

EXPLORING THE PERCEPTIONS OF REGISTERED NURSES TOWARDS EVIDENCE-BASED PRACTICE IN A SELECTED GENERAL HOSPITAL IN NIGERIA

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ABSTRACT

The changing context of many disease profiles within the African continent is necessitating a re-engineered way of nursing. Nurses are required to possess increased knowledge, clinical competency and a greater autonomy in their clinical judgment. Moreover, modern technologies and society's increasing health awareness are intensifying the need for nurses to provide nursing care based on evidence. Within the context of Nigeria, it is documented that Evidence Based



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Practice (EBP) is not widely embraced. Therefore, this study aimed to explore and describe the perception of registered nurses in a selected regional hospital in Nigeria towards EBP. Underpinned by a quantitative descriptive design, a five-point Likert scale was used for data collection. The sample was made up of 133 registered nurses from a cross section of 24 units from the selected hospital. Descriptive statistics and correlation analysis were used to summarise and describe the characteristics of the respondents and establish the relationships of the study variables and the respondents' demographic characteristics. While the respondents perceived themselves as being knowledgeable regarding the usefulness of evidence to inform clinical decisions (91.7%, n=122), there was poor correlation between their knowledge and practice of EBN to inform their nursing care ($r = 0.063$). Furthermore, inability to understand statistical terms used in research articles was rated as the highest perceived barrier (61.7%, n = 82) regarding evidence-based nursing practice. Further research is needed on a larger sample at regional and community health care settings to assess the practice of EBN. The data collection tool focused on the perceived knowledge, attitudes and practices of nurses regarding EBN. Further research is needed to assess the actual practices of nurses about EBN.

Keywords: evidence-based practice, perceived practice, perceived knowledge, perceived attitude, perceived barriers

INTRODUCTION AND BACKGROUND

The dynamism of the health care profession has necessitated the investment of high quality research, which has resulted in a growth of health care literature aimed at improving patient outcomes (Bonner & Sando, 2008:340 ; Majid et al., 2011:230). In addition to this, Majid et al. (2011:233) and Sherriff et al. (2017: 366-367) maintain that health care practitioners are embracing new methods of interventions that are based on sound research and best credence. Evidence-based practice (EBP) is one such technique and is quickly gaining popularity to effectively handle clinical issues and provide better patient care (Heckenberry et al., 2006:372; Majid et al., 2011:231). Sackett et al. (2000:3) defined EBP as the conscientious, explicit and judicious use of current best evidence in making decisions about care of individual patients, integrating individual expertise with the best available external clinical evidence from systematic reviews. Rycroft-Malone et al. (2004:84) argued that in addition to validated research evidence, EBP should include the consideration of patients' preferences, expert opinions and the available resources. However, the basic feature of this approach is the shift from health care decisions being based on custom, tradition, authority and/or opinion to emphasis on using the best available evidence from research with integration of experience, patients' values and available resources (Maaskant et al., 2013:155). 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 (Berland et al., 2012:362).

In their studies of evidence-based practice among nurses, Burney et al. (2012:512) found knowledge about EBP to be lacking among their participants. Similarly, while a good number of nurses reported lacking knowledge of identifying appropriate research designs (Chan et al., 2011:29), others reported lack of skills for conducting research, which is an important element of EBP (Burney et al., 2012:514), thus creating a gap between knowledge and practice.

Although the pace of nurses' acceptance and implementation of EBP has been slow, several studies on nurses' views of EBP indicated that nurses consider it to be important in providing better patient care (Ayandiran et al., 2013:6; Boström et al., 2009:1160). Findings have also shown that positive attitudes towards EBP are associated with several factors, including high professional rank (Bonner & Sando, 2008:340; Knops et al., 2009:1351). Similarly, older nurses, those with tertiary qualification and those working in higher ranked positions are more likely to have higher positive attitudes towards EBP (Heckenberry et al., 2006:374; Knops et al., 2009:1351–1352). Nurses with positive attitudes towards EBP may be more tolerant of critiquing their practices (Yip Wai et al., 2013:38) as well as being more likely to believe that EBP is useful in nursing care (Breimaier, Halfens & Lohrmann., 2011: 1753; Ubbink et al., 2011: 92–93). However, studies have found that a heavy work load in the work place hampers nurses in coping with the demands of EBP (Breimaier, Halfens & Lohrmann., 2011:1753; Majid et al., 2011:234).

The increase in nurses' involvement in clinical decision making warrants them to note the significance of using best evidence to make a justifiable clinical decision (Majid et al., 2011:230). The practice of EBP 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 (Boström et al., 2009:1161; Majid et al., 2011:234; Yip Wai et al., 2013:39). However, findings have shown that only a small proportion of health care practitioners, including nurses, use this approach in their clinical practice (Berland et al., 2012:363; Knops et al., 2009:1353).

THE RESEARCH PROBLEM

The fast changing health care system calls for nurses to possess increasing knowledge, clinical competency and greater autonomy in clinical judgment (Agbedia, 2012:228; Ofi et al., 2008:246). In addition, modern technologies and society's increasing awareness of health and self-care intensify the need for nurses to provide care based on evidence (Agbedia, 2012:228; Ofi et al., 2008:246).

Regrettably, this is challenging as most nurses in Nigeria lack proper understanding of evidence-based practice and do not utilise the most current concepts in nursing that are designed to improve the quality of care rendered by nurses worldwide (Agbedia,

2012:229–230). In addition, the involvement of nurses in Nigeria with research activities is not widely studied and documented (Ofi et al., 2008:250; Agbedia, 2012:228; Bartelt et al., 2011:119). Thus a gap exists between credible research findings and translation of those findings into practice. Consequently, there has only been a slow improvement in the quality of care rendered by registered nurses in the nation's hospitals (Agbedia, 2012:228; Uneke et al., 2010:120–122). Although there is enough evidence to support the use of EBP, it is not understood why there is inconsistency in its application. It was therefore important to explore and describe the nurses' perception towards EBP. Further, it is also important as a measure to evaluate the uptake and effectiveness of research-based knowledge for designing and evaluating intervention effectiveness in the efforts to improve patient and organisational outcomes (Squires et al., 2011:11–13).

PURPOSE OF THE STUDY AND RESEARCH OBJECTIVES

The purpose of this study was to explore and describe the perceived knowledge, attitudes and engagement or practices of nurses towards evidence-based practice.

Research objectives:

The research objectives of this study were to explore and describe the nurses perceived:

- level of knowledge towards evidence-based practice
- attitudes towards evidence-based practice
- practices or engagement towards evidence-based practice
- barriers towards evidence-based practice.

Definition of keywords:

Evidence-based practice is the 'conscientious, explicit and judicious use of current best evidence in making decisions about care of individual patients, integrating individual clinical expertise with the best available external clinical evidence from systematic research' (Sackett et al., 2000:3). In this study, EBP referred to nurses' ability to appraise and utilise findings based on evidence in nursing practice.

Perception is the internal cognitive process that detects, interprets and relates information (Pope, 2003:269); in this study it referred to registered nurses' own interpretation and understanding of EBP in relation to practice, knowledge and attitude.

Perceived practice is the repetition of the same activity around a specific task (Pope, 2003:269); in this study it referred to the EBP activities that registered nurses felt they perform.

Perceived knowledge is defined as information whose validity has been established through tests of proof (Zack, 1999:126); in this study, it referred to the understanding of what EBP is by the nurses.

Perceived attitude is the way in which an individual thinks and feels towards something (Olade, 2004:221). In this study, it referred to the way the nurses felt about EBP.

RESEARCH METHODOLOGY

Design: Underpinned by a positivist paradigm, a quantitative cross-sectional design was used for this study. This design was used as it employs deductive reasoning to generate hunches that are tested in the real world.

Setting: The setting for this study was a general hospital (300 bedded), which is a secondary public facility located in Minna Niger state, Nigeria. It is the largest in the state and also serves as a referral centre for patients from surrounding primary health care facilities as well as other secondary facilities within the state. At the time of the study, there were 322 nurses from different categories, including registered nurses and nursing assistances employed at the hospital.

Population: The target population for this study was 300 registered nurses working in the selected hospital. The inclusion criteria for the sample were that they must be currently registered with the nursing and midwifery council of Nigeria and must have worked as a registered nurse for not less than two years.

Sample and sampling technique: A purposive quota sampling technique was used to recruit respondents for this study, which allowed the researcher to select the participants consciously based on the inclusion criteria. To select samples from each of the 24 units of the hospital, the researcher allocated numbers to participants based on the proportion of nurses in each unit. The sample size for the study was 150 registered nurses.

Instrument: The instruments used for data collection in this study were developed from two questionnaires adopted by the researcher, namely, 'Adopting evidence-based practice in clinical decision making: nurses perceptions' (Majid et al., 2011), Cronbach alpha coefficient of 0.81 and 'Evidence-based practice questionnaire' (Upton & Upton, 2006), Cronbach alpha coefficient of 0.87. Permission to use the instruments was obtained from the authors. The adapted questionnaire consisted of items relating to the respondents' demographic characteristics, perceived knowledge, attitudes, practices/engagements and barriers towards EBP.

Validity and reliability: Content validity was used to assess the accuracy of the items to the research objectives and the literature that guided the items in the instrument. To establish the reliability and stability, the questionnaire was pilot tested in a different but similar hospital with 20 registered nurses selected purposively. The Cronbach's alpha coefficient of each of the sections were: 0.885 (perceived knowledge of EBP), 0.900 (perceived attitudes of EBP), 0.871 (perceived practice/engagement of EBP) and 0.869 (perceived barriers to implementing EBP).

Data collection: Data collection occurred over four weeks (30th November 2013 to 27th December 2013). The data collection tool was accompanied by an information sheet containing the purpose of the study and the consent to participate. Respondents placed their completed questionnaires in secured boxes, which were available at multiple sites in the selected hospital.

Data analysis: With the use of the Statistical Package for the Social Sciences (SPSS) version 22.0, descriptive statistics including frequencies, percentages, mean and standard deviation were calculated. Paired sample correlation was used to establish the influence of the study variables (perceived knowledge, attitudes and practice of EBP as well as respondents demographic characteristics) on one another; and independent t-test was used to make comparison among groups (junior and senior nurses) in the study.

Ethical consideration: Following institutional ethical approval from the University of KwaZulu-Natal (HSS/1228/013M), permission was granted from the management board of the Niger state, Nigeria, and the General hospital. All respondents were given information sheets that provided details of the study and assurance that all information obtained will be treated with confidentiality and that the data will be aggregated and no identifying information will be used. They participated voluntarily and consented with written consent.

RESULTS

Demographic characteristics

The demographic characteristics of the participants showed that most of them were males ($n = 70$; 52.6%). The average age of the participants were 39.4 years old ($SD \pm 2.20$). The stratification of age were; 20–25 years ($n = 7$; 5.3%); 26–30 years ($n = 19$; 14.3%); 31–35 years ($n = 32$; 24.1%); 36–40 years ($n = 32$; 24.1%); over 41 years ($n = 43$; 32.3%). Most participants noted their highest education qualification at the level of a Diploma in Nursing ($n = 81$; 60.9%); this was followed by a Post-Basic diploma in Nursing ($n = 46$; 34.6%). Only 4 (3.0%) had indicated that they had a

Bachelor degree in Nursing; while the remaining 2 (1.5%) participants indicated ‘other’ qualification without specifying in detail what this type of qualification was. In terms of the participants years of nursing experience, the majority (n = 44; 33.1%) indicated that they had more than 21 years of experience; further (n = 33; 24.8%) had between 6–10 years’ experience; n=21 (15.8%) had between 11–15 years’ experience; n = 27 (20.3%) had between 16–20 years’ experience; and only n= 8 (6.0) had indicated that they had between 2–5 years of experience.

Perceived knowledge of evidence-based practice

As indicated in table 1, respondents reported having a very good perception about EBP and perceived themselves as having good research skills that translated into them using research results to inform their clinical practice.

Table 1: Perceived knowledge of evidence-based practice

	Good n (%)	Poor n (%)
Research skills	111 (83.5)	22 (16.5)
Information technology skills	113 (85)	20 (15)
Monitoring and reviewing of practice skills	119 (89.5)	14 (10.5)
Converting your information needs into a research question	103 (77.4)	30 (22.6)
Awareness of major information types and sources	113 (85)	20 (15)
Ability to identify gaps in your professional practice	117 (88)	16 (12)
Knowledge of how to retrieve evidence	115 (86.5)	18 (13.5)
Ability to analyse critical evidence against a set standard	105 (79)	28(21)
Ability to determine how valid (close to the truth) the material is	110 (82.7)	23 (17.3)
Ability to determine how useful (clinically applicable) the material is	125 (94)	8 (6)
Ability to apply information to individual cases	122 (91.7)	11 (8.3)
Sharing of ideas and information with colleagues	127 (95.5)	6 (4.5)
Dissemination of new ideas about care to colleagues	120 (90.2)	13 (9.8)
Ability to review your own practice	117 (88)	16 (12)

Perceived attitudes and practice towards evidence-based practice

Five items were used to obtain information from the respondents about their perceived attitudes towards EBP. The mean score for attitudes was 3.11. Contrary to the high perceived level of knowledge ascertained in the previous section, reflected in table 2, the items of this section indicated that 79 (59.4%) of the respondents either strongly agreed or agreed that their workload is too high to keep up to date with all new evidence. Some 72 (54.1%) agreed that they do not like it if people question their clinical practice, which is based on established methods. Moreover, 63 (47.4%) believed that evidence-based practice has only limited utility compared with 18% and 34.6% who were undecided and disagreed, respectively. However, 72 (54.1%) of the participants disagreed that they prefer using more traditional methods instead of changing to new approaches. Almost half of the participants, 66 (49.6%), agreed or strongly agreed that most research articles were not relevant to their daily practice.

There were nine items to assess the perceived practice towards EBP. The mean score for the perceived practices was 3.92. The majority of the participants, 116 (87.2%), perceived identifying clinical issues or problems for which they can implement EBP. Similarly, 114 (85.7%) perceived translating a clinical issue/problem into a well-formulated clinical question that can be explored for EBP. Table 2 reflects the level of agreement regarding the participants' engagement with EBP.

Table 2: Perceived attitudes and practice towards evidence-based practice

Perceived Attitude towards Evidence Based Practice			
Variable	Agree	Undecided	Disagree
My workload is too high to keep up to date with all new evidence	79 (59.4%)	11 (8.3%)	43 (32.3%)
I don't like people questioning my clinical practice, which is based on established methods	72 (54.1%)	11 (8.3%)	50 (37.6%)
I believe evidence-based practice has only limited utility	63 (47.4%)	24 (18%)	46 (34.6%)
I prefer using more traditional methods instead of changing to new approaches	43 (32.3%)	18 (13.5%)	72 (54.1%)
Most research articles are not relevant to my daily practice	66 (49.6%)	10 (7.5%)	57 (42.9%)
Perceived Practice towards evidence-based practice			
	Agree	Disagree	
Identify clinical issues/problems	116 (87.2%)	17 (12.8%)	

Translate a clinical issue/problem into a well-formulated clinical question	114 (85.7%)	19 (14.3%)
Distinguish between different types of questions related to intervention, prognosis, harm and cost effectiveness	109 (82%)	24 (18%)
Conduct online searches (using data bases and search engines)	98 (73.7%)	35 (26.3%)
Relate research findings to my clinical practice and point out similarities and differences	94 (70.7%)	39 (29.3%)
Use checklist to assess research articles	87 (65.4%)	46 (34.6%)
Read research report and have a general notion about its strength and weaknesses	109 (82%)	24 (18%)
Apply an intervention based on the most applicable evidence	115 (86.5%)	18 (13.5%)
Evaluate the application of intervention and identify areas of improvement	118 (88.7%)	15 (11.3%)

Correlation of knowledge, attitude and practice of evidence-based practice

Reflected in table 3, spearman correlation found a negative correlation between perceived knowledge and level of education ($r = -0.199$). Further, there was a negative correlation between perceived attitude and level of education ($r = -0.059$). The analysis also showed a mild but positive correlation between level of education and the perceived practice towards evidence-based practice ($r = 0.114$). Moreover, it was established that there was a mild positive correlation between perceived knowledge and perceived attitude towards EBP ($r = 0.137$). There was also a positive, but weak correlation between perceived knowledge and perceived practice towards EBP ($r = 0.004$); and a positive weak correlation between perceived practice and perceived attitude ($r = 0.056$).

Table 3: Correlation of perceived knowledge, practice and attitudes towards evidence-based practice

Variables	Mean \pm SD	r vale
Level of education Perceived Knowledge	1.82 \pm 1.06 3.43 \pm 0.86	- 0.199**
Level of education Perceived Attitude	1.82 \pm 1.06 3.11 \pm 1.17	- 0.059
Level of education Perceived Practice	1.82 \pm 1.06 3.92 \pm 0.78	0.114

Perceived Knowledge	3.43 ±0.86	0.137**
Perceived Attitude	3.11 ±1.23	
Perceived Knowledge	3.43 ±0.86	0.004
Perceived Practice	3.92 ±0.78	
Perceived Practice	3.92 ±0.78	0.056
Perceived Attitude	3.11 ±1.23	

** Correlation is significant at the 0.01 level (2- tailed)

Barriers towards evidence-based practice

The result showed that a little more than half, 77 (57.9%), of the respondents perceived inadequate understanding of research terms used in research articles as a barrier to EBP. The majority of respondents, 82 (61.7%), agreed that inability to understand statistical terms used in research articles is a barrier to EBP. Regarding difficulty in judging the quality of research papers and reports, 74 (55.6%) agreed that it was a barrier towards EBP. This section also showed that 59 (44.4%) of the participants agreed that difficulty in determining the applicability of research findings was a barrier, and finding time to engage in reading and searching for research articles was noted as a barrier by 54 (40.6%) of the participants.

DISCUSSION OF RESULTS

Perceived knowledge

The study showed that most of the respondents perceived having a good level of knowledge of evidence-based practice (mean = 3.43 ± 0.86), which is consistent with the study by Ofi et al. (2008:253) that reported a generally good understanding of research utilisation and EBP among nurses. Further, the findings of this study showed that the majority of the nurses perceived that they were adopting EBP when implementing nursing care. The recognition of patients' preferences as a component of EBP has been documented in the literature (Bartelt et al. 2011:119; Maaskant et al., 2013:155). Similarly, the consideration of expert opinion, which is often associated with practice experience, has been acknowledged as an integral part of EBP (Breimaier, Halfens & Lohrmann 2011:1753; Rycroft-Malone et al., 2004:89).

This study also noted that participants perceived having good skills on information technology. This finding is consistent with Maaskant et al. (2013:155) in which nearly all the participants rated themselves as having good computer and internet skills. Similarly, Bartelt et al. (2011:119) also found that most of the respondents had positive perceptions of having information technology skills. Also supporting nurses to improve

their information technology skills to enable them retrieve relevant evidence to inform their nursing practices has been documented as a useful EBP strategy (Yip Wai et al., 2013:39).

Perceived attitudes

The finding of this study shows that a large percentage (59.4%) of the respondents agreed that their workload is too high to keep up to date with all new evidence. This finding is in agreement with other studies (Breimaier, Halfens & Lohrmann, 2011:1753; Majid et al., 2011:233) in which most of the respondents indicated that nurses are too busy to appraise and incorporate the findings of research into their nursing practice. This study also found that most of the respondents did not believe that evidence-based practice has limited application. This may imply that the nurses are positive regarding the benefits of EBP in nursing care and/or have an awareness or a good understanding of EBP (Agbedia, 2012:228; Ayandiran et al., 2013:7; Berland et al., 2012:364).

Perceived practices

The results showed that most of the registered nurses (mean = 3.92) perceived that they were implementing evidence-based practices in their routine professional nursing practices. Along with knowledge, implementation of EBP is an essential step in the provision of quality and reliable care in clinical practice (Chan et al., 2011:29–30). The high perceived application of EBP found in this study is contrary to the findings of other studies (Berland et al., 2012:364; Heckenberry et al., 2006:375), which found that a majority of the participants based their nursing practices on tradition and routine activities.

Perceived barriers

This study found that nurses perceived several factors that are barriers to the implementation of evidence-based practice. Respondents indicated inadequate understanding of research terms used in research articles; this is also supported in other studies (Maaskant et al., 2013:155–156; Majid et al., 2011:233), which highlight nurses' difficulties in understanding research terms. This may suggest the need to support nurses by including EBP techniques in on-going programmes to facilitate their understanding of EBP (Agbedia, 2012:229–230; Ayandiran et al., 2013:6).

Other barriers identified were difficulty in finding time at work to search for and read research articles and reports; insufficient time at the work place to implement changes in their current practice; and insufficient resources to implement EBP. This is supported by other studies that found that availability of time as being a major complaint of most nurses and a challenge to the implementation of EBP (Bartelt et al., 2011:119; Koehn & Lehman, 2008:213; Maaskant et al., 2013:155). Hospitals can address this by providing

nursing journals, newsletters and related research materials in the wards to enhance access by registered nurses (Bertulis, 2008:37–38; Maaskant et al., 2013:156).

Findings of this study showed a weak positive correlation (0.047) between level of education and the application of evidence-based practice. This finding is not in agreement with various other studies (Bonner & Sando, 2008:340–342; Melnyk et al., 2008:214; Ofi et al., 2008:253; Bartelt et al., 2011:119), which pointed out that nurses with more advanced educational status are likely to have more knowledge of evidence-based practice compared with their counterparts with lower educational status. Further, the statistically significant negative correlation of perceived attitude and level of education of this study is also contrary to other studies (Bonner & Sando, 2008:340; Heckenberry et al., 2006:375; Knops et al., 2009:1354), which concluded that nurses with higher educational credentials are likely to have positive attitudes towards EBP.

LIMITATION OF THE STUDY

This study was conducted in only one hospital in Niger state, Nigeria; the results may therefore not be generalisable to other settings.

CONCLUSION

Evidence-based practice contributes to the development of professional nursing practice and standard patient care. Through the appreciation of EBP, nurses can develop and maintain professional integrity, respect, cooperation and quality patient care. The results of this study have added to the existing knowledge on nurses' perception of evidence-based practice.

Although the respondents in the study identified several factors as barriers to EBP, the results of this study suggest that registered nurses had moderate positive perceptions of EBP, with more than half of the respondents perceiving good levels of knowledge and positive attitudes towards EBP. There is need, however, for additional evidence-based education within clinical settings to ensure that patients receive nursing services that are based on sound, high quality evidence.

RECOMMENDATIONS

The evidence-based movement has emphasised the application of research findings into clinical practice (Mantzoukas, 2008:220). An environment with a positive culture, good leadership, infrastructural development and adequate manpower is conducive to evidence-based practice (Bostrom et al., 2008:1161; O' Donnell, 2004:201). In such an atmosphere, nurses will be able to provide highly effective and cost-effective health care to the consumers based on sound evidence (Bartelt et al., 2011:120). This will also allow nurses to practise in an environment of international standard and to keep pace with new developments in the health care industry. Further, this study was limited to one

hospital in Niger state, Nigeria. Broader research needs to be conducted to include every general hospital in the state. Further studies could explore the influence of education on EBP and factors that can enhance the uptake of EBP among nurses.

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