



(RESEARCH ARTICLE)



## Knowledge, attitude and utilization of evidence-based practice among nurses in Tertiary Hospitals

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### Abstract

The increase demand for healthcare, technology advancement and knowledge explosion has necessitated a paradigm shift from nursing practice which was based on intuition and tradition to evidence-based practice in nursing. EBP is a concept that has not been widely utilized by most nurses working in clinical setting in Nigeria according to previous documentation. Therefore, this study aimed to explore and describe the perception and utilization of evidence-based practice among nurses working in Federal Teaching Hospital in Edo state. A cross sectional descriptive survey design was adopted to assess the perception and utilization of evidence-based practice among nurses working in tertiary hospitals in Nigeria; Irrua Specialist Teaching Hospital and University of Benin Teaching Hospital both in Edo State. A sample size of 334 nurses working in the two teaching hospitals in Edo state was obtained using a proportionate sampling technique. The instrument used for data collection was a standardized tool titled “evidence-based practice questionnaire. Data collected were coded and analyzed using both descriptive and inferential statistics of chi-square to summarize and describe the characteristics of the respondents and establish the relationships of the study variables and the respondents’ demographic characteristics. The findings of the study revealed that majority of the nurses are RN/RM (51.8%, n=158) while only (25.5%, n=87) are degree holder. The study further revealed that majority of the respondents has a good knowledge of evidence-based practice (90.2%, n=275). There was a significant association between the nurses’ years of working experience and their knowledge of EBP ( $p = .030$ ). There was also a significant relationship between knowledge of EBP and it utilization ( $p=.001$ ). Hence, there is need for the hospital managements and nursing leader’s to motivate nurse to continue to use evidence-based practice as a tool to provide nursing services that is safe, sound, high quality, cost effective. Furthermore, evidence-based practice culture and mentors should be created within the hospitals.

**Keywords:** Knowledge; Attitude; Utilization; Evidence-Based Practice; Nurses

### 1. Introduction

The global challenge faced by health care practitioners and health care institutions today is the non-provision of evidence-based, cost effective and quality care that will improve practice and patient outcome [1, 2]. For many years, evidence-based practice (EBP) has been a major priority in many countries. The World Health Organization (WHO) and the European Commission emphasized that health and social services should be based on best research evidence because it serves as key to delivering the highest quality of healthcare in clinical setting [3]. However, Nurses being the largest healthcare professional group that provides healthcare services to clients in most health care sectors needs a lot of research evidence to support their practice [4,5]. Consequently, nurses are expected to provide care services with the

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highest standard of quality based on scientific findings which can only be achieved through evidence-based practice [3]. Thus, this has made evidenced based practice an emerging issue in the 21<sup>st</sup> century in nursing profession [6].

EBP promote the delivery of effective, efficient, current and safe patient care. EBP has been systematically integrated into every patient care in all clinical setting. The strategies used in achieving this includes: mentorship, training session on EBP and scientific research during workshops, seminars and journal club [7,8]. However, Dialer et al. identified research evidence, clinical skills/expertise and patient values as the major components of evidence-based practice which are very important in clinical decision making and patient's interventions [9]. In healthcare, evidence is defined as knowledge available to decision-makers that provides scientific evaluation of Practice [10, 11]. However, best research evidence which is useful in patient care and intervention are usually retrieved from scientific database with sound methodology [12, 13]; such as systematic reviews, meta-analyses, randomized controlled trials, cohort studies, case control studies and cross-sectional studies. These are all potential sources of evidence to guide nursing practice [14, 15]. Clinical skills/expertise which is another component of evidence-based practice include: clinical judgment (i.e., the ability to think, understand, and use research evidence in patient intervention; ability to assess a patient's condition through subjective history taking, thorough physical examination and laboratory reports). It also includes internal evidence generated from quality improvement or outcome management projects and clinical reasoning [16, 17]. While patient values which is the last component of evidence-based practice involve giving priority and preference to patient interest and involving the patient in decision about his or her care and intervention [11,18].

Consequently, nurses working in the clinical setting must acquire sufficient knowledge, skills and attitude of evidence-based practice in order to provide best, current and up-to-date care for the patients [15,19]. Furthermore, the practice of EBP by nurses involves a number of activities, which include the ability to formulate clear questions, track down the evidence, critically appraise the literature, integrate the evidence in practice and measure the outcomes [7,9,20]. In clinical setting, nurses are in the best position to promote evidence-based practice, but their knowledge, attitude and utilization is a cornerstone to achieving this [4]. Unfortunately, previous research done on evidence-based practice revealed that most nurses rely on intuition, experience, tradition and the authority of policies and procedures for directing patient care [21,22], because they either cannot access the information or lack the skills in retrieving evidence from database or lack confidence in implementing a change in practice and thus they do not utilize EBP in practice [23,24]. Underpinning this new evidence-based culture is the assumption that if care is based on sound empirical evidence, then it is more likely to be cost effective, appropriate and justifiable [6].

Regrettably, the knowledge, attitude and utilization of evidence-based practice among nurses in Nigeria is still very poor and not encouraging as confirmed by previous researches done on (EBP) in Nigeria [6,25-27]. This is due to barrier militating against the use of evidence-based practice by nurses which includes: insufficient time to engage in reading and searching for research articles, difficulty in determining the applicability of research findings, cost of information resources and inaccessibility to computer and internet services [26]. Therefore, various researches done on EBP acknowledge that nurses have a good knowledge of evidence-based practice, with positive attitude towards it and considered it to be cost effective and important in providing better patient care. But the pace of utilization of research evidence in patient care by nurses is very slow [6, 27]. Therefore, it is necessary to determine the knowledge, attitude and utilization of evidence-based practice among nurses in Nigeria and precisely in tertiary hospitals in order to determine their knowledge, attitude and utilization of EBP among nurses working in this area.

### *Aim*

This study aims to examine the knowledge, attitude and utilization of evidence-based practice among nurses in tertiary hospitals in Nigeria.

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## **2. Material and methods**

A cross sectional descriptive survey design was adopted to assess the perception and utilization of evidence-based practice among nurses working in tertiary hospital in Nigeria; Irrua Specialist Teaching Hospital and University of Benin Teaching Hospital, both in Edo State, Nigeria from March 2019 to September 2019. After due ethical approval was obtained from the various hospital ethical committees, verbal consent was taken from the participants. A sample size of 334 nurses working in the two Teaching Hospitals in Edo State was obtained using a proportionate sampling technique from the total population of 1260 nurses. The instrument used for data collection was a standardized instrument from evidence-based questionnaire, with an internal consistency of Cronbach alpha statistics value of 0.87. In addition, pilot testing of the instrument was done by administration of 33 questionnaires to nurses working in similar tertiary hospital in Nigeria- Nnamdi Azikiwe University Teaching Hospital, (NAUTH) Nnewi, Anambra State. After which Cronbach alpha statistics was used as reliability testing and an alpha of 0.75 was obtained which indicated that the instrument was

reliable, since it was greater than 0.7. Furthermore, 305 questionnaires were duly filled and retrieved for analysis after a thorough explanation of the purpose of the study and assurance of confidentiality of information was given to the respondent. The distribution of the questionnaire was done during the clinics hour of 8am to 4pm of each day for a period of one month with the aid of two assistants trained for that purpose. The inferential statistics used were Chi-Square Test of Association and the Fisher's Exact Test were used to test the hypothesis at 5% level of significance (implying significant relationship/association existed if p-value (p) is less than .05,  $p < .05$ ; otherwise, no significance). The Fisher's Test substituted the Chi-Square when it (the Chi-Square) failed to meet its needed assumption (that not 20% of the expected frequency showed less than 5). Also used were the odds ratio and risk ratios which supplemented the inferential statistics with some predictions. The analyses were done with the aid of the Statistical Package for Social Science (SPSS) version 25.

### 3. Results

#### 3. 1 Demographic Characteristics

**Table 1** Demographic Characteristics of the Nurses

	Frequency	Percent
<b>Age</b>		
20-29	48	15.7
30-39	104	34.1
40-49	87	28.5
50-59	53	17.4
No response	13	4.3
<b>Gender</b>		
Male	40	13.1
Female	252	82.6
No response	13	4.3
<b>Religion</b>		
Christianity	282	92.5
Islam	13	4.3
Traditional religion	1	0.3
No response	9	3.0
<b>Ethnicity</b>		
Yoruba	26	8.5
Hausa	6	2.0
Igbo	51	16.7
Esan	114	37.4
Benin	49	16.1
Others- Etsako, Urhobo, Owan, etc	51	16.7
No response	8	2.6
<b>Professional/Educational Qualification</b>		
RN	31	10.2
RN/RM	158	51.8

BNSc	87	28.5
Postgraduate (MSc & PhD)	14	4.6
No response	15	4.9
<b>Professional Rank</b>		
Nursing officers 11	71	23.3
Nursing officers 1	55	18.0
Senior Nursing Officers	59	19.3
Principal Nursing Officers	5	1.6
Assistant Chief Nursing Officer	36	11.8
Chief Nursing Officers	41	13.4
Assistant Director	26	8.5
Director of Nursing Services	5	1.6
No response	7	2.3
<b>Working years of experience</b>		
Below 1 year	7	2.3
1-2yrs	19	6.2
3-4yrs	31	10.2
5-10yrs	86	28.2
11-20yrs	87	28.5
21-30yrs	53	17.4
> 30yrs	13	4.3
No response	9	3.0

From Table 1 majority of the nurses were aged 30-39 years (34.1%) followed by 40-49 years (28.5%). Females were predominant (82.6%) and likewise Christians (92.5%). Majority of the nurses were from Esan tribe (37.4%). Most of the nurses had Registered Nurse/Midwife (51.8%) for professional qualification while only few had BNSc (28.5%) as educational qualification. However, nursing officer II (23.3%), senior nursing officer (19.3%) and nursing officer I (18.0%) were the prominent professional ranks while their years of working experience was mainly between 5-10 years (28.2%) and 10-20 years (28.5%).

### 3.2 Knowledge of Nurses towards EBP

**Table 2** Nurses' Level of Knowledge (Overall Knowledge by Classification) n = 305

Knowledge level	Frequency	Percent
Good	275	90.2
Poor	30	9.8

Findings from Table 2 below revealed that majority of the nurses had good knowledge of evidence-base practice (90.2%). Specifically, their knowledge based on each constituent question of (EBP) (see Table 3) was never below 70%. Highest indicators to this knowledge included: their understanding of term evidence-based practice (94.8%), their sharing of information and ideas with colleagues (87.2%), their knowledge on how to convert information needed in

the care into research question (87.2%), the frequent monitoring and reviewing of their practical skills (86.9%) and their knowledge in assessing information or conducting online searches (85.6%).

**Table 3** Nurses' Knowledge towards Evidence-Based Practice n = 305

	Yes	No	I do not Know
Do you understand what is meant by the term evidence-based practice in nursing?	289(94.8)	12(3.9)	4(1.3)
Are you competent in accessing information or conducting online searches? (Information technology skills)	261(85.6)	41(13.4)	3(1.0)
Do you frequently monitor and review your practice skills?	265(86.9)	39(12.8)	1(0.3)
Can you convert the information needed in the care of your patient into a researchable question?	266(87.2)	31(10.2)	8(2.6)
Are you aware of various information sources and types?	257(84.3)	43(14.1)	5(1.6)
Can you identify gaps in your professional practice?	249(81.6)	47(15.4)	9(3.0)
Do you have the knowledge of retrieving evidence from publications or research work?	232(76.1)	69(22.6)	4(1.3)
Can you critically analyze evidence materials against a set standard?	216(70.8)	79(25.9)	10(3.3)
Can you effectively determine how valid (close to truth) evidence materials are?	218(71.5)	82(26.9)	5(1.6)
Do you have ability to determine how useful (clinically applicable) research evidence is?	248(81.3)	51(16.7)	6(2)
Can you critically apply information retrieve from publications or research work to individual patient case	229(75.1)	66(21.6)	10(3.3)
Do you share information and ideas with colleagues?	266(87.2)	24(7.9)	15(4.9)
Do you disseminate new ideas about patient care to colleagues?	244(80.0)	44(14.4)	17(5.6)
Do you review your own practice?	253(83.0)	31(10.2)	21(6.9)

### 3.3 Attitude of Nurses towards EBP

**Table 4** Nurses attitude toward Evidence-Based practice = 305

	Disagree (1)	Undecided (2)	Agree (3)	M±SD
My work load is too high to keep up to date with all new research evidence	147	48	110	1.88±0.91
I prefer using more traditional methods and clinical experience instead of changing to new approaches	252	29	24	1.25±0.59
I don't like people questioning my clinical practice which is based on established procedures and standard methods	176	46	83	1.70±0.87
Most research articles are not relevant to daily nursing practice	219	31	55	1.46±0.78
Workplace experience is the most reliable way to know what really works for each patient	86	46	173	2.29±0.88
Overall mean				2.32±0.88

Statement item with mean (M) > 2 was considered to be the nurses' attitude

Findings from Table 4 indicates that generally, nurses working in Federal Teaching Hospital at Edo State had a positive attitude towards evidence-based practice ( $2.32\pm 0.88$ );( $2.29\pm 0.88$ ). Specifically, 71.8% had positive attitude toward evidence-based practice according to the analysis done in (Table 5). However, workplace experience was identified as being the most reliable way to know what really works for each patient

**Table 5** Nurses' Level of Attitude (Overall Attitude)

Overall attitude classification	Frequency	Percent
Positive	219	71.8
Negative	85	27.9
No response	1	0.3

### 3.4 Nurses' Utilization of EBP

Analysis result from Table 6 revealed that there was good utilisation of EBP among the nurses (78.7%). Highest EBP forms utilised (from Table 7) included: evaluating the application of intervention on patient care and identifying areas of improvement (84.3%), applying intervention on patient care based on the most applicable evidence (83.0%) and clinical appraisal of research evidence to determine the quality and relevance to nursing practice (80.0%). The only form underutilised was that of publishing research evidence on scientific journals or publication for peer review (43.3%).

**Table 6** Extent of Utilisation of EBP

Utilisation level	Frequency	Percent
Good	240	78.7
Poor	64	21.0
No response	1	0.3

**Table 7** Utilization of Evidence-Based practice (practice of EBP) n = 305

	Yes	No	I do not Know
I can identify clinical issues and patient problems	218(71.5)	22(7.2)	65(21.3)
I do translate patient problem into well formulated clinical questions	234(76.7)	70(23.0)	1(0.3)
I conduct online searches (using data bases and search engines)	202(66.2)	97(31.8)	6(2.0)
I do effectively use a checklist to assess research articles	195(63.9)	108(35.4)	2(0.7)
I can clinically appraise research evidence to determine the quality and relevance to nursing practice	244(80.0)	57(18.7)	4(1.3)
I apply an intervention on patient care based on the most applicable evidence	253(83.0)	49(16.1)	3(1.0)
I frequently evaluate the application of intervention on patient care and identify areas of improvement	257(84.3)	45(14.8)	3(1.0)
I do share or discuss research evidence with others in your workplace and department	233(76.4)	70(23.0)	2(0.7)
I publish research evidence on scientific journals or publication for peer review	132(43.3)	166(54.4)	7(2.3)
I do read research work or publication to update my knowledge	238(78.0)	66(21.6)	1(0.3)

#### 4. Discussion

The demographic characteristics of the participants showed that most of them were females (82.6%) which accounted for female dominance in nursing practice. Majority of the nurses were aged 30-39 years (34.1%). Most of the participants had professional qualification with RN/RM (51.8%) while only few had educational qualification with BSc in nursing (28.5%). Their working years' experience was between 11-20 years (28.5%). Analysed data from this study indicates a significant association between nurses' years of working experience and their knowledge of EBP ( $p = .030$ ). This is supported by similar studies on evidence-based practice which reported that as nurses gained more experienced, their knowledge/skills of EBP will increase [2,28-30]. Furthermore, the findings revealed that knowledge of EBP was least among nurses with less than 1 year of working experience; other years were relatively higher while those with 11-20 years' experience were highest (< 1 year (2.3%), 1-2 years (6.2%), 3-4 years (10.2%), 5-10 years (28.2%), 11-20 years (28.5%), and 21-30 years (17.4%) and above 30 years (4.3%). This was supported by similar studies by Jetteet al. and Tadesse, et al.; nurses with long years of working experience were 91.2% less likely knowledgeable when compared with working experience below 3 years [31,32]. This implies that nurses with below 3 years of working experience are recent graduates or fresher from schools with updated new knowledge and innovation on evidence-based practice.

Result from the study revealed a significant relationship between knowledge and utilisation of evidence-based practice by nurses. This is in contrast with similar studies carried out by Famutimi, Eke & Fowomola and Hashish et al., that recorded no significant relationship between knowledge and utilization of evidence-based practice among nurses [26,33]. The study showed that most of the participants had a good knowledge of evidence-based practice (90.2%,  $n=275$ ) which is consistent with the study which reported a good understanding of research utilization and EBP among nurse [2,6,34]. Furthermore, findings of this study showed that majority of the nurses are competent in accessing information or conduct online searches (85.6 %,  $n=261$ ). This finding is consistent with Maaskant et al and Menlyk et al., in which majority of the participants rated themselves as having good computer and internet skills [35,36]. In addition, the study also revealed that most of participants (75.1%) have the knowledge of applying information retrieved from publication and research work to individual patient care which is consistent with another study carried out that shows that majority of the nurses apply information retrieved from journals and publication while implementing nursing care to their patients [37,38]. However, application of evidence retrieved from scientific publication is seen as the gold standard for quality care and better patient outcome. Therefore, nurses should be motivated to improve their knowledge on EBP process.

The finding of this study indicates that generally, nurses have a positive attitude towards evidence-based practice ( $2.32 \pm 0.88$ ). This finding is in agreement with the studies that revealed that nurses has positive attitude towards evidence-based practice [39-41]. In addition, this study also revealed that most of the respondents agreed that their workload is too high to keep up to date with all new evidence ( $1.88 \pm 0.91$ ) which is consistent with a study carried out in which most of the participant indicated that nurses are too busy to appraise and incorporate the findings of research into their nursing practice [1,34]. This study also found out that workplace experience is the most reliable way to know what type of evidence-based practice that will really work for each patient ( $2.29 \pm 0.88$ ). This shows that most nurses are aware of (EBP) summary and guideline that should be applied at workplace on each patient that will result to safe, quality and individualized patient outcome [36,42].

Analysis of data from this work revealed that most nurses are utilizing evidence-based practice in their routine professional nursing practices (78.7%) which is contrary to the findings of other studies which shows that majority of the participants based their nursing practices on traditions, hospital policies and outdated procedures taught at their various schools of nursing [43-45]. However, along with knowledge, utilization of (EBP) is an essential step in the provision of quality and reliable care in clinical practice [9,46]. However, the only form of (EBP) that was underutilised according to analysis of result done from this work was that of publishing research evidence on scientific journals or publication for peer review (43.3%,  $n=132$ ), which is consistency with similar studies on this subject which revealed that publication of research reports among nurses is very low and most research conducted by nurses to obtain certificate or degree requirement were not published [27,47].

#### 5. Conclusion

Evidence-based practice is the gold standard for individualized patient care and quality assurance in nursing practice. If well appreciated, evidence-based practice can help develop and maintain professional integrity, respect and quality patient care. The results of this study have added to the existing knowledge on nurses' perception and utilization of evidence-based practice. Although the participants in the study (nurses) had positive perceptions of EBP, with very high levels of knowledge, positive attitudes and high level of utilization of EBP. There is need for the hospital managements and nursing leaders to motivate nurses to continue to use evidence-based practice as a tool to provide nursing services

that is safe, sound, high quality, cost effective. Furthermore, evidence-based practice culture and mentors should be created within the hospitals.

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## Compliance with ethical standards

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### *Disclosure of conflict of interest*

There is no conflict of interest

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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