护理杂志
Journal of Nursing
Volume 70 Number 8
ISSN: 0047-262X
DOI: 10.5281/zenodo.8337530

Exploring Influencing Factors in the Utilization and Integration of Evidence-Based Practice in Nursing

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Abstract

***Background**: Evidence-based practice (EBP) is the foundation for providing high-quality, patient-centered care. **Objective:** This study aims to explore influencing factors in the utilization and integration of evidence-based practice in nursing. **Methodology:** This research adopted a cross-sectional, descriptive study design to investigate utilizing and integrating EBP in nursing at a tertiary care hospital in Karachi from June to August 2023. A total of 100 participants were recruited through the convenient sampling technique. **Result:** The study reveals essential barriers nurses face when using research in their practice. Some struggle to access research materials (21%), find research lacks clear practical use (19%), and have difficulty understanding statistical analyses (24%). For others, research doesn't seem relevant (24%), and they may not even be aware of available research (25%). Limited facilities (23%) and time (26%) further hinder research use. Generalizability concerns (29%) and a perceived lack of authority (36%) to implement changes based on research are common. Uncertainty about the benefits (21%) and credibility issues also affect research adoption, along with variable support from colleagues, physicians, and administrators (26% to 30%). These findings highlight diverse challenges in integrating research into nursing practice, necessitating strategies to overcome these obstacles and promote evidence-based care. **Conclusion:** The study identifies vital obstacles nurses encounter when incorporating research into their practice, including limited access to materials, uncertainty about practical implications, challenges grasping statistical analyses, and doubts about credibility. Time constraints, organizational factors, and perceived personal benefits contribute to the hurdles. Improving access, offering training, nurturing an evidence-based culture, and creating supportive environments are vital to address these issues. Promoting mentorship and emphasizing research's value can channel the breach among research and nursing training, ultimately benefiting patient care and outcomes.*

INTRODUCTION

Evidence-based practise (EBP), sometimes known as the "cardinal objective in healthcare," is a systematic method of addressing healthcare issues that improves population health outcomes and the standard of care while reducing costs and empowering clinicians to actively participate in their role. Additionally, helping organizations achieve high reliability is an evidence-based approach. Clinical professionals use EBP to assimilate the best available external proof with inside confirmation (i.e., practice-generated data), clinical understanding, and patient views and preferences to provide the best outcomes (1).

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Florence Nightingale may have laid the groundwork for providing care based on evidence throughout the 1800s by attempting to improve patient outcomes for those exposed to unhygienic surroundings. According to one demarcation, evidence-based nursing is the "conscientious, explicit, and prudent use of theory-derived, research-based information in decisions about care delivery to individuals or groups of patients reflective of individual needs and preferences"(2). The use of evidence-based practise in the nursing industry can close the theory-to-practice gap. It is also a vital way for nursing educators to impart core knowledge to undergraduate and graduate nursing students. Enhancing undergraduate nursing students' knowledge of and proficiency with the use of evidence in practise is "a fundamental university role." (3).

Although EBP is a good idea, it can be difficult for a nurse to implement it before a nursing organisation adopts this innovative concept. Therefore, an organization's and a nurse's readiness for EBP adoption must be weighed for success(4). Implementing Evidence-Based Practice (EBP) is intricate and requires systemic changes within the healthcare industry and behavioral adjustments from medical personnel (5). However, because it lowers hospital expenses and raises the quality of care, its use has been acknowledged globally as improving health services (6). For evidence-based nursing to occur, nurses must understand what it is, how it varies from evidence-based medicine and evidence-based practice, and how to interact with and use the evidence (7). Despite calls for lower costs and higher quality nursing care, EBP integration into nurses' daily practice has not been examined (5). Many reports have been made about the factors influencing nurses' use of EBP (8). Obstacles that nurses encounter when using EBP include a lack of knowledge and skills, a lack of belief and capacity, a lack of database access and use, and a lack of critical thinking and ambition (4). According to research, 72.1% of respondents have never attempted to use evidence-based practice. "Inadequate resources for implementing research findings" and "Inadequate training in research methods" were the two biggest obstacles found (9). According to reports on evidence-based practice in community health care, the biggest obstacle to its adoption was a shortage of time for locating, comprehending, and interpreting study findings. According to some writers, nurses' ignorance of previous research studies constituted the primary obstacle to using research (10). Another study discovered that practice, attitude, and knowledge/skills related to evidence-based practice were predicted by the perceived barriers to research usage (11). Another investigation found that lack of well-trained personnel, inadequate education programs, and organizational culture are the obstacles to implementing EBP at the organizational level. EBP specialists' analysis of clinical nurses, insufficient time, and poor communication (12). Therefore, this present study aims to explore influencing factors in utilizing and integrating evidence-based practice in nursing.

METHODOLOGY

This research adopted a cross-sectional, descriptive study design to explore the utilization and integration of EBP in nursing at tertiary care hospital in Karachi from June to August 2023. The study involved 100 registered nurses and nurse interns currently working at the tertiary care hospital in Karachi. The inclusion criteria for this study encompassed individuals who were nurses and nursing interns aged 18 years or older. The Barriers to Research Utilization Scale was used to assess the factors hindering the utilization of evidence-based practice in nursing. This scale has 35 items, the first half of which had 29 questions graded on a 5-point Likert scale (1 = never, 2 = seldom, 3 = occasionally, 4 = often, and 5 = no opinion). The Barriers Scale scores could range from 29 to 116, with higher scores indicating more significant barriers to EBP utilization (5). Factor analytic techniques were employed by Funk et al. (1991) to assess instrument dependability. The instrument's four variables had Cronbach's alpha coefficients of 0.65–0.80 and a total correlation of 0.30–0.53. Cronbach's alpha was 0.72 for innovation traits and 0.65 for communication characteristics.

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Nonetheless, the other two components demonstrated good dependability, as evidenced by a 0.80 Cronbach's alpha coefficient. Reliability between tests was determined to be 0.68–0.83 (13). Before gathering data, the hospital's Institutional Review Board (IRB) provided ethical permission. All participants gave informed consent after being informed of the study's goal and assured that their answers would be kept private. The study complied with ethical standards, guaranteeing informed consent and participant privacy. To preserve participant anonymity, all data were anonymized during collection. The survey platform was protected to protect participant privacy and anonymity when collecting data online. Potential participants were given the survey link and ample time to finish the questionnaire. Over a predetermined period, data was gathered to make sure every participant had a chance to reply.

Any incomplete or improperly filled questionnaires were debarred from the analysis. The sample size was calculated through Open Epi, with a 95% confidence interval and a total population of 140 nurses in the hospital. The calculated sample size was 103. However, three participants who did not correctly fill out the questionnaire were excluded, resulting in a final sample size of 100. Data collected from the questionnaires was analyzed using appropriate statistical software version 26. The demographic details of the participants and their responses to the Barriers to Research Utilisation Scale were described using descriptive statistics, such as percentages and frequency.

RESULT

Table 1 presents the demographic and professional characteristics of a group of individuals. Regarding gender, 62% are male and 38% are female. Regarding age, the majority (81%) fall within the 20-29 age range, while 16% are aged 30-39, and a small 3% are above 40. Education-wise, 25% have a diploma, 74% hold a bachelor's degree, and only 1% possess a master's degree. Concerning clinical experience, 15% have less than 1 year, 59% have 1-3 years, 17% exhibit 4-7 years, and 9% boast more than 8 years of experience.

Table 1: Demographic variables of the Participants n=100

Variables	Frequency	Percent
Gender		
Male	62	62.0
Female	38	38.0
Age		
20-29	81	81.0
30-39	16	16.0
Above 40	3	3.0
Total	100	100.0
Education		
Diploma	25	25.0
Bachelor degree	74	74.0
Master Degree	1	1.0
Clinical Experience		
Less Than 1 year	15	15.0
1-3 years	59	59.0
4-7 years	17	17.0
Above 8 years	9	9.0

Table 2 illustrates a range of significant barriers faced by nurses when integrating research into their clinical practice. Notably, several barriers were reported to a great extent. These include limited

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access to research reports and articles (21%), research often lacking clear implications for practice (39%), difficulties in understanding statistical analyses (33%), research not being relevant to the nurse's practice (25%), a lack of time to read research (26%), uncertainty regarding the benefits of changing practice (32%), a perception of not having enough authority to change patient care procedures (36%), challenges in obtaining physician cooperation (30%), and potential barriers stemming from healthcare administration (26%).

Furthermore, 29% of respondents express concern regarding the generalizability of study findings, saying they might not apply to their particular contexts. Furthermore, 27% are unsure of the advantages of making changes based on research, and 36% believe they lack the power to do so. There are also evident problems with research legitimacy, methodological shortcomings, and finding pertinent material, with different percentages indicating the severity of these issues.

The support and cooperation of colleagues, physicians, and administrators are seen as potential barriers, ranging from 26% to 30%

Barriers	To no extent	To a little extent	To a moderate Extent	To a great extent	No opinion
Research reports/articles are not readily available	9.0%	33%	19%	21%	18%
No apparent implications for application are provided.	8%	25%	39%	19%	9%
It is difficult to understand statistical analyses.	14%	20%	33%	24%	9%
The study is not applicable to the nurse's practise.	18%	24%	20%	24%	14%
The nurse is not familiar with the study.	23%	22%	23%	25%	7%
The resources are insufficient for implementation.	15%	26%	25%	23%	11%
There is not enough time for the nurse to read the research.	18%	20%	25%	26%	11%
The study has not been repeated.	14%	28%	22%	19%	17%
The nurses believe that there is less advantages to changing practises.	8%	31%	23%	32%	6%
The nurse is unsure about whether to accept the study's findings.	19%	18%	32%	19%	12%
There are deficiencies in the research's methodology.	15%	27%	21%	21%	16%
The pertinent literature is not collected in one site.	12%	33%	22%	21%	12%
The nurse does not believe they have enough power to alter patient care practises.	17%	18%	20%	36%	9%
The nurse believes that the findings are not applicable to their own settings.	9%	24%	29%	29%	9%
The nurse lacks access to knowledgeable coworkers with whom to discuss the study.	12%	18%	31%	27%	12%
The nurse is just marginally benefiting.	21%	13%	30%	27%	9%
Research reports/articles are not published fast enough	11%	17%	34%	27%	11%
Physicians will not help with implementation	20%	24%	19%	30%	7%
Implementation is prohibited by the administration	19%	19%	22%	26%	14%
The nurse is not convinced of the value of research in practise.	30%	16%	22%	20%	12%
There is no established necessity to alter practise.	18%	30%	22%	17%	13%
The study's findings are not supported by the data.	21%	24%	24%	16%	14%
Conflicting findings are reported in the literature.	15%	26%	28%	14%	17%
The research is not presented in a comprehensible manner.	15%	27%	28%	17%	13%
Other staff are not in favour of implementation	13%	18%	35%	22%	12%
The nurse refuses to adapt or attempt new things.	14%	24%	33%	25%	4%
There is an astounding amount of study information.	13%	23%	25%	28%	11%

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The nurse doubts her ability to assess the calibre of the research.	17%	22%	20%	32%	9%
There is not enough time on the job to put fresh ideas into practise.	10%	18%	31%	27%	14%

DISCUSSION

Evidence-based practice (EBP) integrates individual clinical expertise with the best available clinical evidence obtained from systematic research, while evidence-based medicine (EBM) is thought to be the careful and meticulous use of current evidence in the decision-making process regarding individual patient care (14). To minimize such consequences, evidence-based guidelines should be adopted that minimize practice variance, encourage best practices, lower healthcare costs, and enhance clinical outcomes (15). Research shows that rules are frequently not adequately implemented or followed due to several obstacles. Role ambiguities, a lack of time, skills, education, expertise, supervision, and limited resources have all been identified as obstacles in critical care nursing (16-18). Therefore, this present study aims to explore influencing factors in utilizing and integrating evidence-based practice in nursing.

Present findings show that 26% face a barrier that nurses do not have time to read the research. Smiley, another study found a slightly different result that 36.4% did not have time to read the research (5). Lack of time can be a barrier, but it can also indicate ignorance, lack of interest, or need for new information. Some duties or jobs nurses may want to avoid include using study findings for personal gain (19). A study in this regard suggested that evidence-based nursing practice is built on research. Nursing professionals are supposed to understand the creation and assessment of evidence (20).

Moreover, the study found that 33% face barriers that nurses do not feel capable of evaluating the quality of the research. Another study found that 18.9% face the same barrier (5). Research is crucial in nursing as it helps in evidence-based practice. Nurses must understand and evaluate research findings to provide the best possible care to patients (21). These findings may be due to nurses not receiving formal training in research methods during their education or not being exposed to research in their daily practice.

Present findings found that 30% face physicians not cooperating with implementation. Other reviews have recognized the inability to modify nursing practice, one of the main obstacles this review has revealed. Since directors and doctors have authority roles and nurses seem to be executive bodies, undermining their position, lack of power may be related to the current hierarchical structure of modern hospitals (19).

Present findings show that 25% face that the nurse is unwilling to change/try new ideas. In this regard, another study found a different result that (61.1%) had insufficient time on the job to implement new ideas (22). This finding suggests that there may be a need for cultural and attitudinal shifts within the nursing profession to promote a more open and adaptable approach to change.

Presented findings show that 24% face barriers that his research is irrelevant to the nurse's practice. These findings agreed with the previous study (23). The biggest obstacles are a heavy workload, a lack of time, and a lack of research knowledge and expertise. The primary enablers are advanced education, research-trained nurses employed as models, and managerial support (24).

Moreover, this study found another barrier: 19% believed the nurse is uncertain whether to believe the research results. In contrast, another study found that the nurse is uncertain whether to believe the research results (72.57%) (25). It is recommended that critical evaluation skills be prioritized in nursing education programs and continuous training to mitigate uncertainty surrounding research

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findings. Nurses can more confidently accept research findings if they have the skills and resources necessary to evaluate the caliber and applicability of studies.

CONCLUSION

The study identifies essential obstacles nurses must overcome to incorporate research into their daily work. These obstacles include restricted access to research materials, ambiguous practical ramifications, and challenges in comprehending statistical analyses, and uncertainties over the reliability of the findings. Adoption of research is further hampered by organizational problems, time constraints, and the belief that there is little personal gain. Enhancing research accessibility, offering training, promoting an evidence-based culture, and establishing supportive environments are crucial for removing these obstacles. The gap between research and nursing practice can be closed by promoting mentorship and highlighting the importance of research, which will ultimately improve patient outcomes and care.

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