in 2005, Federal Ministry of Health (FMoH) outlined some methods of family planning and birth control for both men and women and if such information is made available to public through ICTs, such information will highly improve the adoption of family planning in the country. The reports of Federal Office of Statistics (2000) found the adoption of family planning and birth control to be at its lowest ebb thus:

The introduction and acceptance of Modern Birth Control Methods (MBCM) are of great importance in controlling the Population growth in Nigeria. Reports from Federal Office Statistics (FOS) 19 indicated that the adoption of MBCM rose from 1% in 1981 to 11% in 1994 and declined to 7.1% in 1995. Another report in 1998 indicated that only 5.1% of all women in the country were using family planning methods (20). This low adoption rate of MBCM has been variously reported (21- 24). Adopting MBCM is a very complex sociological issue in Africa.

This simply shows that the application of ICTs in family planning will impact families' lives as it relates to family planning. Without awareness, the available services about family planning and birth control through ICTs cannot be accessed as majority of the respondents were ignorant of the application of ICTs on family planning and birth control. The awareness creation on this issue becomes paramount since majority of the respondents agree that one can access information only on the services that one knows of its existence. However, they all agreed that people should be sensitized on such existing services that are possible through ICTs.

Even though there is awareness and knowledge of family planning services through ICTs, some factors such as educational background, cultural and religious diversities of the people that make up the nation may constitute a barrier to effective application of ICTs in family planning and birth control methods. The general position is that all the factors listed above actually

constitute barriers to the application of family planning in Nigeria. According to female participant:

In some cultures, the success of marriage is judged by the number of children the couples have. Therefore, for family planning in a place where such a culture exists, The cultural barrier has to be broken. In such a culture there is need to prove to the couples or individuals that it is not a matter of quantity (number of children),

For another's view on religion as a factor that constitutes barrier to the application of ICTs on family planning:

1. *Different denominations and religions view family planning differently.*
2. *For instance the Roman Catholic Church favours only the natural method of family planning and only when it is absolutely necessary. The Anglican denomination is more liberal in its own perception. For the adherents of the restrictive religion, accessing family planned methods, other than the one prescribed by their religion will be a problem.*

Also, many of the participants believed that superstitions belief constitute a barrier to family planning and birth control. However, a male participant remarked that:

For some methods of family planning such as bilateral tubal ligation for the females and vasectomy for the males, some cultures believe that anyone using such methods when he or she dies will re-incarnate with incomplete internal reproductive organs and therefore will not be able to have children in his or her next life.

Almost all the participants agreed that educational background is a factor that constitutes barrier to family planning services. According to a participant:

Poor educational background can affect one's understanding of the benefits and side effects of family planning methods more especially on this issue of the application of ICTs in family planning and birth control. When couples or individuals are well educated, they can be computer literate and at the same time be able to understand all the packages on family planning and birth control methods as regards the benefits and possible side effects of chosen methods.

Focus of this article is to access the role of ICT in support of family planning policy. However, many Nigerians may have sought or received information regarding family planning and birth control through ICTs. Using information and communication technologies (ICTs) to design family planning information may be through mobile devices, blogs, facebook, twitter etc.

However, many Nigerian women may have been

fortunate to access the right information regarding family planning and birth control through the new information and communication technologies. For centuries, humans have relied upon their imagination to avoid pregnancy. Today, the voluntary control of fertility is of paramount importance to modern society. According to Obinna (2011) from a global perspective countries currently face the crisis of rapid growth of the human survival population that has begun to threaten human survival. According to the population Reference Bureau's 2003 world population data sheet, the world's current growth rate is 1.3 percent. Based on this growth rate, the population would double in 53.8 years. The less developed according to the population Reference Bureau's 2003 world population data sheet, the world's current growth rate is 1.3 percent. Based on this growth rate, the population would double in 53.8 years. The less developed world's natural increase rate (births therefore, population in these countries would double in 43.8 years). The less developed world's natural increase rate (births minus deaths, without migration) is 1.6 percent; therefore, therefore, population in these countries would double in 43.8 years. Experts observed that today, Nigeria has one of the highest maternal mortality rates in the world and this has been attributed to the inability of Nigerian women to adequately use contraceptives to assist them in successfully spacing of their children therefore the use of ICTs in dissemination of family planning messages should be highly encouraged in the country.

Conflict of Interests

The authors have not declared any conflict of interests.

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