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Students' Perceptions of Research Project Conduct for Evidence-Based Practice in Sajo College of Nursing Sciences, Kebbi State, Nigeria

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Abstract

Introduction: Research projects are a core component of nursing education and can help students develop research literacy and prepare for evidence-based practice. However, students may encounter educational, financial, and institutional barriers during project work. **Objective:** To assess students' knowledge of research projects and evidence-based practice, determine their perceptions of conducting research projects, and identify the challenges encountered by final-year nursing students at Sajo College of Nursing Sciences, Kebbi State, Nigeria. **Method:** A descriptive cross-sectional survey was conducted among 150 final-year nursing students selected from a population of 238 using simple random sampling. Data were collected with a 40-item structured questionnaire covering demographic characteristics, knowledge, perceptions, and challenges. Frequencies, percentages, and mean scores were used to summarize responses. **Results:** Most respondents were female (66.0%), single (89.3%), and aged 21–23 years (36.0%); 65.3% were in Final Year 2. All respondents agreed or strongly agreed that a research project is a systematic investigation. However, 49.3% agreed or strongly agreed with the incorrect statement that research findings are irrelevant to evidence-based nursing practice, and 60.0% agreed or strongly agreed that evidence-based practice excludes clinical expertise and patient preferences. Perceptions of research project conduct were generally positive, with item means ranging from 3.35 to 3.59. The leading challenges were inadequate research materials (mean = 3.47), heavy academic workload (mean = 3.44), and financial difficulties (mean = 3.38). **Conclusion:** Students generally valued research projects and their relevance to nursing practice, but responses revealed possible misconceptions about evidence-based practice and substantial resource, workload, and financial barriers. **Recommendation:** Nursing colleges should improve access to research resources, provide structured research methods and evidence-based practice training, strengthen supervision and mentorship, and coordinate project timelines with students' academic workloads.

Keywords: Nursing students; evidence-based practice; nursing research; research education; research barriers

1 Introduction

Research is an essential component of nursing education because it develops students' ability to identify practice problems, formulate questions, locate and appraise evidence, and communicate findings. Evidence-based practice (EBP) involves integrating the best available research evidence with clinical expertise and patient preferences when making decisions about care. Nursing graduates therefore require more than theoretical familiarity with research; they need the confidence and

practical skills to use evidence in clinical decision-making (Abu-Baker et al., 2021; American Association of Colleges of Nursing [AACN], 2021; Dang et al., 2022; Institute of Medicine, 2001).

International studies indicate that nursing students often express positive attitudes towards EBP while reporting uneven knowledge, appraisal skills, and ability to apply evidence. A multicountry survey involving nursing students from Nigeria and other countries identified differences in perceived EBP competence and barriers to implementation (Labrague et al., 2019a). Research syntheses have similarly reported that positive attitudes do not always correspond to adequate knowledge and practical skills (Fiset et al., 2017; Li et al., 2024). In Rwanda, for example, nursing students reported knowledge of EBP concepts but limited routine application, with lack of time, knowledge, and role models identified as barriers (Iradukunda & Mayers, 2020).

Research projects are one educational route through which students can practise the research process. Participation in research education has been associated with improved confidence, research skills and readiness to use evidence (Estalella et al., 2023; Keib et al., 2017). However, the experience may be demanding. Students and nurse educators have reported challenges relating to research supervision, time constraints, infrastructure, access to literature, research skills, and institutional support (Mhlongo & Zuma, 2024; Rana et al., 2022). Reviews of EBP education have found that structured teaching, authentic learning activities and mentorship can improve students' EBP competence (Portela Dos Santos et al., 2022; Jeong et al., 2024).

At Sajo College of Nursing Sciences in Kebbi State, final-year students undertake research projects as part of their academic programme. Despite this requirement, local information on students' understanding of research and EBP, their perceptions of project work, and the practical difficulties they encounter has been limited. Without such information, educators and administrators may not be able to target support effectively. This study therefore assessed students' knowledge regarding research projects and EBP, their perceptions towards conducting research projects, and the challenges they experienced. The study provides institution-specific evidence to inform research teaching, supervision, and student support.

2 Methods

2.1 Study design and setting

A descriptive cross-sectional survey was conducted at Sajo College of Nursing Sciences, Birnin Kebbi, Kebbi State, Nigeria. The study focused on final-year nursing students who had received research-methodology instruction and were involved in completing academic research projects.

2.2 Study population and sample size

The study population comprised 238 final-year nursing students. The sample size was determined using Taro Yamane's formula (Yamane, 1967): $n = N/[1 + N(e^2)]$, where n is the required sample size, N is the population size (238), and e is the margin of error (0.05). Substitution gave $n = 238/[1 + 238(0.05^2)] = 238/1.595 = 149.22$, which was rounded to 150 respondents.

2.3 Sampling technique and eligibility

A simple random sampling technique was used to select 150 students from the final-year student list provided by the college. Eligible participants were final-year nursing students who had been exposed to research methodology, were involved in research-project activities, and agreed to participate.

Students who were not in the final year, were absent during data collection, declined participation or submitted incomplete questionnaires were excluded.

2.4 Research instrument

Data were collected using a researcher-developed, structured electronic questionnaire containing 40 items in four sections. Section A collected demographic information, including age, gender, marital status, ethnic group, duration of study and academic level. Section B contained 12 statements assessing knowledge of research projects and EBP. Section C contained 12 statements assessing perceptions towards research-project conduct. Section D contained 10 items on challenges encountered during research-project work.

Knowledge and perception statements used a four-point Likert response scale: strongly agree, agree, disagree and strongly disagree. Positively worded statements were scored 4, 3, 2 and 1, respectively. Two negatively worded knowledge statements were identified separately because agreement with them did not indicate correct understanding. Challenge items used a four-point scale: very high challenge = 4, high challenge = 3, moderate challenge = 2 and low challenge = 1. Item means were calculated by multiplying response frequencies by their respective scores and dividing by 150.

2.5 Validity and reliability

The project document reports that the questionnaire was submitted to the research supervisor and two additional lecturers for review of relevance, clarity, appropriateness, and alignment with the study objectives. It also describes pretesting with nursing students from another institution who were not part of the main sample. However, the project does not provide the pilot-test sample size, the final Cronbach's alpha coefficient, or item-level validation results. These statistics have therefore not been presented or reported in this manuscript.

2.6 Data collection and analysis

The questionnaire was administered electronically after the study purpose had been explained and informed consent obtained. The project reports that data collection took place over two weeks and that 150 completed questionnaires were analysed. Data were summarized using frequencies, percentages and mean scores. Descriptive analysis was appropriate to the stated objectives, which sought to describe knowledge responses, perceptions and challenges rather than test causal relationships.

2.7 Ethical considerations

The project reports that ethical approval was obtained from the relevant authority at Sajo College of Nursing Sciences and that an institutional letter of introduction and administrative permission were obtained. Participation was voluntary, informed consent was sought, and confidentiality and anonymity were maintained. The approval reference number and approval date were not stated in the project text and should be added if available.

3 Results

A total of 150 completed questionnaires were included in the analysis. Findings are presented according to respondents' characteristics, knowledge of research and EBP, perceptions of research-project conduct, and challenges encountered.

3.1 Respondents' characteristics

The largest age group was 21–23 years (36.0%), and two-thirds of respondents were female (66.0%). Most were single (89.3%). Yoruba respondents constituted 36.7%, while 59.3% reported a study duration of 3–4 years. Most participants were in Final Year 2 (65.3%).

Table 1 presents the sociodemographic characteristics of respondents (N = 150).

Table 1. Sociodemographic characteristics of respondents (N = 150).

Characteristic	Category	n	%
Age	18–20 years	44	29.3
	21–23 years	54	36.0
	24–26 years	37	24.7
	27 years and above	15	10.0
Gender	Male	51	34.0
	Female	99	66.0
Marital status	Single	134	89.3
	Married	15	10.0
	Widowed	1	0.7
Ethnic group	Yoruba	55	36.7
	Hausa	40	26.7
	Igbo	33	22.0
	Other	22	14.7
Duration of study	1–2 years	28	18.7
	3–4 years	89	59.3
	5 years and above	33	22.0
Academic level	Final Year 1	52	34.7
	Final Year 2	98	65.3

Source: Field survey, 2026.

3.2 Knowledge of research projects and evidence-based practice

Respondents generally agreed with the positively worded knowledge statements. All 150 respondents agreed or strongly agreed that a research project is a systematic investigation. Agreement was also high for the role of research in improving patient care (97.3%) and the use of the best available evidence in patient-care decisions (96.7%). However, 49.3% agreed or strongly agreed with the negative statement that research findings have no relevance to EBP, while 60.0% agreed or strongly agreed that EBP involves applying research without considering clinical expertise or patient preferences.

Table 2 presents the responses to knowledge statements (N = 150).

Table 2. Responses to knowledge statements (N = 150).

Knowledge statement	SA	A	D	SD	Mean
Research is a systematic investigation to generate knowledge or solve a problem	98	52	0	0	3.65
Research improves quality of patient care	95	51	4	0	3.61
EBP uses best available evidence in patient-care decisions	89	56	4	1	3.55
Research findings can improve nursing practice and patient outcomes	91	54	4	1	3.57
Research follows a systematic process from problem identification to reporting	82	65	3	0	3.53
Literature review examines existing information and studies	73	71	4	2	3.43
Data collection gathers information to answer research questions	88	55	7	0	3.54
Negative: Research findings have no relevance to EBP	35	39	51	25	2.56
EBP helps nurses make informed patient-care decisions	82	66	2	0	3.53
Research methodology refers to methods and procedures used in a study	71	73	5	1	3.43
Research develops skills in searching for and evaluating information	84	61	5	0	3.53
Negative: EBP applies research without considering expertise or preferences	38	52	39	21	2.71

Note: SA = strongly agree; A = agree; D = disagree; SD = strongly disagree. The two negatively worded items are presented as stated and should not be interpreted as favourable knowledge responses.

3.3 Perceptions towards conducting research projects

Perceptions were generally positive. Mean scores across the 12 statements ranged from 3.35 to 3.59. Nearly all respondents agreed or strongly agreed that research projects are important in nursing education (98.7%) and improve understanding of EBP (98.7%). A total of 97.3% supported encouraging nursing students to participate in research activities.

Table 3 presents the respondents' perceptions of research-project conduct (N = 150).

Table 3. Respondents' perceptions of research-project conduct (N = 150).

Perception statement	SA	A	D	SD	Mean
Research projects are important in nursing education	89	59	2	0	3.58
Research projects improve understanding of EBP	80	68	2	0	3.52
Research develops critical-thinking skills	84	60	5	1	3.51
Research experience is useful for future nursing practice	74	70	5	1	3.45
Research-project work is relevant to nursing practice	78	67	4	1	3.48
Research improves ability to search for reliable information	83	61	5	1	3.51
Research findings can improve quality of patient care	84	60	4	2	3.51
Interest in participating in future research activities	68	69	11	2	3.35
Research supervision is important for project completion	85	57	8	0	3.51
Research has improved confidence in using evidence	77	59	12	2	3.41
Nursing students should be encouraged to participate in research	93	53	4	0	3.59
Research knowledge will be useful throughout nursing careers	80	62	8	0	3.48

Note: SA = strongly agree; A = agree; D = disagree; SD = strongly disagree.

3.4 Challenges during research-project conduct

The highest-rated challenge was lack of adequate research materials (mean = 3.47), followed by heavy academic workload (mean = 3.44) and financial difficulties (mean = 3.38). Difficulty accessing data or respondents had a mean of 3.28. All ten listed challenges had mean scores above the descriptive midpoint of 2.50.

Table 4 presents the challenges encountered during research-project conduct (N = 150).

Table 4. Challenges encountered during research-project conduct (N = 150).

Challenge	Very high (4)	High (3)	Moderate (2)	Low (1)	Mean	Rank
Lack of adequate research materials	83	55	12	0	3.47	1
Limited access to relevant research literature	59	72	18	1	3.26	7
Inadequate research supervision	64	53	31	2	3.19	10
Financial difficulties	81	46	22	1	3.38	3
Difficulty managing time	67	61	18	4	3.27	5
Heavy academic workload	82	53	14	1	3.44	2
Difficulty accessing data or respondents	64	65	20	1	3.28	4
Difficulty understanding research methodology	66	56	23	5	3.22	8
Difficulty analysing and interpreting data	62	59	27	2	3.21	9
Limited access to internet/electronic research resources	72	52	21	5	3.27	5

Note: Items 5 and 10 share the same mean and rank.

4 Discussion

4.1 Knowledge of research projects and evidence-based practice

The findings suggest that respondents recognized several basic principles of research and EBP. All participants agreed that research is a systematic investigation, and large proportions endorsed the role of research in improving patient care and the importance of using evidence in clinical decisions. This pattern is consistent with studies reporting that nursing students generally value EBP and recognize its relevance to professional practice (Labrague et al., 2019a, 2019b; Tumala & Alshehri, 2019).

However, the responses to the two negatively worded statements reveal important conceptual uncertainty. Almost half of respondents endorsed the statement that research findings are irrelevant to EBP, while 60.0% endorsed the statement that EBP excludes clinical expertise and patient preferences. These responses are inconsistent with the accepted definition of EBP, which integrates research evidence, clinical expertise and patient values (Dang et al., 2022; Institute of Medicine, 2001). Similar gaps between positive attitudes and practical understanding have been reported among nursing students in Rwanda and in multicountry studies (Iradukunda & Mayers, 2020; Labrague et al., 2019b). The present findings therefore support the need to teach EBP as an integrated decision-making process rather than as the use of research findings alone.

4.2 Perceptions towards research-project conduct

Respondents demonstrated generally positive perceptions of research-project conduct, with mean scores ranging from 3.35 to 3.59. They recognized the contribution of research to nursing education, critical thinking, information literacy, EBP, and future clinical practice. The high proportion supporting student participation in research is encouraging and suggests that research projects are viewed as professionally relevant.

This finding agrees with research showing that a structured research and EBP course can improve nursing students' perceptions and confidence (Estalella et al., 2023). Studies of nursing students have also identified positive attitudes towards EBP, even where practical skills and application remain less developed [6,15,16]. Recent work on authentic assessment and undergraduate research experiences similarly suggests that applied research activities can strengthen research literacy, critical thinking and confidence [17,18]. Nevertheless, a favourable perception should not be equated with demonstrated competence. The current study measured self-reported agreement and did not objectively test students' ability to formulate research questions, appraise evidence or apply findings in clinical practice.

4.3 Challenges during research-project conduct

Inadequate research materials, heavy academic workload, and financial difficulties were the three highest-rated challenges. Other barriers included difficulty accessing data or respondents, time-management difficulties, limited access to electronic resources and literature, difficulty understanding research methodology, data-analysis challenges, and inadequate supervision. These findings point to an interaction between resource constraints and the academic demands placed on students.

The results are consistent with research on undergraduate research supervision, which identified educator research-supervision skills, student commitment, infrastructure, staffing and time constraints as challenges (Mhlongo & Zuma, 2024). A multicountry study of nursing students also identified limited time and institutional barriers to EBP uptake (Labrague et al., 2019a). Reviews of nursing EBP education have highlighted the importance of accessible learning resources, structured educational strategies, and support from faculty (Portela Dos Santos et al., 2022; Jeong et al., 2024). The present study adds local institutional evidence that research materials, workload, and funding require particular attention.

The financial and resource barriers may limit students' access to current literature, data-collection opportunities and statistical support. The high workload may also reduce the time available for sustained project work. Strengthening supervision alone may therefore be insufficient unless students also have access to relevant materials, internet facilities, practical data-analysis training and realistic project timelines.

4.4 Implications for nursing education and practice

The findings have implications for students, educators, research supervisors and college management. Research and EBP teaching should include practical exercises in literature searching, critical appraisal, research design, data management and interpretation. Research supervisors should provide scheduled consultations and timely feedback. Institutional management should consider strengthening library and electronic-resource access, coordinating research deadlines with clinical and academic schedules, and identifying feasible ways to reduce students' research-related costs.

These measures are consistent with recommendations from evidence syntheses on EBP education and research mentorship (Güngör et al., 2026; Jeong et al., 2024; Portela Dos Santos et al., 2022).

5 Conclusion

The study found that final-year nursing students at Sajo College of Nursing Sciences generally valued research projects and recognized their relevance to nursing education and evidence-based practice. However, responses to negatively worded knowledge items indicated possible misconceptions about the relationship between research evidence, clinical expertise and patient preferences. Students also reported substantial challenges, particularly inadequate research materials, heavy academic workload and financial difficulties. The findings demonstrate the need to strengthen research and EBP education while addressing institutional and resource-related barriers to successful project completion.

6 Recommendations

- Provide regular practical workshops on research methodology, literature searching, critical appraisal, data analysis and interpretation.
- Improve students' access to current textbooks, peer-reviewed journals, online databases, computers and reliable internet facilities.
- Establish a structured research-supervision schedule with clear milestones, timely feedback and manageable supervisor-to-student workloads.
- Coordinate research-project deadlines with academic and clinical schedules to reduce competing workload demands.
- Explore institutional support, small research grants or shared resources to reduce the financial burden of student research.
- Reinforce the correct meaning of EBP, emphasizing the integration of best available evidence, clinical expertise, and patient preferences.
- Conduct further multicentre studies using validated instruments and inferential analyses to examine factors associated with research competence and EBP application.

Author contributions

Akande Boluwatife Faidat was the sole student researcher and was responsible for the study conception, design, data collection, analysis, interpretation and preparation of the research project. The author reviewed and approved this manuscript for submission.

Conflicts of interest

The author declares no conflict of interest.

Declaration of generative AI and AI-assisted technologies in the writing process

Generative artificial intelligence was used to assist with language editing, manuscript organization and formatting. The author reviewed the generated text and remains responsible for the accuracy, originality, integrity and final content of the manuscript, including the verification of all data and references.

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