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Utilization and Predictors of Evidence-Based Practice Among Nurses and Midwives: A Cross-Sectional Study from Al-Jouf, Saudi Arabia

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Abstract
Background: Evidence-Based Practice (EBP) enhances the quality and safety of nursing and midwifery care by integrating research evidence into clinical decision-making. This study aims to assess the current level of EBP use and identify its individual and organizational predictors among nurses and midwives at the Maternity and Children's Hospital in Al-Jouf, Saudi Arabia.

Methods: This cross-sectional study involved 183 nurses and midwives. A validated online questionnaire was used to assess EBP knowledge, utilization, barriers, and facilitators. Data were analyzed using SPSS version 29 with descriptive statistics and Fisher's exact test to determine significant associations.

Results: Most participants demonstrated good knowledge of evidence-based practice (EBP) (88.0%), yet the majority reported poor EBP utilization (83.1%). Knowledge was significantly associated with EBP utilization ($p = 0.029$). Significant associations were also found with work unit ($p < 0.001$) and educational level ($p < 0.001$), with higher utilization among ICU nurses and those holding a master's degree. Key barriers included limited research skills, insufficient time, and a lack of authority to change practice.

Conclusion: The findings emphasize the need for better organizational support, leadership empowerment, and training programs aligned with Saudi Vision 2030 to strengthen EBP implementation and improve healthcare quality.

Keywords: Evidence-Based Practice, Nurses, Midwives, Women's Health, Al-Jouf, Saudi Arabia.

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1. Introduction:

Evidence-Based Practice (EBP) integrates the best available scientific evidence to guide clinical decision-making and enhance the quality of patient care.(Reynolds et al., 2026; Schmidt & Brown, 2024). To provide optimal care, healthcare professionals must continuously update their knowledge and skills. Sackett's EBP model offers a structured framework that supports practitioners in applying evidence systematically to improve clinical outcomes and overall care quality. By utilizing this model, caregivers can ensure that their practice is grounded in the most current and effective evidence. Sackett's model outlines six essential steps: (1) formulating a clear clinical question, (2) searching for the best available evidence, (3) critically appraising the quality and relevance of the evidence, (4) integrating the evidence with clinical expertise and patient preferences, (5) evaluating the outcomes of the applied evidence, and (6) disseminating or sharing the findings with others. Although the implementation of EBP requires time, resources, and effort, the resulting improvements in patient outcomes and quality of care justify the investment (Atalla et al., 2025) .

Nursing forms the foundation of healthcare systems worldwide, and ensuring high-quality patient care depends on evidence-based nursing practice. Both nurses and midwives play a vital role in advancing healthcare by providing superior services throughout women's lifecycles. The implementation of EBP is essential not only for improving patient outcomes but also for fostering professional growth, accountability, and staff competencies. Over time, EBP has gained increasing importance within the nursing profession and has become an integral part of routine clinical practice (Katowa-Mukwato et al., 2021).

Nonetheless, unsafe care is a significant global health concern that poses challenges for all nations; therefore, decisions must continue to assess the quality and safety of medical care (8). The growing number of medical errors and subpar care presents challenges to healthcare organizations from time to time (Dang et al., 2021; Rahmayanti et al., 2020). In addition to differences in results, health disparities and insufficient medical treatment continue to be problems for nurses and midwives worldwide. Low implementation of EBP leads to inadequately informed decision-making, resulting in substandard service delivery. This failure creates variations in practice that reduce effectiveness, efficiency, and equity of care. (Crawford et al., 2023).

The regular implementation of EBP in clinical settings has been an ongoing challenge for all organizations for decades. (Alatawi et al., 2020). In a study on primary care nurses, researchers found that organizational concerns about costs, shifts in workload, time constraints, patient compliance, and a lack of incentive to adopt EBP were the top obstacles to EBP. (Leiviska et al., 2025). A study conducted in Cyprus by (Pitsillidou et al., 2021). reported that, according to nurses, the primary barrier to implementing Evidence-Based Practice was their limited authority or inability to modify care procedures. The second major obstacle identified was the perception that research findings did not apply to their clinical settings.

While concentrating solely on nurses' individual decisions to apply EBP oversimplifies the problem, this does not diminish the staff nurse's role. Instead, research suggests that supportive work environments and strong nursing leadership are crucial because they are what truly enable staff nurses to engage in EBP(Ominyi et al., 2025). Supportive organizational culture is a key element in promoting the adoption of EBP within healthcare settings. Institutions that emphasize professional development, leadership support, and shared decision-making tend to create environments conducive to EBP implementation. Nevertheless, organizational initiatives alone may not be sufficient to enhance EBP utilization. It has been suggested that integrating strong institutional support with nurses' competencies, motivation, and confidence in applying evidence can foster a more effective and sustainable EBP culture(Atalla et al., 2025).

In Saudi Arabia (SA), increasing attention has been directed toward improving the quality of healthcare services. Over recent years, nursing practice has undergone a gradual transformation, as most nurses were previously diploma holders rather than bachelor's degree graduates. Compared with diploma nurses, those holding a bachelor's degree receive more extensive training in research and EBP. (Alsufyani et al., 2020). Despite these advancements, nursing education and clinical practice in the Kingdom are still developing and require further enhancement.(Alruwaili et al., 2025). Studies from Saudi Arabia and neighboring countries such as Jordan, Oman, and Iran have shown that nurses face significant challenges in implementing EBP, and limited research has explored this issue in depth. (Atalla et al., 2025; Hamad et al., 2025; Mohebi et al., 2025). Moreover, the Saudi nursing workforce is unique, as a substantial proportion of nurses are expatriates with limited proficiency in the Arabic language and limited familiarity with the local culture. These factors may hinder effective communication and culturally sensitive care, thereby influencing the overall quality of nursing practice. (Alruwaili et al., 2025; Atalla et al., 2025).

Midwives play a critical role in implementing evidence-based practices to improve maternity health. Their unique position allows them to bridge clinical knowledge with the specific needs of mothers and their families. Enhancing maternal health during pregnancy and delivery is one of the World Health

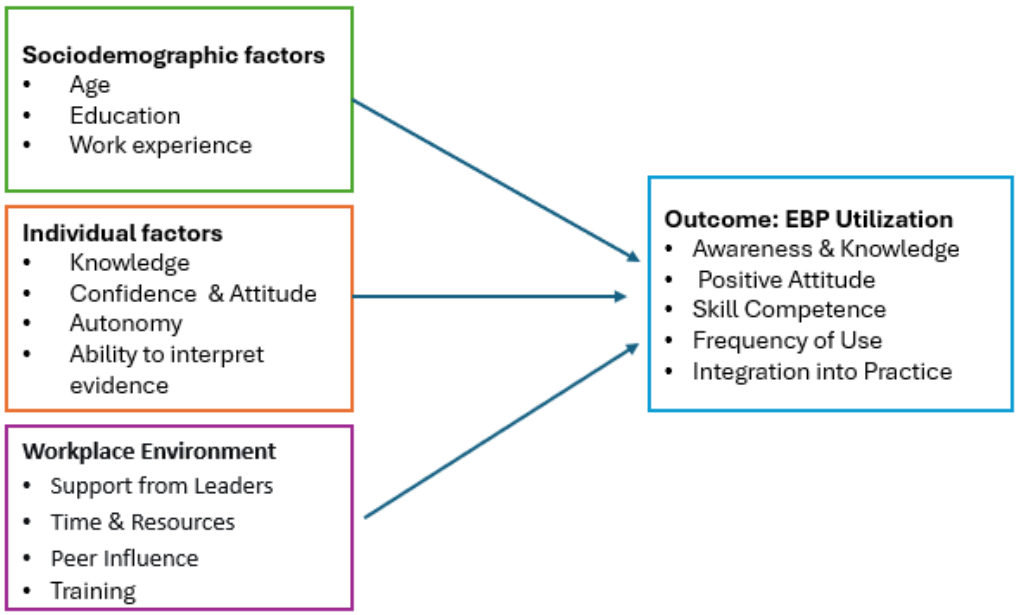
Organization's primary developmental goals for the fifth millennium. Global public health has been concerned about the maternal death rate as a measure of standard maternal health care (Rahman et al., 2020). In 2023, Saudi Arabia reported a maternal mortality rate of 7.0 deaths per 100,000 live births, underscoring the need to further enhance the safety and quality of maternal healthcare(Ahmed et al., 2026). The implementation of EBP and continuous quality improvement is an essential competency for all healthcare professionals, particularly nurses and midwives who serve as frontline caregivers. Therefore, evaluating the extent of EBP utilization and identifying its influencing factors among nurses and midwives are critical steps toward improving patient outcomes, strengthening professional competence, and advancing the overall quality of healthcare services in the Kingdom(Alarifi et al., 2025).

Despite the growing global emphasis on integrating Evidence-Based Practice (EBP) into clinical care, there remains a notable scarcity of research in Saudi Arabia examining its implementation among nurses and midwives, particularly within the Al Jouf region. Given the essential role of these professionals in ensuring high-quality maternal and child healthcare, it is crucial to understand their engagement with EBP. Therefore, the present study aimed to assess the level of EBP implementation and identify the factors influencing its application among nurses and midwives working at the Maternity and Children's Hospital in Al Jouf, Saudi Arabia.

1.1 Conceptual Framework

To strengthen the conceptual rationale for examining these factors, this study is guided by the Diffusion of Innovation framework, which explains how individuals and organizations adopt new practices(Moraes et al., 2025). The conceptual framework presented in Figure 1 illustrates the relationships between sociodemographic factors, individual factors, workplace environmental factors, and EBP utilization. The theory offers a robust framework for understanding how new practices, including evidence-based interventions, are communicated, adopted, and sustained within social systems. The theory posits that adoption rates are shaped by potential users' perceptions of an innovation's relative advantage, compatibility with existing values and practices, complexity, trialability, and observability. Within nursing and midwifery practice, this framework is particularly useful for explaining the often slow and uneven uptake of clinical guidelines and research evidence, as it shifts attention from simple evidence dissemination toward the psychosocial, organizational, and contextual factors that influence implementation(Iqbal & Zahidie, 2022). By applying this theoretical lens, researchers can move beyond assessments of individual knowledge or skills to examine how innovative characteristics, adopter attributes, and environmental conditions interact to predict the utilization of evidence-based practice (EBP). In this regard, the present study, which examines the utilization and predictors of evidence-based practice among nurses and midwives in Al-Jouf, Saudi Arabia, is informed by theory and seeks to identify both the level of EBP utilization and the key individual and organizational predictors shaping its adoption within a regional healthcare context.

Figure 1: Conceptual Framework Based on Diffusion of Innovation Theory



2. Methods

2.1 Study Design:

An institution-based cross-sectional study was conducted at the Maternity and Children's Hospital, a 150-bed tertiary referral facility situated in the Al Jouf region of northern Saudi Arabia. Data collection was conducted over five months, from January to May 2025.

2.2 Sample/Participants:

The study population comprised all nurses and midwives employed at the Maternity and Children's Hospital in the Al Jouf region of Saudi Arabia. The hospital employed a total of 320 registered nurses and 26 midwives, resulting in a total population of 346 healthcare professionals. The required sample size was calculated to be 183 participants using the online Calculator.net tool based on a 95% confidence level and a 5% margin of error. The calculator applies standard statistical formulas commonly used for sample size estimation. A nonprobability sampling technique was used in this study. All eligible participants were invited to participate in the survey, and 183 completed the questionnaire, yielding a response rate of 52.9%.

2.3 Inclusion criteria:

Registered nurses and midwives, both Saudi and non-Saudi, employed at the Maternity and Children's Hospital in Al Jouf, Saudi Arabia, with at least one year of clinical experience, both full-time and part-time staff actively working during the data collection period, were invited to participate in this study, including nurses in clinical and managerial positions.

2.4 Exclusion criteria:

Nurses and midwives with less than one year of clinical experience, interns, and healthcare personnel not employed in nursing or midwifery roles were excluded from the study, as were staff members on extended leave during the data collection period, including annual, maternity, or sick leave. Participation was voluntary, and individuals who declined to participate were also excluded.

2.5 Instruments:

Data were collected using a self-administered, structured online questionnaire. To ensure data quality, the online questionnaire was designed to allow only one response per participant and included mandatory fields to minimize missing data. The questionnaire was pilot tested before data collection to assess clarity, readability, and understanding of the items. Participants were also provided with clear instructions before completing the survey. Permission to use the instrument was obtained via email from the original developers. The scale's validity and reliability were previously assessed by Aynalem et al., with prior studies reporting good internal consistency (Cronbach's alpha 0.85–0.93) across subscales, supporting the instrument's reliability and methodological rigor. (Aynalem et al., 2021).

The questionnaire comprised 56 items divided into six sections. The first section included eight items assessing sociodemographic characteristics, such as age, gender, marital status, nationality, and work experience. The second section consisted of six items evaluating nurses' knowledge of Evidence-Based Practice (EBP), including understanding of EBP principles, research appraisal, and the integration of evidence into clinical practice. The third section included nine items assessing sources of information supporting EBP, such as classroom learning, hospital protocols, and national guidelines. The fourth section consisted of six items evaluating the implementation of EBP and the frequency of applying research evidence in patient care decisions. The fifth section included 14 items addressing barriers to EBP utilization, such as lack of autonomy to change practice, insufficient research skills, and limited organizational support. The final section comprised five items examining facilitators of EBP use, including training opportunities, managerial support, and improving research knowledge. There were yes/no questions in Part 2, and Levels in Parts 3, 4, and 6 varied from never (1) to always (5). A 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), was used to produce part five. This 5-point Likert scale was combined for analytical purposes in accordance with the results of a prior study, which made it simpler to compare the findings of this survey with those of the other study. Consequently, the terms disagree and strongly disagree were combined to become disagree and agree and strongly agree to form agree. (Megersa et al., 2023).

2.6 Data Collection Procedure:

Regarding the data collection Procedure, the nursing director in the hospital received the survey link via email from the researcher, and they helped distribute it to the nurses who worked under their supervision. The email invitation provided comprehensive information about the study's objectives and the consent required from participants. To proceed with the survey, participants were required to click a confirmation indicating their consent, and completion of the survey was taken as agreement to participate. To encourage wider participation, a web-link invitation was distributed to staff nurses via email and several social media platforms, including WhatsApp, Instagram, and Messenger. Participants were assured of anonymity and informed that they could withdraw from the study at any time before submission without any consequences.

2.7 Data Analyses:

All statistical analyses were conducted using IBM SPSS Statistics version 29.0. Descriptive statistics summarized the characteristics of the 183 participants,

including demographics, knowledge, perceptions, engagement, and barriers/facilitators related to evidence-based practice (EBP), with categorical data presented as frequencies and percentages. Knowledge of EBP was assessed using six questions. Each correct response was assigned one point, resulting in a total knowledge score ranging from 0 to 6. Knowledge levels were categorized as good or poor using a cutoff point of ≥60%, with scores ≥4 classified as good knowledge and scores <4 classified as poor knowledge. The 60% cutoff was selected based on commonly used criteria in similar EBP questionnaire-based studies and to facilitate interpretation of the findings. In addition to categorical classification, descriptive statistics, including frequencies, percentages, and mean scores, were also reported to provide a more comprehensive presentation of participants' knowledge levels. EBP utilization was measured using 18 items on a four-point Likert scale (0 = never, 1 = sometimes, 2 = usually, 3 = often). A mean utilization score was calculated for each participant. Utilization levels were then categorized as good or poor based on the mean score, with a mean score ≥2 indicating good utilization and a mean score <2 indicating poor utilization. Fisher's Exact Test was applied. Effect sizes were measured using Cramér's V. A p-value of <0.05 was considered statistically significant for all analyses.

2.8 Ethical consideration:

Ethical approval for the study was obtained from the Bioethics Institutional Review Board at Jouf University (Approval No. 6897, dated 25/12/2024) as well as from the Al Jouf Health Cluster.The study adhered to the ethical principles outlined in the Declaration of Helsinki. Participant confidentiality and anonymity were strictly maintained by assigning each participant a unique identification code and reporting all findings in aggregate form. Data were stored securely in a password-protected electronic database accessible only to the researcher. Informed consent was obtained electronically from all participants before they completed the online survey through Google Forms.

3. Results:

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- Bottom of Form

Table 1: Demographic Characteristics of Participants (N = 183)

Variables		Frequency	Percent
Age	20 – 24	46	25.1
	25-30	29	15.8
	31- 35	58	31.7
	36- 40	37	20.2
	More than 40	13	7.1
Gender	Male	8	4.4
	Female	175	95.6
Work unit in which you are working	ER	37	20.2
	ICU	9	4.9
	Labor room	12	6.6
	Maternity word	5	2.7
	OPD	8	4.4
	Others	112	61.2
Marital status	Single	71	38.8
	Married	107	58.5
	Divorced	5	2.7
Nationality	Saudi	154	84.2
	Non-Saudi	29	15.8
Work experience	1–4 years	75	41.0
	5–8 years	13	7.1
	9–12 years	21	11.5
	More than 12	74	40.4
Educational level	BSc	92	50.3
	Diploma	56	30.6
	MSc	30	16.4
	PhD	5	2.7
Current role at the hospital	Midwife	12	6.6
	Staff nurse	114	62.3
	Nurses at managerial position	57	31.1

Table 1 shows that the study included 183 participants. The largest proportion were aged 31–35 years (31.7%, n = 58), and most were female (95.6%, n = 175). The majority worked in other departments (61.2%, n = 112), were married (58.5%, n = 107), and were Saudi nationals (84.2%, n = 154). Most participants had 1–4 years (41.0%, n = 75) or more than 12 years (40.4%, n = 74) of work experience. In terms of education and role, most held a bachelor's degree (50.3%, n = 92) and were employed as staff nurses (62.3%, n = 114).

Table 2: Knowledge and Perceptions of Evidence-Based Practice Among Nurses

	No		Yes	
	N	%	N	%
Have you received training courses on evidence-based practices?	104	56.8%	79	43.2%
Are you aware of the concept of EBP in nursing?	26	14.2%	157	85.8%
Evidence-based practice is a problem-solving approach.	18	9.8%	165	90.2%
It enhances the delivery of the highest quality of care	23	12.6%	160	87.4%
EBP combines knowledge and theory	22	12.0%	161	88.0%
EBP is for nurse educators and for those in the clinical area	59	32.2%	124	67.8%

As shown in Table 2, most participants demonstrated good awareness and positive perceptions of evidence-based practice (EBP). Most respondents reported being aware of the concept of EBP in nursing (85.8%, n = 157) and recognized it as a problem-solving approach (90.2%, n = 165). Additionally, a high proportion agreed that EBP enhances delivery of the highest quality of care (87.4%, n = 160) and that it combines knowledge and theory (88.0%, n = 161). Furthermore, 67.8% (n = 124) acknowledged that EBP applies to both nurse educators and clinical practitioners. However, only 43.2% (n = 79) reported having received training courses on EBP, while the majority (56.8%, n = 104) had not.

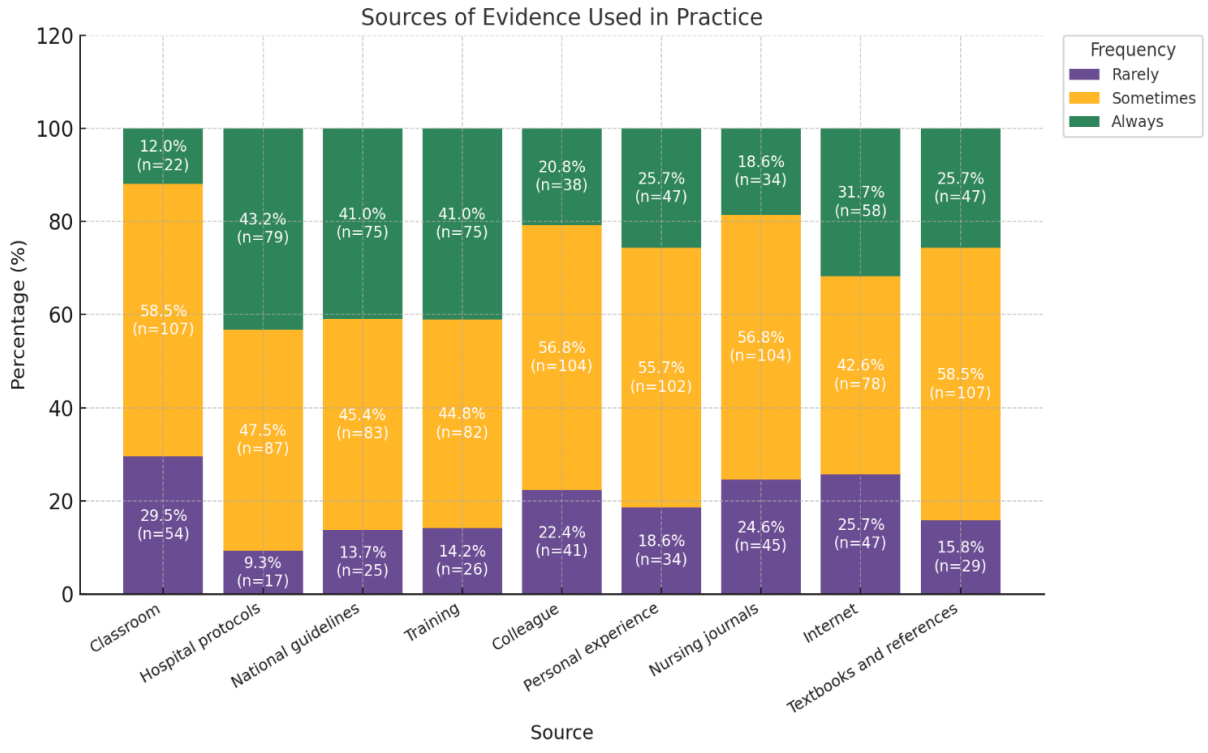


Figure 2: Sources Utilized by Nurses for Evidence and Practice-Related Information

As shown in Figure 2, nurses reported varying frequencies of use across different sources of evidence in clinical practice. The most frequently used sources ("always") were hospital protocols (43.2%), national guidelines (41.0%), and training (41.0%), indicating strong reliance on institutional and formal guidance. In contrast, classroom learning was least frequently used as a primary source, with only 12.0% reporting "always" use, while the majority reported using it "sometimes" (58.5%). Informal sources such as colleagues (20.8%) and personal experience (25.7%) were moderately utilized, whereas nursing journals (18.6%) and the internet (31.7%) showed variable but notable usage. Textbooks and references were used consistently, with 25.7% reporting "always" use and the majority (58.5%) using them "sometimes."

Table 3: Level of Engagement in Evidence-Based Practice Activities Among participants

Activity	Never		Sometimes		Usually		Often	
	N	%	N	%	N	%	N	%
Asked clinical questions related to your nursing care practice	46	25.1%	99	54.1%	8	4.4%	30	16.4%
Looked for information, research, or evidence to support your nursing practice	47	25.7%	90	49.2%	21	11.5%	25	13.7%
Evaluated the outcome of using current evidence (First entry)	37	20.2%	111	60.7%	13	7.1%	22	12.0%
Used/integrated current evidence/guidelines to guide nursing care	45	24.6%	105	57.4%	21	11.5%	12	6.6%
Evaluated the outcome of using current evidence (Repeated entry – use this one instead)	33	18.0%	108	59.0%	25	13.7%	17	9.3%
Shared or taught others about new practices (e.g., current guidelines)	26	14.2%	102	55.7%	22	12.0%	33	18.0%

As shown in Table 3, participants demonstrated generally low-to-moderate engagement in evidence-based practice (EBP) activities. The majority reported "sometimes" engaging in most activities, including asking clinical questions (54.1%, n = 99), searching for evidence (49.2%, n = 90), evaluating outcomes of evidence use (59.0%, n = 108), and integrating current evidence into practice (57.4%, n = 105). A considerable proportion also reported never performing key EBP activities, such as searching for evidence (25.7%, n = 47) and integrating evidence into care (24.6%, n = 45). Only a small percentage of participants reported frequent engagement, with 16.4% (n = 30) often asking clinical questions, 13.7% (n = 25) often searching for evidence, and 18.0% (n = 33) often sharing or teaching new practices.

Table 4: Barriers to Evidence-Based Practice (EBP) among participants

Barrier	Rarely		Sometimes		Always	
	N	%	N	%	N	%
Lack of autonomy to change practice	37	20.2%	110	60.1%	36	19.7%
Inadequate understanding of research terms	32	17.5%	127	69.4%	24	13.1%
Inability to understand statistical terms used in research	40	21.9%	117	63.9%	26	14.2%

Barrier	Rarely		Sometimes		Always	
	N	%	N	%	N	%
Difficulty in judging the quality of research	49	26.8%	126	68.9%	8	4.4%
Inability to properly interpret the results of research	45	24.6%	130	71.0%	8	4.4%
Insufficient time at the workplace to implement EBP	41	22.4%	108	59.0%	34	18.6%
Insufficient resources (e.g., equip-(ment, internet	42	23.0%	116	63.4%	25	13.7%
Lack of authority in the workplace to implement EBP	45	24.6%	117	63.9%	21	11.5%
Insufficient proficiency in the English language	58	31.7%	112	61.2%	13	7.1%
The nurse is isolated from ex-perienced colleagues to discuss research	75	41.0%	96	52.5%	12	6.6%
Physicians are not cooperative with EBP implementation	41	22.4%	114	62.3%	28	15.3%
Unclear implications of EBP for practice in nursing	33	18.0%	125	68.3%	25	13.7%
The culture of my team is not receptive to EBP implementation	55	30.1%	112	61.2%	16	8.7%
Uncertainty to believe the results of the research are relevant to nurses' practice	55	30.1%	108	59.0%	20	10.9%

Table 4 demonstrates that most barriers to evidence-based practice (EBP) implementation were reported as occurring "sometimes." The most frequent individual barriers were difficulty interpreting research results (71.0%), inadequate understanding of research terms (69.4%), and difficulty judging research quality (68.9%). Key organizational barriers included lack of authority to implement EBP (63.9%), insufficient resources (63.4%), lack of autonomy (60.1%), and insufficient time (59.0%). Additionally, over 62.3 % cited noncooperative physicians, unsupportive team culture, and language barriers. A smaller proportion reported experiencing these barriers "always," notably lack of autonomy (19.7%) and insufficient time (18.6%).

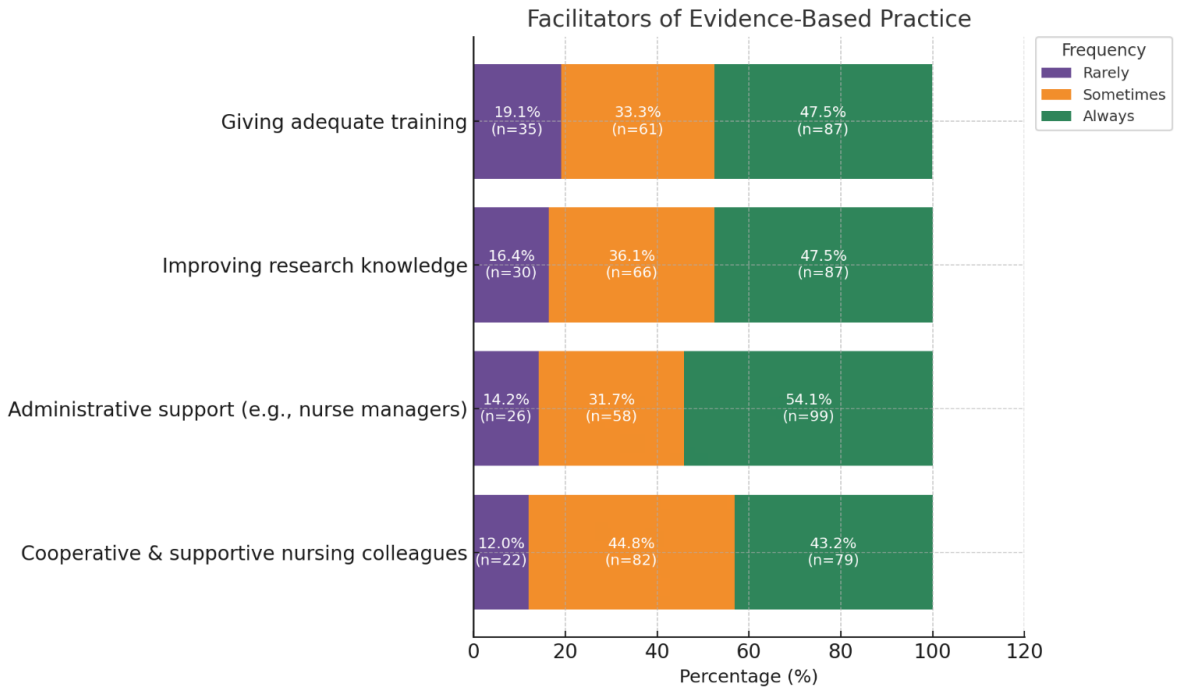


Figure 3: Factors that Facilitate the Implementation of Evidence-Based Practice (EBP)

As shown in Figure 3, several factors were identified as key facilitators of evidence-based practice (EBP) implementation among nurses. Administrative support from nurse managers was the most frequently reported facilitator, with more than half of participants indicating that it "always" supports EBP implementation (54.1%, n = 99). Similarly, both providing adequate training and improving research knowledge were highly endorsed, with 47.5% (n = 87) of participants reporting that these factors "always" facilitate EBP. Additionally, cooperative and supportive nursing colleagues were recognized as important, with 43.2% (n = 79) reporting consistent support. Across all facilitators, a substantial proportion of participants also reported "sometimes" support, highlighting variability in the availability of enabling conditions

Table 5: Distribution of Overall Knowledge about Evidence-Based Practice Among Participants

EBP utilization	Frequency	Percent
Poor	22	12.0
Good	161	88.0
Total	183	100.0

As shown in Table 5, most participants demonstrated good knowledge of evidence-based practice (EBP), with 88.0% (n = 161) classified as having good knowledge, while only 12.0% (n = 22) had poor knowledge. This indicates a high overall level of awareness and understanding of EBP among the study participants.

Table 6: Overall Evidence-Based Practice Utilization Among Participants

Category	Frequency (n)	Percent (%)
Poor	152	83.1
Good	31	16.9
Total	183	100.0

As shown in Table 6, most participants demonstrated poor utilization of evidence-based practice (EBP), with 83.1% (n = 152) classified as having poor utilization, while only 16.9% (n = 31) demonstrated good utilization.

Table 7: Association Between Knowledge and Overall Evidence-Based Practice Utilization

Knowledge Level	Poor Utilization	Good Utilization	P-value	Cramér's V
Poor	22 (100.0%)	0 (0.0%)	0.029*†	0.167
Good	130 (80.7%)	31 (19.3%)		

*** Statistically significant at p < 0.05**
† Fisher's Exact Test was used

As shown in Table 7, there was a statistically significant association between knowledge level and EBP utilization (p = 0.029), with participants with good knowledge demonstrating higher utilization than those with poor knowledge. However, the effect size indicated a weak association (Cramér's V = 0.167), suggesting that although knowledge is statistically related to EBP utilization, its practical influence on actual implementation is limited.

Table 8: Association of Demographic and Professional Characteristics with Knowledge Level

Variables	Category	Overall, Knowledge Level		P. value	Cramér's V
		Poor	Good		
Age group	20–24 years	4 (8.7%)	42 (91.3%)	0.001*	0.329
	25–30 years	0 (0.0%)	29 (100.0%)		
	31–35 years	4 (6.9%)	54 (93.1%)		
	36–40 years	9 (24.3%)	28 (75.7%)		
	>40 years	5 (38.5%)	8 (61.5%)		
Gender	Male	0 (0.0%)	8 (100.0%)	0.599†	0.079
	Female	22 (12.6%)	153 (87.4%)		
Work unit	ER	8 (21.6%)	29 (78.4%)	0.103	0.158
	ICU	0 (0.0%)	9 (100.0%)		
	Labor room	0 (0.0%)	12 (100.0%)		
	Maternity ward	1 (20.0%)	4 (80.0%)		
	OPD	0 (0.0%)	8 (100.0%)		
	Others	13 (11.6%)	99 (88.4%)		
Marital status	Single	4 (5.6%)	67 (94.4%)	0.186	0.203
	Married	17 (15.9%)	90 (84.1%)		
	Divorced	1 (20.0%)	4 (80.0%)		
Work experience	1–4 years	4 (5.3%)	71 (94.7%)	0.088	0.189
	5–8 years	1 (7.7%)	12 (92.3%)		
	9–12 years	4 (19.0%)	17 (81.0%)		
	> 12 years	13 (17.6%)	61 (82.4%)		
Educational level	BSc	13 (14.1%)	79 (85.9%)	0.323	0.138
	Diploma	8 (14.3%)	48 (85.7%)		
	MSc	1 (3.3%)	29 (96.7%)		
	PhD	0 (0.0%)	5 (100.0%)		
Current role	Midwife	0 (0.0%)	12 (100.0%)	0.294	0.116
	Staff nurse	13 (11.4%)	101 (88.6%)		
	Managerial nurse	9 (15.8%)	48 (84.2%)		

*** Statistically significant at p < 0.05**
† Fisher's Exact Test was used

Table 8 shows a statistically significant association between age group and knowledge level (p = 0.001, Cramer's V = 0.329), indicating a moderate association, which suggests a meaningful but not strong relationship between the variables

in practical terms. The highest level of knowledge was observed in the 25–30 age group (100%), while the lowest was among participants aged over 40 years (61.5%). In contrast, no statistically significant associations were found between knowledge level and gender, work unit, marital status, years of experience, educational level, or current role, and all showed weak effect sizes, indicating negligible or limited practical relationships.

Table 9: Association of Demographic and Professional Characteristics with Overall Evidence-Based Practice Utilization

	Category	Overall Evidence-Based Practice Utilization		P. value	Cramér's V
		Poor	Good		
Age (years)	20–24	41 (89.1%)	5 (10.9%)	0.225	0.176
	25–30	24 (82.8%)	5 (17.2%)		
	31–35	45 (77.6%)	13 (22.4%)		
	36–40	29 (78.4%)	8 (21.6%)		
	>40	13 (100.0%)	0 (0.0%)		
Gender	Male	8 (100.0%)	0 (0.0%)	0.355†	0.097
	Female	144 (82.3%)	31 (17.7%)		
Marital status	Single	61 (85.9%)	10 (14.1%)	0.372	0.104
	Married	86 (80.4%)	21 (19.6%)		
	Divorced	5 (100.0%)	0 (0.0%)		
Work unit	ER	28 (75.7%)	9 (24.3%)	<0.001*	0.538
	ICU	0 (0.0%)	9 (100.0%)		
	Labor room	12 (100.0%)	0 (0.0%)		
	Maternity ward	5 (100.0%)	0 (0.0%)		
	OPD	8 (100.0%)	0 (0.0%)		
	Others	99 (88.4%)	13 (11.6%)		
Work experience	1–4 years	65 (86.7%)	10 (13.3%)	0.467	0.118
	5–8 years	9 (69.2%)	4 (30.8%)		
	9–12 years	17 (81.0%)	4 (19.0%)		
	>12 years	61 (82.4%)	13 (17.6%)		
Educational level	BSc	82 (89.1%)	10 (10.9%)	<0.001*	0.434
	Diploma	52 (92.9%)	4 (7.1%)		
	MSc	14 (46.7%)	16 (53.3%)		
	PhD	4 (80.0%)	1 (20.0%)		
Current role	Midwife	8 (66.7%)	4 (33.3%)	0.126	0.150
	Staff nurse	99 (86.8%)	15 (13.2%)		
	Managerial nurse	45 (78.9%)	12 (21.1%)		

*** Statistically significant at $p < 0.05$**
Fisher's Exact Test was used

As shown in Table 9, statistically significant associations were observed between work unit and overall evidence-based practice (EBP) utilization ($p < 0.001$, Cramér's $V = 0.538$), indicating a large effect size, which reflects a strong and practically meaningful relationship between workplace setting and EBP utilization. Similarly, a statistically significant association was found between educational level and EBP utilization ($p < 0.001$, Cramér's $V = 0.434$), indicating a moderate effect size, suggesting a clear but not strong practical relationship between higher education and improved EBP utilization.

Participants working in the ICU demonstrated the highest level of good utilization (100.0%), whereas those in labor rooms, maternity wards, and outpatient departments exhibited entirely poor utilization (100.0%). Regarding educational level, participants with a master's degree showed the highest proportion of good utilization (53.3%), while those with bachelor's and diploma qualifications demonstrated predominantly poor utilization.

No statistically significant associations were found between EBP utilization and age ($p = 0.225$, Cramér's $V = 0.176$), gender ($p = 0.355$, Cramér's $V = 0.097$), marital status ($p = 0.372$, Cramér's $V = 0.104$), work experience ($p = 0.467$, Cramér's $V = 0.118$), or current role ($p = 0.126$, Cramér's $V = 0.150$), with all showing weak effect sizes, indicating minimal or negligible practical relationships.

4. Discussion:

This study aimed to assess the utilization and predictors of evidence-based practice among nurses and midwives working at the maternity and children's hospital in Al-Jouf, Saudi Arabia

4.1 Knowledge Level regarding (EBP)

The findings indicate that most participants had good knowledge and positive perceptions of evidence-based practice (EBP), which aligns with the EBP theoretical framework emphasizing the integration of research evidence, clinical expertise, and theory to improve the quality of care (Dabak et al., 2024; Melnyk & Fineout-Overholt, 2022). Although awareness of EBP was high, less than half of the participants reported receiving formal EBP training, reflecting a gap between knowledge and educational preparation that has been similarly reported in previous studies (Ominyi et al., 2025). Most nurses recognized EBP as a problem-solving approach that enhances care quality, consistent with earlier research linking EBP to improved clinical decision-making and patient outcomes (Halili et al., 2024). Additionally, the understanding that EBP is important for both educators and clinical nurses reinforces the need for collaborative academic–clinical models, which are crucial for successful EBP implementation. These results underscore the need for ongoing educational initiatives, the incorporation of EBP throughout the nursing curriculum, and the creation of supportive clinical environments that promote research literacy and critical appraisal skills to strengthen evidence-based decision-making in practice.

4.2 Sources Utilized by Nurses for Evidence and Practice-Related Information

The findings indicate that nurses primarily relied on institutional resources such as hospital protocols, national guidelines, and training programs. Within the diffusion of innovation theory of the Evidence-Based Practice model, this pattern reflects the strong influence of the practice environment and organizational readiness on evidence utilization, particularly when evidence is translated into accessible tools such as protocols and guidelines. (Dang et al., 2021). International studies similarly report that leadership support, educational preparation, and clinical experience facilitate nurses' engagement with evidence-based resources, whereas time constraints and limited research skills hinder direct research use. (Ominyi et al., 2025) .

Within the Saudi Vision 2030 context, the frequent use of standardized guidelines and institutional resources aligns with national healthcare transformation goals aimed at improving care quality and workforce competency, though continued emphasis on leadership empowerment and research literacy remains essential.(Althuwaybi et al., 2025) .

4.3 Engagement in Evidence-Based Practice Activities

The results revealed low to moderate levels of engagement in EBP-related activities among the participants; the "sometimes" category was most frequently selected, suggesting that EBP is practiced intermittently rather than routinely. These findings imply that although nurses recognize the importance of EBP, it is not yet embedded in everyday clinical decision-making.

This pattern aligns with previous research reporting that nurses often engage with EBP irregularly due to factors such as time constraints, lack of confidence in research skills, and insufficient institutional support. (Alqahtani et al., 2022) . These findings emphasize the need for strategies to enhance the frequency and quality of EBP engagement among clinical nurses.

4.4 Barriers to Evidence-Based Practice

The findings indicate that nurses face multiple barriers to evidence-based practice (EBP), with the most prominent related to research knowledge, including difficulty interpreting results (71.0%), judging research quality (68.9%), and understanding research terminology (69.4%). Organizational constraints, such as lack of authority (63.9%), insufficient resources (63.4%), limited physician cooperation (62.3%), an62.3d time pressures were also frequently reported. These barriers align with the Johns Hopkins EBP Model, where deficits in evidence appraisal and contextual support hinder the translation of research into practice. (Alqahtani et al., 2022; Alruwaili et al., 2025; Mortada, 2024). Social, cultural, and language challenges further limit nurses' confidence and engagement in EBP, consistent with international studies highlighting the impact of leadership, mentorship, and organizational culture on EBP adoption. (Connor et al., 2023). Addressing these barriers through targeted training, leadership empowerment, protected time, and resource provision is essential to strengthening EBP

implementation and aligning nursing practice with the quality-driven goals of Saudi Vision 2030. Althuwaybi et al., 2025

4.5 Facilitators of Evidence-Based Practice

Several facilitators were identified that could strengthen EBP implementation. The most significant enablers were interpersonal and organizational support. Cooperative and supportive colleagues were perceived as highly influential, with 43.2% of nurses indicating that their colleagues were always supportive and 44.8% indicating that they were sometimes supportive. Similarly, 54.1% of the respondents reported consistent administrative support from nurse managers. These findings suggest that teamwork, mentorship, and leadership commitment are vital for cultivating an evidence-based culture in healthcare.

Moreover, improving research knowledge and providing adequate training were recognized as key facilitators, each reported as "always helpful" by 47.5% of the participants. This emphasizes the importance of continuous professional development, workshops, and mentorship programs that equip nurses with the skills to evaluate and apply evidence. Previous studies have similarly confirmed that structured EBP education and leadership involvement significantly enhance EBP competencies and patient care outcomes. (Dabak et al., 2024). Collectively, these findings underscore the need to foster a supportive clinical environment that values collaboration, managerial engagement, and continuous learning as critical factors for advancing EBP.

4.6 Factors Associated with Good Utilization of Evidence-Based Practice

A statistically significant association was found between knowledge level and EBP utilization ($p = 0.029$), indicating that participants with good knowledge were more likely to implement evidence-based practice than those with poor knowledge. Knowledge is a key factor that enables healthcare professionals to understand, evaluate, and apply research evidence in clinical decision-making. Previous studies similarly report that higher EBP knowledge is associated with greater use of evidence in practice (Dabak et al., 2024). Also, the findings indicate that organizational and social factors strongly facilitate evidence-based practice (EBP) among nurses, with supportive colleagues, administrative backing, targeted training, and improved research knowledge being key enablers (Alqahtani et al., 2022). When considered alongside the findings on knowledge, the results suggest that both individual knowledge and organizational factors influence EBP utilization. Although age was the only demographic factor significantly associated with knowledge level, with younger nurses (25–35 years) demonstrating higher levels of good knowledge, age itself was not significantly associated with EBP utilization. This indicates that while younger nurses may possess stronger theoretical knowledge of EBP, it is likely due to more recent education that integrates research appraisal, clinical inquiry, and EBP principles; they may not necessarily translate this knowledge into practice without supportive clinical environments (Reynolds et al., 2026). Younger nurses' greater familiarity with digital tools and online databases may enhance access to evidence, while older nurses may rely more on traditional practices and experiential knowledge, which can limit engagement with contemporary research (Bissett et al., 2025; Halili et al., 2024).

In contrast, the present results showed that work unit and educational level were the strongest factors associated with EBP utilization. Nurses working in high-acuity settings such as the ICU demonstrated the highest level of EBP utilization, likely due to greater reliance on protocols, multidisciplinary collaboration, and continuous monitoring. Similarly, nurses with higher educational qualifications, particularly those with master's degrees, demonstrated greater utilization, highlighting the role of advanced education in strengthening research literacy and evidence-based decision-making.

Together, these findings suggest that although younger nurses may possess better EBP knowledge, the actual application of EBP is more strongly influenced by organizational context and educational preparation rather than demographic characteristics alone. The lack of significant associations between utilization and variables such as gender, marital status, work experience, or role further supports the idea that system-level support, mentorship, and institutional facilitation are key drivers of EBP implementation. (Connor et al., 2023). Therefore, targeted professional development programs especially for older nurses and organizational strategies that foster a culture of evidence-based care are essential to bridge knowledge gaps and promote consistent EBP utilization across all clinical settings.

5. Conclusion:

This study shows that although nurses and midwives have positive attitudes and high knowledge about evidence-based practice, its everyday application is still restricted. The use of EBP is greatly aided by organizational and social factors, especially access to training, collegial collaboration, and leadership support. In line with the objectives of Saudi Vision 2030's healthcare reform, our findings emphasize the significance of bolstering institutional regulations, empowering leaders, and launching training and educational programs to incorporate EBP into routine practice. Future studies should use interventional and longitudinal designs in a variety of contexts to assess strategies that support long-term EBP implementation and raise the quality of care.

6. Recommendations

Healthcare institutions should provide continuous educational and training programs to improve evidence-based practice (EBP) knowledge and utilization among nurses and midwives, particularly in departments with lower utilization levels. Access to evidence-based resources and mentorship programs should also be strengthened to support EBP implementation in clinical settings.

6.1 Implications for Nursing Practice and Research

The findings highlight the importance of promoting EBP competencies among nurses and midwives to enhance the quality of patient care and clinical decision-making. The study also emphasizes the need for organizational support and educational advancement to improve EBP utilization. Future research should include larger and more diverse samples from multiple healthcare settings across Saudi Arabia to improve the generalizability of findings and further explore barriers to EBP implementation.

6.2 Limitations:

The study has several limitations that should be considered when interpreting the findings. Data were collected using self-administered online questionnaires, which may have introduced response and social desirability bias, as participants may have overestimated their knowledge or utilization of evidence-based practice (EBP). In addition, the use of nonprobability sampling may have increased the likelihood that more motivated staff members participated in the study, which limits generalizability. Also, the study was conducted in a single hospital and included only a small number of male staff members, which limits the generalizability of the findings to other healthcare settings, professional groups, or regions in Saudi Arabia. The cross-sectional design captured participants' perceptions at a single point in time and therefore could not assess changes or long-term effects related to EBP utilization. Additionally, the relatively small number of midwives (n = 12) limited the statistical power for comparisons between nurses and midwives and restricted the applicability of subgroup-specific conclusions. The combination of Likert-scale responses (e.g., agree/strongly agree and disagree/strongly disagree) may have resulted in a loss of detail and reduced the ability to capture nuanced differences in participants' responses. Future studies should adopt longitudinal approaches and include larger, more diverse, and balanced samples to validate and broaden these findings across different professional groups and settings.

1. Declaration of Conflicting Interest:

- No conflict of interest to declare in this study.

2. Funding:

- None.

3. List of Abbreviations:

- EBP = Evidence-Based Practice
- SA = Saudi Arabia
- ICU = Intensive Care Unit

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