

## Deployment of Information and Communication Technology (ICT) in Family Planning: The Way Forward

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### **Abstract**

*The issue of family planning has always been a rising concern in our modern society. Women and generally couples need to be equipped with a system that will facilitate in their efficient decisions with respect to family planning. The use of Information and Communication Technology (ICT) can serve as an efficient system towards enhancing qualitative and effective family planning. Applying ICT in our routine lives is now a given factor in the contemporary society and it has really improves the way we live and carry out our daily activities. This paper therefore looks into the use of Information and Communication Technology (ICT) towards enhancing an effective family planning. It also made several recommendations such as the need for women and couples to embrace ICT and embed themselves into the streamline of technological dynamism for efficient family planning and also for the need for government to encourage, support and ensure availability of ICT tools that will enhance effective family planning as these will go a long way in building a healthy society.*

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**Keywords:** Family planning, Birth control, ICT, eHealth, Smartphone, Android, iOS, Application

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### **Introduction**

Family planning generally and greatly improves the health of both mother and child as well as the health of the entire family, and consequently creates a healthy and stronger society and also drives economic development. Only a few couples and women do not have access or information on the contemporary contraceptives methods of family planning.

Through family planning services, women have access to contraceptives, increasing the prospect that they are able realize their ideal family size. Nonetheless, despite of the known advantages of family planning, a soaring number of pregnancies are unintended (Sedgh *et al.*, 2014) and unmet need for contraception is still on the rise in spite of many accessible methods (Cleland *et al.*, 2014).

The World Health Organization (WHO) defines family planning as the ability of persons and couples to predict and attain their chosen number of children and the timing and spacing of their births. It is accomplished by the use of contraceptive methods and the treatment of involuntary infertility (WHO, 2008). It involves the scheduling and preparation of when to have children and also the application of birth control to realize such plans. Family planning is occasionally used as a synonym for birth control. However, it usually involves a broad variety of methods, and practices that are not birth

control. It is most usually valuable to couple who plan to minimize the number of children they plan or to manage the spacing and timing of pregnancy. Objectives of Family Planning Programme include;

- a. Reduces infant mortality rate.
- b. Encourage marriages at any given point in time.
- c. Improves women's health.
- d. Effective in Control of communal diseases. (Puja, 2014)

It is a fundamental human right to have access to safe and voluntary family planning. Family planning is a vital factor in poverty reduction and it is also very vital to women's empowerment and gender equality. However, in developing areas, an estimated 232 million women who plan to prevent pregnancy are not applying safe and effective family planning methods. The motives may possibly be from lack of access to information or services and lack of support from their partners or communities. This inhibits their ability to put together a better and improved future for themselves, their families and their communities as a whole. (UNFPA, 2019)

However, access to the modern information technologies over the past two decades has grown speedily and has stimulated a surge of creative approaches to utilize these ICT tools to deal with reproductive health challenges. Owing to the lack of previous communications infrastructure in low-resource areas, well-designed eHealth interventions could possibly have a much better result there than in developed areas with functioning phone, landlines and cable modems (Blaya, et al, 2010).

Information and Communication Technology (ICT) has the capability of playing a very significant role in taking care of issues concerning family planning, reproductive health, and several other health issues like; HIV/AIDS, tuberculosis (TB), malaria, typhoid, cancer etc. ICT tools can be applied to educate and inform family planning/reproductive health program planners, local clinic staff, community health workers, and other service providers, as well as clients/users. When properly applied, existing ICTs like the smartphone technologies possess the potential to boost access to family planning/reproductive health information and services for women, men, and the society at large. It can also expand opportunities to more effective economic engagement, with the best ability to improve both the health status and quality of life. These technologies can also play a role in the overall approach to addressing gender inequities if adequate care is taken with all sense of purpose sustain and support their application for women and by women. Although technology is ever changing, the remarkable rate of it change has led to lots of advances and innovations in the global health population (The AIDSTAR-Two Project, 2011).

### **Information and Communication Technology**

Information and Communication Technologies (ICT) is defined as the technologies that offer access to information through telecommunications (Rahman, 2016). ICT is associated to Information Technology (IT), but ICT centers principally on communication technologies. These technologies comprise the Internet, wireless networks, mobile phones technologies, and other communication media. The contemporary information and communication technologies have succeeded in making the world a "global village," where people can communicate with one another across the world as if they were living next door. Nonetheless, as a result of this, ICT is generally considered in the framework of how modern communication technologies influence society (Christensson, 2010).

ICT is actually the combination of electronics, telecommunications, software, networks, and decentralized computer work stations, and the incorporation of information media (Granville, et al, 2000).

Information and Communication Technology (ICT) involves application of computers hardware, software, communication devices and tools, in the collection, storage, retrieval, analysis and transmission of information (Marcelle, 2000). To enhance efficient delivery of services, ICT can be applied in various sectors. In education, ICT supports learning processes where classes can be attended online. In business, ICT supports marketing, sales, payments, forecasting and predictions in the market. In governance, ICT can be applied to improve and enhance the way government services are accessed by the people (ITU, 2005). Also, in the health sector, ICT can be applied to manage patient's health data and support diagnosis and treatment (Capron & Johnson, 2004).

### **Objectives of the Study**

The objectives of this paper include the following:

- i. To showcase ICT as a veritable tool towards an effective family system programming.
- ii. To harness the gains of ICT as a tool for an integrated and efficient health care system.
- iii. To enlighten women and couples in efficient decision making on issues of family planning with the aid of ICT.
- iv. To educate women and couples on the need to update and upgrade their skills in the areas of ICT towards an efficient family planning programme.
- v. To highlight the advantages of investing in ICT as an aid towards bridging our digital divide.

### **ICT for Effective Family Planning**

The use of ICT tools such as mobile apps for family planning certainly boosts greater efficiency. Nevertheless, different family planning alternatives employed by a lot of people are not fully meeting their requirements. Accessible and affordable family planning methods, which can be made available through a multiplicity of communication technologies, can fill a fraction of these requirements. The use of smartphones is increasing rapidly transversely the globe as lots of people at present use of this digital device for various needs. Smartphone apps have been discovered to add to an extensive array of positive and productive health results amongst people being treated for chronic conditions by offering information on frequently asked questions, appointments, medications, etc. (Simmons, et al, 2017). On family planning, smartphone apps for android, iOS etc can as well offer suitable information regarding in depth contraceptive methods, pregnancy and antenatal care.

Amid these novel technologies come new challenges. At present, more than 1000 smartphone apps have been developed that center on women's menstrual cycles. The bulk of these apps are designed simply to track cycles or to help in planning a pregnancy. Most of these apps are not proper for prevention of pregnancy, though, there is an alarming evidence that women are employing these apps for this reason (Moglia, et al, 2016).

Ekwugha and Adum (2014) posited that the use of Information and Communication Technologies (ICTs) in family planning is intended at getting more people particularly with the use of mobile phones/ smartphones. With the cost of mobile technology gradually falling and with the increase of cell phone use, predominantly in the developing world, it is

providing health professionals with a novel pathway of communication to offer family planning information.

### **Improving Family Planning Through ICT**

According to Gerber (2011), family planning is improved through Information and Communication Technology (ICT) through the following means:

- ***Build a high-performing, well-trained staff*** – Provision of programmes that use SMS and web-based and wireless eLearning platforms.
- ***Provide strong leadership*** - The Virtual Leadership Development Program (VLDP) uses the internet, a print workbook, and teamwork to support the capability of health workers to conquer workplace challenges.
- ***Communicate effectively*** - Provision of programmes that use SMS (text messaging) to engage, educate, and inform the community about family planning/reproductive health, HIV/AIDS, and other health issues, as well as the availability of related services such as mobile or smartphone apps.
- ***Base decisions on evidence*** - Interventions using mobile collection tools to facilitate monitoring and evaluation (M&E) and research efforts.
- ***Assure contraceptive security with a strong logistics system*** -The Supply Chain Information Portal that enables users to manage data and create presentations using web-based dashboards.

### **Conclusion and Recommendation**

The applications of ICT in family planning vary from the use of SMS, web-based applications, smartphone applications for android or iOS and PC applications that are able to offer information on ways of family planning to women and couples and to health professionals. ICT application is fast breaking down the hurdles of family planning, facilitating the works of healthcare professionals to reach out to their clients across several locations.

In this current era of ICT where people are getting easier and more convenient ways to solve their everyday problems, the healthcare sector is as well not left out in getting the needed attention of ICT experts, and they are creating systems that are aiding in caring and making lives better. However, it is quite obvious that the use of ICT tools such as smartphone android or iOS apps, SMS and web-based applications will definitely simplify the task of family planning for couples and women of reproductive ages who intend ensure effective and efficient family planning.

It is however recommended that:

- Women and couples should embrace ICT tools for effective and efficient family planning.
- Women and couples should embed themselves into the streamline of ICT dynamism for healthy and more efficient methods of family planning as this will ensure the health of the mother, child, the entire family and the society at large.
- Also the government should encourage couples and women on the need to embrace ICT tools for efficient family planning as this will have an overall positive impact on the society.
- ICT tools should be made readily and easily available for people or individuals who intend to use them for family planning.

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