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Full Length Research

Factors associated with nurses' knowledge of and compliance with evidence-based nursing practice in Mainland Hospital Yaba, Lagos State

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ABSTRACT: Evidence-based nursing practice (EBNP), preferences are very critical for improved patient outcomes. This study aims to determine the factors associated with Nurses' knowledge and practice of evidence-based nursing practice in Mainland Hospital Yaba, Lagos State. The study applied a cross-sectional study design of 97 nurses in Mainland Hospital, Yaba, Lagos. Data collection was through the use of a well-structured questionnaire. The population had a moderate knowledge level of EBNP with a mean knowledge score of 9.42/15. From the mean knowledge score calculations, 51% of the nurses had moderate knowledge of EBNP, 14% had low knowledge score, and 35% had high knowledge of EBNP.74% of the nurses reported to often practice evidence based nursing, 9% reported to very often practice evidence based nursing and 17% reported to not practice evidence-based nursing. 96.9% indicated a belief that the practice of evidence-based nursing improves patient outcomes. 96.9% indicated the readiness of recommending EBNP to colleagues, and 71.1% of the respondents expressed willingness to practice EBNP in the future, indicating a considerably high positive attitude of the nurses towards evidence-based nursing. With respect to the benchmark mean ($\bar{x}$ = 3.00), the highly influential factors were observed to be system-related factors, including technology and infrastructure ($\bar{x}$ = 3.51), followed by organisational factors ($\bar{x}$ = 3.32) and nurse-related factors ($\bar{x}$ = 3.13). The least influential factor observed was the patient-related factor ($\bar{x}$ = 2.98). From the regression model coefficient, Nurses' years of experience (0.175) and educational qualification (0.001) have a positive effect on their knowledge of EBNP. From the ANOVA table, the effect of age, Nurses' education and years of experience on their knowledge of EBNP. However, there is a significant association between the highest nursing qualification of the nurses and their knowledge of evidence-based nursing practice (χ^2 = 14.800, P (0.010) < 0.05). No significant association was recorded between the factors influencing EBNP and nurses' attitudes towards EBNP. The study recommends that the management of Mainland Hospital should organise EBNP-focused modules and workshops in order to strengthen the current knowledge of the registered nurses.

Keyword: Evidence-Based Nursing Practice (EBNP), knowledge, practice, nurses, Mainland Hospital.

INTRODUCTION

Evidence-based nursing practice (EBNP) refers to making clinical decisions based on the best available, up-to-date research, clinical expertise, and patient preferences (Melnyk and Fineout-Overholt, 2019). By combining clinical experience and patient values and preferences into the delivery of professional patient care, evidence-based nursing practice (EBNP) applies the best available scientific evidence to clinical decision-making (Melnyk and Fineout-Overholt, 2019). It is about making decisions by using the best available evidence from multiple sources in a conscientious, explicit, and judicious manner (Degu *et al.*, 2022). Evidence means research findings that are clinically relevant, such as empirical data from randomised controlled trials, data from other scientific methods like descriptive and qualitative research, and data from case studies, scientific principles, and expert opinion (Aynalem *et al.,* 2021). We refer to nurses' knowledge and proficiency in their field of study as clinical expertise. The knowledge and skills that nurses possess are derived from their clinical experiences and academic studies. Without

question, nurses are skilled at communicating with patients and eliciting their emotions. Therefore, it involves incorporating their expertise and abilities when providing care (Groove, 2018). As a science, nursing bases its choices on research findings. The most reliable method for drawing conclusions from science is scientific research. Research is the cornerstone of contemporary practice, whereas nursing practice produces research questions. As a result, practice and research coexist side by side in a circular continuity (Kristensen and Konradsen, 2015). EBNP has been recognised as the gold standard for promoting nursing excellence and delivering safe, compassionate care. Evidence-based practice positively influences the practice of nurses and enables them to shift from tradition to science-based practice (Oluwatoyin *et al.,* 2016). In a similar vein, it reduces cost, enhances patient outcomes, establishes a benchmark for high-quality patient care (Branham *et al.,* 2014), boosts patient and family satisfaction, and advances professional growth (Jordan *et al.*, 2016). Once more, it closes the gap between theory and practice (Saleh, 2018), boosts working efficiency, decreases overtime (Jane Vortherms *et al.*, 2015), and produces high job satisfaction (Kim *et al.,* 2016). The experiences and opinions of people involved in treatment have an impact on patient care; yet, the use of research-based evidence in nursing practice is limited (Degu *et al*., 2022). EBNP is not frequently used by nurses, despite the fact that it has several benefits on patient outcomes. This is because putting evidence into practice presents many difficulties for nurses. Among these, lack of source, lack of time, inadequate skill, lack of training, and lack of knowledge took the first (Aynalem *et al*., 2021). EBNP is rarely utilised in low- and middle-income countries. EBNP procedures are a relatively new and often challenging responsibility for many healthcare institutions. In African nations, including South Africa, Ethiopia, Kenya, Nigeria, Egypt, Botswana, Burundi, and Malawi, for instance, EBNP is emphasised and promoted for nurses (Labrague *et al.,* 2019). In nursing practice, it is still in its early stages. A recent study from Nigeria found that the healthcare system there does not frequently use EBNP (Williams *et al.,* 2015). One explanation for this difficulty is that Africa falls behind in research due to a paucity of studies describing the state-of-the-art in EBP and a lack of government financing (Hadgu *et al*., 2015). Another cause could be a lack of resources, which makes it nearly impossible for health professionals to work with vulnerable groups in low-income settings to acquire information. Nurses may lack the Knowledge and skills needed to extract research evidence from the literature or to apply that evidence, making it ineffective and failing to enhance clinical outcomes (Degu *et al*., 2021).

METHODOLOGY

Research design

The research design adopted in this study was a survey. In a survey design, according to Isangedighi *et al*. (2004), the researchers attempt to obtain a picture of the present conditions of particular phenomena. It is directed towards determining the nature of a situation, as it exists at the time of investigation, and it depends basically on a questionnaire as a means of data collection. This particular research design was adopted because the variables under study were examined as they existed when the study was carried out. The study also involves populations that were only covered through a sample using questionnaires and describing the picture of the situation instead of drawing inferences. In this study, the independent variables, knowledge and practice of evidence-based practice of quality nursing care, were a measure of difference; while the dependent variables already exist in the outcome of quality nursing care to patients

Research setting

This study was carried out in Mainland Hospital Yaba, Lagos State. Mainland Hospital Yaba, Lagos State is formally known as Infectious Diseases Hospital, this is a public hospital that offers quality medical solutions to a number of diseases, ensuring accessibility and affordability. Mainland Hospital Road is located at 6.522°N 3.3768°E, 1 Abule Ijesha Road Yaba Lagos.

Population of the study

The target population of this study will comprise all the nurses who are working in Mainland Hospital Yaba, Lagos State and patients admitted to the ward between 2022 and 2023.

Sample size determination

The sample size for this study is 114 nurses and patients, this is determined using the Taro Yamane (1967) formula which provides a simplified method of calculating sample size for a finite (known) population using a confidence level and 5% or 0.05 margin error. The formula is given as:

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

Where: n = the sample size, N = the population size, e = the level of precision (allowable error) that is 5%.

Therefore, the sample size is given as:

$$n = \frac{148}{1 + 148(0.05)^2}$$

n = 127.89115646258502

10% non-response rate = 10.4

Total sample size = 138.3 = 138

Sampling technique

A random sampling technique was used to obtain the required sample for nurses and patients who participated in the study. This was done to give each nurse and patient equal opportunity of being selected through balloting of YES or NO.

Instrument for data collection

The instrument for data collection was a structured questionnaire which is divided into four sections: section A: consists of questions on the demographic characteristics of the respondents. Section B: nurses' knowledge on evidence-based practice of quality care rendered to patients. Section C: Practice of evidence=based practices of quality of nursing care Section D: Attitudes of nurses on evidence-based practice of quality nursing care by nurses. Section F: Level of compliance of nurses on evidence-based practice of quality nursing care. A standardized instrument by University of Ulster (2000) was used to measure attitude using a Likert scale 1- 5 ranging from strongly disagree (1), disagree (2), unsure (3), agree (4) to strongly agree (5).

Procedure for data collection and data analysis

Data was collected using a simple random sampling of nurses in each unit to give everyone the opportunity to be selected. This was carried out after the aim of the study was explained to the nurses who participated in the study. One hundred and eighteen nurses were sampled out of 147 nurses in the hospital. Descriptive Statistics and Service Solutions (SPSS) version 23 was used to reduce masses of raw data into a more meaningful form. And data presented in tables using percentages and frequencies.

Ethical considerations

A letter of introduction was collected from the college, and ethical approval was obtained from the Hospital's Ethical Committee. Informed consent was obtained from the respondents after an explanation of what the research is all about. They were told to opt out of the study if they so wished without any prejudice. The confidentiality of respondents was guaranteed.

RESULTS

Analysis of nurses' demography

The study involved the analysis of the demographic characteristics of the respondent nurses as described in Table 1. The mean age of the nurses is reported to be 30.57 years, representing a relatively very young respondent with a minimum age of 20 years and a maximum age of 62 years. This is evident as 57.7% of the respondents fall within the range of 20-29 years of age, 27.8% of the respondents fall within the age range of 30-39 years, and 20.3% fall within the age range of 40-49 years. Only 3.1% of the respondents fall within the range of 50-59 years, and only 1% of the respondents are within the range of 60-65 years of age. This signifies that in Mainland Hospital, Yaba, Lagos State. The study also records the nursing experience of the respondents. The study reveals that the average years of working experience of the respondents is 9.42 years representing a relatively young slightly inexperienced nursing population with minimum years of nursing experience being 1 year and the maximum nursing experience of 38 years. Respondents with 1-5 years of nursing experience account for 40.2% of the population. 28.9% of the population had a nursing experience between 6-10 years of age. Respondents with years of nursing experience between 11-15 years accounted for 15.5% of the respondent population. Higher experience ranges had a significant reduction in the respondent population as follows: 16-20 years (7.2%), 21-30 years (6.2%) and 30+ years (2.1%). The study takes note of the Nursing qualifications of the nurses in Mainland Hospital Yaba, Lagos State. B.Sc and Registered Nurse (RN) qualifications accounted for 33 of the population respectively, respondents with M.Sc qualifications accounted for 20.6% of the respondent population and PhD, having the lowest percentage distribution, accounted for 13.4% of the respondent population.

Assessing the level of knowledge of evidence-based nursing practice among respondents

The study assessed the knowledge of the nurses about evidence-based nursing through their knowledge of the definition, components and characteristics of evidence-based nursing as recorded in Table 2. About 81.4% of the respondents are aware of the definition as "A practice that combines research, clinical expertise, and patient preferences as opposed to the definition of evidence-based nursing as "A nursing practice that emphasizes intuition and experience". About 90.7% of respondents accepted that EBNP comprises of clinical experience, patient values and research evidence as opposed to 9.28% which opted for "hospital policies, patient preference and clinical guidelines" as components of evidenced based nursing. Concerning the characteristics of evidence-based nursing practices, 16.5% of the respondents agreed that the practice of EBN is time-efficient, 66% of the respondents agreed that it is cost-effective, and 55.7% accepted that it entails a high level of evidence.

Table 1. Demographic characteristics of nurse respondents.

Demographic characteristics		Frequency	Percentage (%)	Mean
Age	20-29 years	56	57.7	30.57
	30-39 years	27	27.8	
	40-49 years	10	10.3	
	50-59 years	3	3.1	
	60-65 years	1	1.0	
Working Experience (Years)	1-5 years	39	40.2	9.42 years
	6-10 years	28	28.9	
	11-15 years	15	15.5	
	16-20 years	7	7.2	
	21-30 years	6	6.2	
	30+ years	2	2.1	
Highest Nursing Qualification	B.Sc	32	33.0	
	M.Sc	20	20.6	
	PhD	13	13.4	
	RN	32	33.0	
Rank	Staff Nurse	65	67.0	
	Chief Nurse	6	6.2	
	Clinical Nurse	1	1.0	
	Assistant Nurse	11	11.3	
	CNO	3	3.1	
	Nurse Manager	3	3.1	
	Senior Nursing Officer	8	8.2	

Table 2. Respondents knowledge of evidence based nursing practice

Parameters	Frequency	Percentage (%)
Definition of evidence-based nursing practice		
A nursing practice that emphasizes intuition and experience	16	16.5
A practice that combines research, clinical expertise, and patient preferences	79	81.4
A method that relies solely on traditional nursing routines	1	1.0
Components of ENBP		
Clinical experience, patient values, and research evidence	88	90.7
Hospital policies, patients preferences and clinical guidelines	7	7.2
Characteristics of ENBP		
Time Efficient		
Yes	81	83.5
No	16	16.5
Cost effective		
No	33	34.0
Yes	64	66.0
High level of evidence		
No	43	44.3
Yes	54	55.7

Table 3. Practical and model-based assessment of the knowledge of evidence-based nursing practice

Parameters	Frequency	Percentage
Practical based knowledge assessment of what ENBP entails		
Changing wound dressing based on hospital policy		
No	90	92.8
Yes	7	7.2
Administering medications based on patient's self-report		
No	41	42.3
Yes	56	57.7
Using evidence-based guidelines for pain management		
No	37	38.1
Yes	60	61.9
Relying solely on clinical experience for decision making		
No	71	73.2
Yes	26	26.8
Knowledge of Models of EBNP		
IOWA Model		
Not familiar	4	4.1
Poor	10	10.3
Fair	42	43.3
Good	38	39.2
Excellent	2	2.1
Stetler Model		
Not familiar	4	4.1
Poor	15	15.5
Fair	55	56.7
Good	20	20.6
Excellent	2	2.1
ACE star Model		
Not familiar	5	5.2
poor	12	12.4
Fair	42	43.3
Good	36	37.1
Excellent	1	1.0

To further investigate the nurses' knowledge of evidence-based nursing practice, practical-based knowledge questions were administered. 92.8% of the respondents disagreed that changing of wound based on hospital policy is not evidence-based nursing practice. 42.3% of the respondents disagreed that administering medications based on a patient's self-report is not an evidence-based nursing practice. 38.1% disagreed that using evidence-based guidelines for pain management is not an evidence-based nursing practice.

In order to ascertain or measure the knowledge level of the nurses about evidence-based nursing practice, nurses were questioned about their knowledge of the models of evidence-based nursing practice. This is to cover up for the use of intuition that may have been used to answer previous questions. The Knowledge of the IOWA, Stetler, and ACE star models was measured on a Likert scale; 1 = Not familiar, 2 = Poor, 3 = Fair, 4 = Good and 5 = Excellent. With the highest code of 5, a perfect match that accounts for knowledge of the three models would sum up to 15 (5*3), making up the highest possible total for an individual. This total was categorized into three levels based on percentage; 0-49% (scores from 0-7) is considered to be low knowledge, 50-69% (scores from 8-10) was considered to be Moderate knowledge and 70-100% (score from 11-15) were considered to be High knowledge. From the results in Table 4, the average mean score of the respondent population was recorded to 9.42, which is considered moderate. Hence, the population is said to have moderate actual knowledge of evidence-based

Table 4. Knowledge level score of the respondent population.

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Knowledge Level	97	3	15	9.42	2.281
Valid N (listwise)	97				

Key: low = 0-7, Moderate = 8-10, High = 11-15.

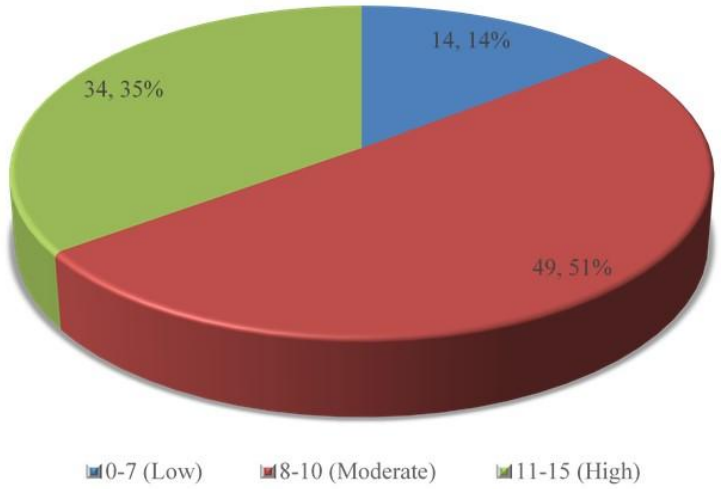

Figure 1. Knowledge level distribution of the respondent population.

nursing practice. The Percentage distribution of the knowledge level of the population is displayed in Figure 1, wherein the proportion of the population with low knowledge is recorded to be 14%, the prop**o**rtion of the population with moderate knowledge of evidence based nursing practice is recorded to be about 51% and 35% of the respondents had high knowledge of evidence-based nursing practice.

Assessing the practice of evidence-based nursing among respondents

The study also endeavoured to investigate nurses' practice of evidence-based nursing as recorded in Table 5. Considering the frequency of application of evidence-based nursing practices, 72% were obliged to apply evidence-based nursing practice, 9.3% of the respondents very often applied EBNPs, and 16.5% of the respondents were obliged to have applied EBNPs at all. On the frequency of measurement of patient outcome, the results are as follows: Not at all (2.1%), not often (4.1%), often (73.2%) and very often (20.6%). Considering the documentation of evidence-based decisions in patient records recorded 100% yes, an indication that respondents may have considered any other form of records as evidence-based records, as 16.5% had indicated not applying evidence-based nursing practice at all.

Assessing respondents' attitudes towards evidence-based nursing practices

Considering the attitude of the respondents' evidence-based nursing practice in Table 6, 69.1% of the respondents indicated that EBNP was good, 12.4% agreed that EBNP was excellent, and 17.5% acknowledged that EBNP was fair. 96.9% indicated a belief that the practice of evidence-based nursing improves patient outcomes. 96.9% indicated the readiness to recommend evidence-based nursing practice to colleagues, and 71.1% of the respondents expressed willingness to practice EBNP in the future. These results signify a considerably high positive attitude of the nurses to evidence-based nursing practice.

Determination of organisational support of evidence-based nursing in Mainland Hospital Yaba, Lagos State

The study also investigates the organisational support towards evidence-based nursing practice as recorded in Table 7. Interestingly, 88.7% of the respondents are neutral in their opinion regarding the availability of resources for the practice of evidence-based nursing. 78.4% of the population agreed that Mainland Hospital places priority on evidence-based nursing, and 67% agree to have sufficient training in the practice of evidence-based nursing. These results considerably show the administrative support of Mainland Hospital Yaba.

Table 5. Assessment of the respondent's practice of evidence-based nursing

Parameters	Frequency	Percentage (%)
How often do you apply EBNPs?		
Not at all	16	16.5
Often	72	74.2
Very Often	9	9.3
How often do you measure patients' outcomes?		
Not at all	2	2.1
Not often	4	4.1
Often	71	73.2
Very often	20	20.6
Do you participate in quality improvement initiative?		
No	6	6.2
Yes	90	92.8
Do you document evidence-based decisions in patient record?		
Yes	97	100.0
No	0	0.0

Table 6. Investigation of nurses attitude towards evidence-based nursing practice

Parameters	Frequency	Percentage
How important is EBNP in your daily practice		
Fair	17	17.5
Good	67	69.1
Excellent	12	12.4
Do you believe EBNP improves patient outcomes		
No	3	3.1
Yes	94	96.9
Would you recommend EBNP to colleagues		
No	2	2.1
Yes	94	96.9
How likely are you to adopt EBNP for your future practice		
Fair	13	13.4
Good	69	71.1
Excellent	14	14.4

Factors affecting the practice of evidence-based nursing

The practice and non-practice of evidence-based nursing could be dependent on certain factors. Table 8 highlights respondents' opinions on the factors affecting their practice of evidence-based nursing. 40.2% of the respondents consider lack of knowledge and skills to be a limiting factor, while 66% consider insufficient resources to be a factor affecting their practice of evidence-based nursing. 23.7% consider resistance from colleagues to be a hindering factor, and 15.5% consider limited access to journals and databases to have affected their practice of evidence-based nursing. A very small percentage of the respondents (5.2%) consider one of the factors to be inadequate policies and guidelines, and 13.4% consider limited support from administration to be one of the factors. Also, Inadequate Staff and workload were a factor considered by 7.2% of the respondent population. From the analysis specific to Mainland Hospital Yaba, Lagos State, the most pressing factors include insufficient resources and lack of knowledge and skills, followed by resistance from colleagues or management.

Assessing the extent of the influence of factors on ENBP

The extent of influence of the factors on evidence-based nursing practice was analysed. These factors were categorised into system-related factors, organisational factors, nurse-related factors and patient-related factors.

Table 7. Assessing organisational support of evidence-based nursing practice.

Parameters		Frequency	Percentage
I have adequate resources to support EBNP	Disagree	8	8.2
	Neutral	88	88.7
	Agree	1	1.0
My organisation prioritises EBNP	Disagree	2	2.1
	Neutral	17	17.5
	Agree	76	78.4
I receive sufficient training on EBNP	Disagree	23	23.7
	Neutral	65	67.0
	Agree	7	7.2

Table 8. Investigating factors affecting the practice of evidence based nursing.

Parameters	Frequency	Percentage
Lack of Knowledge and Skills		
No	58	59.8
Yes	39	40.2
Insufficient resources (e.g., time, funding)		
No	33	34.0
Yes	64	66.0
Resistance from colleagues or management		
No	74	76.3
Yes	23	23.7
Limited access to research journals and databases		
No	82	84.5
Yes	15	15.5
Inadequate policies and guidelines		
No	91	93.8
Yes	6	5.2
Limited support from the administration		
No	84	86.6
Yes	13	13.4
Inadequate staffing and workload		
No	90	92.8
Yes	7	7.2

Responses on the influence of these factors were coded as follows: 1 = Minimal, 2 = Low, 3 = Moderate, 4 = High, and 5 = Significant, creating a benchmark mean ($\bar{x}$) of 1+2+3+4+5/5 = 3.0. Hence, through the benchmark mean ($\bar{x}$), the factors were either highly influential ($\bar{x} > 3.0$) in the Mainland and less influential ($\bar{x} < 3.0$). Therefore, as can be seen in Table 9, the highly influential factors were observed to be system-related factors, including technology and infrastructure ($\bar{x} = 3.51$), followed by organisational factors ($\bar{x} = 3.32$) and nurse-related factors ($\bar{x} = 3.13$). The least influential factor observed was the patient-related factor ($\bar{x} = 2.98$).

Testing of the study hypothesis

H_{o1}: There is no statistically significant effect of the nurse's sociodemographic variables (Years of Experience, age and educational qualification) and their knowledge of evidence-based nursing care in Mainland Hospital Yaba, Lagos State

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where: Y = Knowledge Score (Measured in numbers from 1 to 15), β_0 = Intercept, $\beta_1 - \beta_9$ = Regression coefficients,

Table 9. Extent of effect of factors on the practice of evidence-based nursing.

Factors	Measures	Frequency	Percentage	Mean	Rank
System-related factors (e.g technology, infrastructure)	Minimal	1	1.0	3.51*	1st
	low	3	3.1		
	moderate	49	49.5		
	high	36	37.1		
	significant	8	8.2		
Organizational factors (e.g resources, policies)	low	5	5.2	3.32*	2nd
	moderate	56	57.7		
	high	36	37.1		
Nurse-related factors (e.g knowledge, attitude)	low	10	10.3	3.13*	3rd
	moderate	65	66.0		
	high	21	21.6		
	significant	1	1.0		
Patient-related factors (e.g Complexity, acuity)	Minimal	2	2.1	2.98	4th
	low	7	7.2		
	moderate	79	81.4		

Table 10. Model summary of knowledge score against nurses demographic parameters (age, experience and qualifications)

Model	R	R Square	Adjusted R square	Std. error of the estimate
1	0.502[a]	0.252	0.227	2.00534

a. Predictors: (Constant), Highest nursing qualification, Nursing experience, Age of respondents
b. Dependent Variable: KnowledgeScore

Table 11. Analysis of variance to test the significance difference between regression model dependent and independent variables

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	125.683	3	41.894	10.418	0.000[b]
	Residual	373.988	93	4.021		
	Total	499.670	96			

a. Dependent Variable: KnowledgeScore
b. Predictors: (Constant), Highest nursing qualification, Nursing experience, Age of respondents

X_1 = Age of Nurses (Measured in Years), X_2 = Nursing Experience (Measured in years), X_3 = Highest Nursing Qualification (Categorical Variable; 1 = B.Sc., 2 = M.Sc., 3 = PhD, 4 = RN)

A multiple regression model was used for the hypotheses as stated above. From the model summary in Table 10, the coefficient of correlation reveals a strong positive correlation (R = 0.502) between the nurses' demographic parameters (age, nursing experience and highest nursing qualification) and their knowledge score, as can be seen in Table 11. The coefficient of determination, $R^2 = 0.252$, implies that 25.2% of the variance in the knowledge score can be accounted for by the nurses' demographic variables (predictors). In the ANOVA table, the relationship between the predictors and knowledge score is statistically significant P (0.000^b) < 0.05). From the table of coefficients, the model equation is established below

Y= 8.455 - 0.022 (Age of Nur) + 0.175 (Experience of Nur) + 0.001 (Nurses Qualification)

The regression constant of 8.455 represents the baseline knowledge score when the predictors of age, nursing

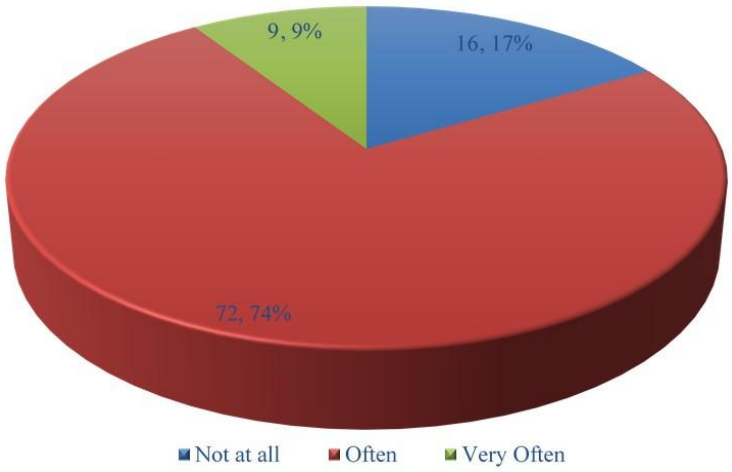

Figure 2. Respondent application of evidence-based nursing practices.

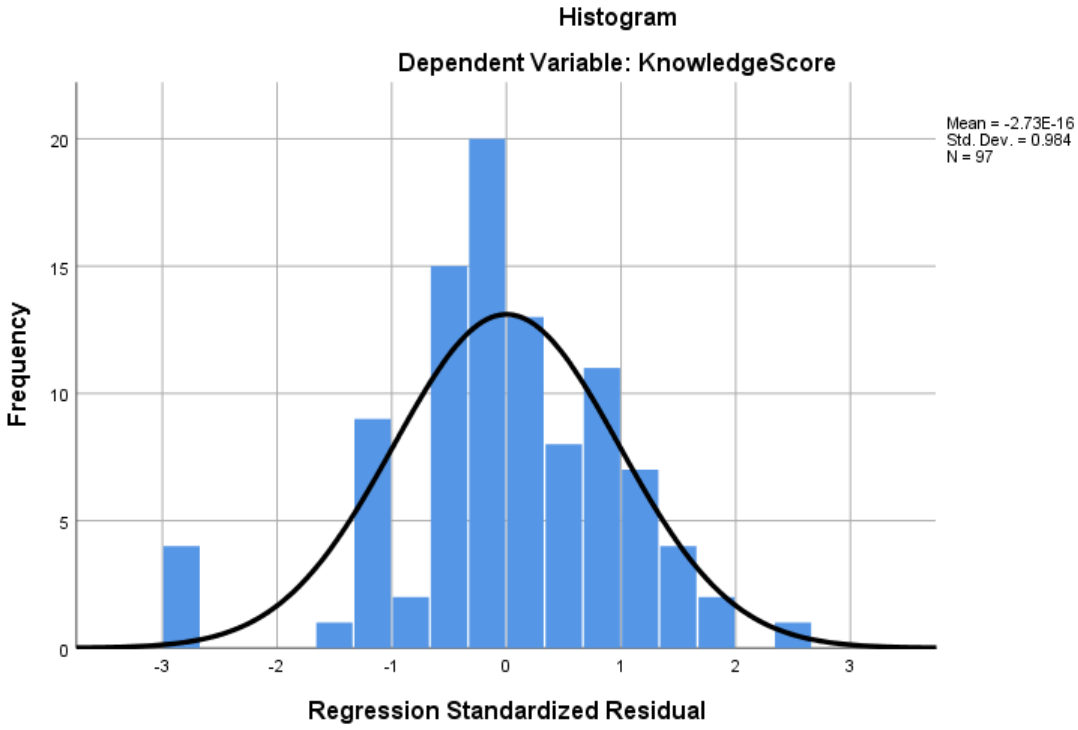

Figure 3. Histogram of regression standardized residuals.

experience and nurses' qualification are zero as shown in Table 12. From the coefficients of all the predictors, the age of nurses is said to have a negative relation with the knowledge score (-0.022); however, this knowledge score is not statistically significant. A positive relationship is recorded for the relationship with the knowledge score. Implying that for every additional increase in nursing experience, the knowledge score increases by 0.175 points or 1.175% of the total possible score, this relatioship is also statistically significant P (0.013) < 0.05. Nurses' qualification had a positive coefficient of 0.001, implying that each level rise in qualification (such as from B.Sc to M.Sc.) would increase the knowledge score by 0.001 points or 0.007% of the total score. This relationship is also not statistically significant P (0.997) > 0.05. From the histogram plot of residuals in Figure 2, the bell shape of the histogram, evenly distributed around zero, is an indication of normal distribution. Also, from the normal P-P plot in Figures 3 and 4, the points following the diagonal line are also an indication that the residuals are normally distributed.

Table 12. Table of coefficients for the regression model

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	8.455	1.274		6.639	0.000
	Age of respondents	-0.022	0.062	-0.084	-0.360	0.719
	Nursing experience	0.175	0.069	0.577	2.547	0.013
	Highest nursing qualification	0.001	0.174	0.000	0.003	0.997
a. Dependent Variable: KnowledgeScore						

Table 13. Fischer's exact test to ascertain the significant relationship between factors influencing EBNP and their attitude towards ENBP.

Variables	Category	Do you believe EBNP improves patient outcome?		Chi-square (χ^2)	df	Exact Sig.
		No	Yes			
Patient Related Factors	Minimal	0 (0.0%)	2 (2.1%)	0.465	3	0.926
	Low	0 (0.0%)	7 (7.4%)			
	Moderate	2 (100%)	77 (81.1%)			
	High	0 (0.0%)	9 (9.5%)			
Organizational Factors	Minimal	0 (0.0%)	5 (5.3%)	3.460	2	0.236
	Low	0 (0.0%)	56 (58.9%)			
	Moderate	0 (0.0%)	0 (0.0%)			
	High	2 (100%)	34 (35.8%)			
System-Related Factors	Minimal	0 (0.0%)	1 (1.1%)	0.344	4	0.251
	Low	1 (50%)	3 (3.2%)			
	Moderate	0 (0.0%)	47 (49.5%)			
	High	1 (50%)	8 (8.4%)			
Nurse-related Factors	Minimal	0 (0.0%)	10 (10.5%)	0.782	3	1.078
	Low	1 (50%)	64 (67.4%)			
	Moderate	1 (50%)	20 (21.1%)			
	High	0 (0.0%)	1 (1.1%)			

H_{o2}: There is no statistical association between factors affecting nurses' practice of evidence-based care of patients and their attitude towards evidence-based nursing practice in Mainland Hospital Yaba, Lagos State

Fisher's exact test was also used to test the significance of the association between factors that affect EBNP and the attitude of nurses to EBNP, as shown in Table 13. No significant association was noted between patient-related factors and the attitude of nurses to evidence-based nursing practice (χ^2 = 0.465, P (0.926) < 0.05). No significant association was noted between organisational factors and the attitude of nurses to evidence-based nursing practice (χ^2 = 3.460, P (0.236) < 0.05). No significant association was noted between system-related factors and the attitude of nurses to evidence-based nursing practice (χ^2 = 0.344, P (0.251) < 0.05) and, no significant association was noted between nurse-related factors and the attitude of nurses to evidence-based nursing practice (χ^2 = 0.782, P (1.078) < 0.05). Hence, none of these categories of factors has a statistically significant relationship with the attitude of the nurses towards evidence-based nursing practice in Mainland Hospital Yaba, Lagos State.

DISCUSSION

Sources have identified years of clinical experience and educational background as hypothesised factors influencing nurses' ability to adhere to evidence-based nursing practice (Rudman *et al.,* 2020). The study reports a considerable young population of Nurses in Mainland

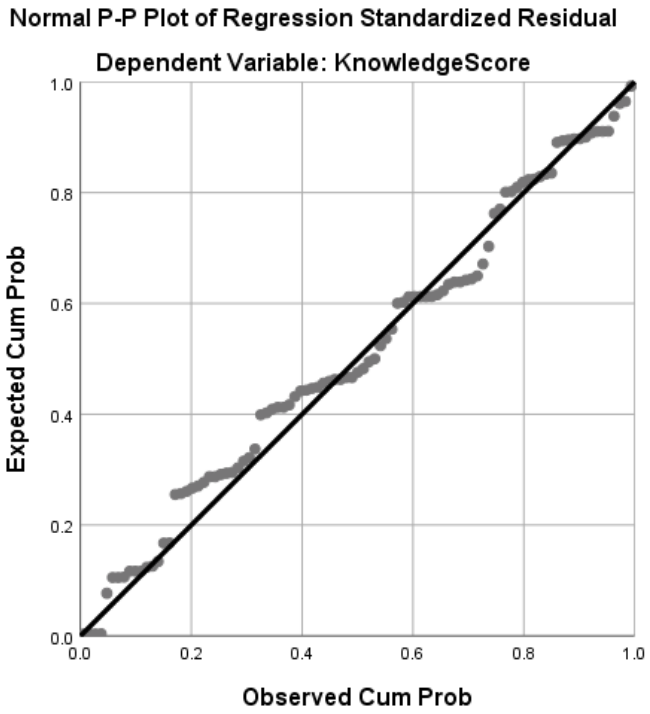

Figure 4. Normal P-P plot of regression standardized residuals.

Hospital, Yaba, Lagos. With a mean age of 30.57 years, and with the highest percentage of nurses falling within the age range of 20-29 years. Their average clinical experience was recorded to be 9.42 years, signifying a moderately experienced workforce, as the majority of them (40.2%) have clinical experience in the range of 1-5 years. There is evidence that Registered nurses with a graduate degree are likely to apply evidence-based nursing practice (Saunders and Vehvilatnem-Julkunem, 2016). Whereas, in certain European settings, registered Nurses with a master's level education are likely to apply more cognitive abilities, analysing and synthesising relevant information in the execution of evidence-based practices compared to nurses with lower levels of educational qualification (Watkins, 2011). In the study, nurses with B.Sc and registered nurse qualifications had a population of 33% each. 20.6% of the nurses had a Master's Degree (M.Sc), and 13.4% attained a doctorate (PhD) as their highest educational qualification. However, there is a need for evidence-based practice experts which including advanced practice nurses who have received the requisite education to perform tasks in compliance with evidence-based practices (Jokiniemi *et al.,* 2020). These advanced practice nurses (APNs) are comprised of clinical nurse specialists (CNSs) and nurse practitioners, each with different roles aimed towards the implementation of evidence-based practices (Jokiniemi *et al.,* 2020; Melnyk *et al.,* 2018). According to the recommendations by the International Council of Nurses (ICN), clinical nurse specialists take the lead in improving nursing practice through mentoring, teaching, consulting, and making sure nursing practice is grounded in evidence (Schober *et al.,* 2020; Li *et al.,* 2018). However, they also recommend that the minimum academic qualification to become an advanced practice nurse is a Master's degree. Furthermore, the study of Rudman *et al.* (2020) revealed that Registered Nurses with specialist education had higher compliance with evidence-based practice. From the regression model coefficient, nurses' years of experience (0.175) and educational qualification (0.001) have a positive effect on their knowledge of EBNP. From the ANOVA table, the effect of age, nurses' education and years of experience on their knowledge of EBNP. However, there is a significant association between the highest nursing qualification of the nurses and their knowledge of evidence-based nursing practice (χ^2 = 14.800, P (0.010) < 0.05).

The study reports considerable knowledge of what evidence-based nursing practice is. 81.4% of nurses correctly defined evidence-based nursing as a practice that incorporates clinical knowledge, research, and patient preferences; they rejected the idea that it is mostly based on routine or intuition. In addition, 90.7% of respondents said that EBNP is a practice that goes beyond merely following hospital rules or regulations by integrating clinical expertise, patient values, and research findings. In reality, evidence-based practice has proven to reduce the cost of healthcare (Aiken *et al.,* 2014; Rangachari *et al.,* 2015). Of those who responded, 83.5% agreed that EBNP is time-efficient, 66% agreed that it is cost-effective, and 55.7% agreed that it demands a high degree of proof. In order to evaluate practical knowledge, questions about the use of EBNP principles were asked. Significantly, 42.3% of respondents disagreed with giving medication based only on patient self-report, and 92.8% disagreed with changing wound dressings based only on hospital regulation. These responses demonstrate an understanding of the importance of evidence in clinical decision-making. From Fisher's exact test, the highest nursing qualification had a significant statistical association with the nurses' knowledge of evidence-based nursing practice (χ^2 = 14.800, P (0.010) < 0.05. However, neither Age nor nursing experience had a significant statistical association with nurses' knowledge of evidence-based nursing practice in Mainland Hospital, Yaba, Lagos.

Because evidence-based involves the integration of clinical practice with the most recent and relevant research findings (Ghorpade and Salvi, 2024), the best definition of evidence-based nursing as stated in the data collection instrument was that evidence-based nursing is "A practice that combines research, clinical expertise, and patient preferences", and 81.4% consented to this definition of evidence-based nursing practice. As for the specific characteristics of EBNP, 83.5% of respondents recognised that it is time-efficient, 66% agreed it is cost-effective, and 55.7% acknowledged it requires a high level of evidence.

Studies have reported that the application of evidence-based practices provides the benefits of patient satisfaction as well as satisfaction among clinicians (Dang *et al.,* 2021). Moreover, a study by Melnyk *et al.* (2018) affirms that the cost-effective interventions of evidence-based practice can prevent 50% of deaths globally. From the measurement of the knowledge level, Nurses in Mainland Hospital, Yaba, Lagos collectively have a moderately extensive knowledge of evidence-based nursing practice, which can be attributed to a lack of specialisation and their relative inexperience, as can be noted in their record of years of nursing experience.

The practice of evidence-based nursing is a multifaceted process requiring changes in the behaviour and attitude of the clinical practitioners (Cuzmenco, 2024). The investigations of EBNP in Mainland Hospital confirm the sad report from studies that despite the emphasis on the importance and benefits of evidence-based nursing practice, the best available relevant evidence is not always utilized in clinical decision-making and practice as well as in healthcare (Dagne and Basha, 2021; Lehane *et al.,* 2019). This can be attributed to certain factors affecting the implementation of sustainable practice of evidence-based nursing (EBN). In this study, organisational support for EBNP at Mainland Hospital Yaba was also assessed. Although 78.4% of respondents agreed that the hospital prioritises EBNP, and 67% agreed they received sufficient training, a notable 88.7% remained neutral regarding the availability of resources, such as time and funding, indicating potential ambivalence about the support infrastructure for evidence-based nursing. 40.2% of the nurses identified a lack of knowledge and skills as a limiting factor, while 66% identified insufficient resources as an influential factor. The study found that system-related factors, such as technology and infrastructure, had the highest influence (mean score of 3.51), followed by ($\bar{x}$ = 3.51), followed by organisational factors ($\bar{x}$ = 3.32) and nurse-related factors ($\bar{x}$ = 3.13), with patient-related factors having the least influence. Hence, the study identifies the lack of sufficient equipment and resources, such as information, as the highest limiting factor. The nurse-related factor involves nurses' knowledge and attitude towards evidence-based nursing practice. This is troubling, as it has been established that the translation of evidence into practice requires both human and material resources as well as organisational support (Spooner *et al.,* 2018).

Recommendation

Based on the above-reported study outcomes, some of the appropriate study recommendations are stated as follows:

1. In a bid to enhance the ability of nurses to effectively interpret and implement evidence-based nursing practices, the Hospital management should consider creating access to educational advancement and specialisation through scholarship provision or in collaboration with other nearby universities. Furthermore, the management should organise EBNP-focused modules and workshops in order to strengthen the current knowledge of the registered nurses, bridging the gap between theory and practice.
2. Mainland Hospital, Yaba, Lagos, should invest more in the informational and technical infrastructure needed for the practical implementation of theoretical evidence in order to overcome the resource constraints reported by the nurses in this study.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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