

# Midwives Perception and Utilization of Information and Communication Technology (ICT) For Health Care Delivery in Imo State Teaching Hospital, Orlu

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## Abstract

This research work was carried out to ascertain the perception and utilization of information and communication technology (ICT) in nursing care delivery by midwives in Imo State University Teaching hospital Orlu. The objective of the study was to ascertain midwives perception of the use of ICT, to ascertain the current level of usage of ICT and find out factors hindering the use of ICT. the significance of the study was to assist the management of health institutions where midwives are employed to gain insight into the midwives perception and usage of ICT tools in the discharged of their services, the research was a descriptive research was a descriptive research design aimed at ascertaining the midwives' perception and utilization of information communication technology for nursing care delivery in IMSUTH Orlu. The target population is 500 midwives and sample size was 100 midwives both students and working class nurses. Questionnaires were used for data collection and data analyzed using descriptive statistics and presented in tables and charts. The results revealed that majority of the respondents had a positive perception towards ICT, majority make use of ICT in patient care and factors that hinder the utilization of ICT include low level of computer knowledge, busy work schedule and inaccessibility of facilities. It is therefore recommended that continuing education programmes on ICT application should be organized for midwives in IMSUTH Orlu and curriculum for midwives training should include computer studies, health information and ICT application, also health organizations in Orlu, even in Imo state generally, should provide internet and other ICT facilities in the institutions in order to enhance access and usage of ICT by the staff of the hospital, including midwives.

**Keywords:** Midwives perception, utilization, information, communication technology (ICT), health care delivery.

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## INTRODUCTION

The computer revolution and information technology have transformed modern health care systems in the areas of communication, teaching, storage and retrieval of medical information [1].

The act of health care delivery concerns the overall management of patient wellbeing. Its roles include the task of information management in which health practitioner acquire process, store, retrieve and utilize information for the delivery of care.

These developments have positively impacted patient management and the training and utilization of health care providers little information is available on the level of training and utilization of ICT among health care professionals in developing countries.

Information communication technologies (ICT) are all instrument through which information are conveyed and shared between places and among people.

Since the development of the internet, information technology (ICT) has had a positive impact on health care delivery system worldwide, particularly in the areas of disease control, diagnosis, and patient management and teaching [2].

On the contrary, ICT makes current materials readily available. Technology allows access to information and expert knowledge worldwide independent of time and places.

The technology provides distributed collaborative learning and practice with possibilities for self-assessment and reflection. In ICT, the potential in nursing education and practice is due to the possibilities of interaction learning environment with immediate and content related feedback. All of this has the potentials of being inexpensive rapid and reliable communication tool [3].

According to Fakoya [1], the use of personal

Digital assistants, (PDAS) among Uganda health workers was found to be 25% less expensive than the traditional paper and pen data gathering process. The personal digital assistants were used to send and receive health information even in rural areas through Satellite and battery operated land equipment.

The world is witnessing increasing sophistication in nursing care delivery occasioned by diverse application of information and technology, ranging from hand-held internet accessible GSM, Fax machines, digital video camera, Web, television, satellite and host of others.

Information proficient work- force that is computer literate, trained in information management skills and motivated to use the well-designed clinical system would be necessary in a tertiary institution particularly in a developing country such as Nigeria.

Clinical information aims to improve patient care by the intelligent application of technology and hopes to increase the effectiveness and efficiently fulfill its promise in developing countries only if health care professionals are trained in basic training will necessitate an assessment of baseline knowledge and the utilization patterns of all personnel involved in health care delivery which is the major thrust of this survey. ICT are relevant to nursing care delivery from the point of assessment and diagnosis of patient to the point of caring for them. They provide limited opportunities and access to vital information that assist in addressing general and specific difficulties in nursing care delivery Ferguson [4], stated that information communication technology has generally come as an indispensable aid to the accuracy and precision needed in addressing human health problems.

Imo state university teaching hospital (IMSUTH) is an important host for health related academic and specialized institutions including hospital. This study therefore examines the perception and utilization of ICT among nurses in IMSUTH Orlu Imo State.

### Objectives

- To determine midwives awareness on the importance of information communication technology in nursing care delivery.
- To identify the current level of usage of information communication technology among midwives in IMSUTH.
- To find out factors hindering the use of information communication technology among midwives in IMSUTH.

## METHODOLOGY

### Research Design

This study adopts the descriptive survey

research method, in which questionnaire was used to gather relevant data from a random selected professional midwives in IMSUTH.

### Research Setting

The study carried out among student midwives in IMSUTH Orlu. The hospital is located along Umuna by North and stretches from Owerre-ebeyi to Nnenas, a distance of five kilometer and occupies an area of ten square kilometer and it is bounded by the east by Umunachi and in the west by Umuowa and in south by Odoala Okporo.

The hospital consists of various departments and wards which includes urology unit, intensive care unit, dental unit, ophthalmic unit, ear, nose and throat unit. Accident and emergency unit, pediatric unit, prenatal unit, antenatal unit, postnatal unit, central sterilizing department (CSSD), dialyzing unit, orthopedic unit and gynecological unit, also it has two outpatient departments with two reception centers, two theatres, one minor and one major Morbid Anatomy unit, two lecture halls and two pharmacies.

Within the hospital environment is a library, a bank, a fast food, a multipurpose hall and a warehouse. The medical strength consists of a chief medical director and assistant, a chief nursing officer and one assistant, 15 junior doctors and 8 senior doctors. 450 nurses with 350 of them as registered nurse midwife, 60 of them as B.Sc. nursing certificate holders, 40 of them as registered nurses with numerous students doctors and 150 midwives.

### Target population

The target population is 500 midwives. 150 midwives and 350 registered midwives working in the hospital IMSUTH.

### Sample and sampling technique

20 of the population were used. Simple random sampling was used to select 100 from the target population of 500

That is;

$$\frac{20}{100} \times \frac{500}{1} = 100$$

Out of this 100, 60 were student while 40 were working class midwives. Convenience sampling was used to select 60 from student midwives and 40 from working class midwives in teaching hospital Orlu.

### Instruments for data collection instrument

The only instrument used for data collection was questionnaire made up to 2 parts; demographic and question that helps to achieve the objectives.

This consists of 16 close ended questions and

100 questions and 100 copies of questionnaires were printed and distributed.

### Validity of instrument

The term validity means the ability of an instrument to measure what it was designed to measure. The instrument for data collection was questionnaire which after generating was presented to the supervisor who read through it and made corrections before it was typed (face validity).

### Reliability of the instrument

This refers to the level of consistency of the measuring instrument; test- retest was used to ascertain the reliability of the instrument by administering the questionnaire from them by hand on the same day.

### Procedure for data collection

The researcher distributed the questionnaire to the respondents on a face to face basis and retrieved the entire questionnaire from them by hand on the same day.

### Method of data analysis

Data analysis was done using descriptive statistical and presented with tables and charts. Pie chart was used in data analysis.

### Ethical consideration

A letter of instruction was given by the H.O.D to the hospital management.

- The researcher obtained consent from the hospital management
- The researcher maintained the interpersonal relationship and report with the student and staff of the hospital.
- The researcher acknowledges all sources of information.
- Confidentiality of all information sources was maintained.

## RESULTS

### SECTION A: Respondents' Demographic Data

**Table-1: Demographic variables**

|                          |     |     |
|--------------------------|-----|-----|
| Educational Status       | N   | (%) |
| BNSc Nursing Certificate | 42  | 42  |
| RN/RM                    | 13  | 13  |
| Student midwives         | 45  | 45  |
| Total                    | 100 | 100 |
| Rank                     | N   | (%) |
| Chief Nursing Officer    | 1   | 1   |
| Ass C.H.O                | 10  | 10  |
| Senior Nursing Officer   | 21  | 21  |
| Others                   | 34  | 34  |
| Student                  | 45  | 45  |
| Total                    | 100 | 100 |
| Marital Status           | N   | (%) |
| Married                  | 64  | 64  |
| Single                   | 36  | 36  |
| Total                    | 100 | 100 |

Source: Field Work, 2018

Table 1 above presents the demographic characteristics distribution of the participants in the study. The result presents that the educational status of the participants discloses that about 45% of the respondents are student midwives, 42% are with BNSc Nursing certificates, and about 13% are RN/RM. The participants were mostly students (45%), senior nursing

officer (21%), Ass. C.H.O (10%), others (34%) and only 1% chief nursing officer. The majority of the participants are married (64%) while the rest of 26% are single.

### SECTION B: Results

**Table-2: Respondents' feeling about the use of ICT**

|                              |     |     |
|------------------------------|-----|-----|
| Feeling about the use of ICT | N   | (%) |
| Positive                     | 89  | 89  |
| Negative                     | 11  | 11  |
| Total                        | 100 | 100 |

Source: Field Work, 2018

The result in table 2 presents the respondents' feeling about the use of ICT. The result reports that the

majority of the respondents (89%) were of the view that they have positive feeling about the use of ICT while

the rest (11%) have negative feeling about the use of ICT. See a graphical representation in figure 1 below.

**Table-3: Midwives perception of ICT effective in management of a patient**

| Perception | N   | (%) |
|------------|-----|-----|
| Yes        | 89  | 89  |
| No         | 11  | 11  |
| Total      | 100 | 100 |

Source: Field Work, 2018

The result in table 3 presents the respondents' perception of ICT effective in management of a patient. The result reports that the majority of the respondents (89%) were of the view that they agree that ICT is effective in the management of a patient while the rest (11%) disagrees to that.

**Table-4: Midwives view of ICT**

| Midwives view ICT            | N   | (%) |
|------------------------------|-----|-----|
| A good source of information | 43  | 43  |
| aid in student training      | 57  | 57  |
| Total                        | 100 | 100 |

Source: Field Work, 2018

The result in table 4 presents midwives view of ICT. The result discloses that the majority of the respondents see ICT as an aid in student training (57%) while the rest being about 43% see ICT as a good source of information. Figure 3 presents a graphical representation of the result.

**Table-5: Midwives view ICT as one of the facilities that help for better investigation**

| ICT is one of the facilities that help for better investigation | N   | (%) |
|---|-----|-----|
| Yes   | 89  | 89  |
| No  | 11  | 11  |
| Total   | 100 | 100 |

Source: Field Work, 2018

The result in table 5 presents midwives view ICT as one of the facilities that help for better investigation. The result reports that the majority of the respondents (89%) were of the view that ICT is one of the facilities that help for better investigation while the rest (11%) disagrees to that. See a graphical representation in figure 4 below.

**Table-6: Use of ICT in patients care**

| Use of ICT in patients care | N   | (%) |
|-----------------------------|-----|-----|
| Yes                         | 57  | 57  |
| No                          | 43  | 43  |
| Total                       | 100 | 100 |

Source: Field Work, 2018

The result in table 6 presents midwives view on use of ICT in patients care. The result reports that the majority of the respondents (57%) were of the view that ICT is used in patients care while the rest (43%) disagrees to that. See a graphical representation in.

**Table-7: Proficient in ICT use**

| Proficient in ICT use | N   | (%) |
|-----------------------|-----|-----|
| Yes                   | 57  | 57  |
| No                    | 43  | 43  |
| Total                 | 100 | 100 |

Source: Field Work, 2018

The result in table 7 presents midwives view on being proficient in the use of ICT. The result reports that the majority of the respondents (57%) were proficient in the use of ICT while 43% of the midwives disagree to that. See a graphical representation in figure 6 below.

**Table-8: Documentation of patient problems in the computer**

| Documentation of patient problems in the computer | N   | (%) |
|---|-----|-----|
| Yes   | 31  | 31  |
| No  | 69  | 69  |
| Total   | 100 | 100 |

Source: Field Work, 2018

The result in table 8 presents midwives view on documentation of patient problems in the computer. The result reports that the majority of the respondents (69%) disagreed to documentation of patient problems

in the computer while 31% of the midwives agree to the opinion. See a graphical representation in figure 7 below.

**Table-9: Communicate findings to other professional through the use of computer**

| Responses | N   | (%) |
|-----------|-----|-----|
| Yes       | 31  | 31  |
| No        | 69  | 69  |
| Total     | 100 | 100 |

Source: Field Work, 2018

The result in table 9 presents midwives view on communicating findings to other professional through the use of computer. The result reports that the majority of the respondents (69%) disagreed to

communicating findings to other professional through the use of computer while 31 % of the midwives agree to the opinion.

**Table-10: Respondents' view on factors hindering the use of ICT by Midwives**

| Factors hindering the use of ICT                       | Yes | (%) | No | (%) | N   |
|--|-----|-----|----|-----|-----|
| High cost of hard and soft wares                       | 87  | 87  | 13 | 13  | 100 |
| Busy job schedule. Family and communities              | 43  | 43  | 57 | 57  | 100 |
| Low level of computer literacy among staff and student | 92  | 92  | 8  | 8   | 100 |
| Inaccessibility of facilities                          | 87  | 87  | 13 | 13  | 100 |

Source: Field Work, 2018

The result in table 10 presents the respondents view on factors hindering the use of ICT by Midwives. The result reports that the majority of the respondents 92% of the participants were of the view that low level of computer literacy among staff and student contributes followed by high cost of hard and software and inaccessibility of facilities which accounted 87% of the participants respectively. Majority of the respondents disagree that busy job schedule, family and communities' issues hinder them from the use of ICT (43%).

## DISCUSSION

The study have shown that participants were of the view that ICT is used in patients care while about 57% of the participants were proficient in the use of ICT while the rest of 43% of the midwives disagree to that. Majority of the respondents disagreed to the use of computer in documenting patient problems and also disagreed to communicating findings to other professional through the use of computer. The study is not in support of the findings of Clark [5] whose result reported that majority of the midwives were not utilizing information and communication technology effectively.

The findings from the study presented that the majority of the respondents of the participants were of the view that low level of computer literacy among staff and student, contributed to not using ICT, followed by high cost of hard and software and inaccessibility of facilities which accounted of the participants respectively. Majority of the respondents disagree that busy job schedule, family and communities' issues hinder them from the use of ICT.

## CONCLUSION

The study found that majority of the participants has positive feeling about the use of ICT. The participants also viewed ICT has effective in management of patients, aid in student training, good source of information and as one of the facilities that help for better investigation.

The study have been able to establish that the participants reported that ICT is used in patients care while about 57% of the participants were proficient in the use of ICT while the rest of 43% of the midwives disagree to that. The study discloses that majority of the respondents disagreed to the use of computer in documenting patient problems and also disagreed to communicating findings to other professional through

the use of computer.

The result findings showed that the majority of the respondents of the participants were of the view that low level of computer literacy among staff and student, contributed to not using ICT, followed by high cost of hard and software and inaccessibility of facilities which accounted of the participants respectively. Majority of the respondents disagree that busy job schedule, family and communities' issues hinder them from the use of ICT

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