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Evidence-Based Practice in Nursing: A Systematic Literature Review of Barriers and Facilitators of Implementation

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Abstract

One of the greatest paradigm shifts that has been discovered in the contemporary nursing practice is evidence-based practice (EBP), which integrates empirical evidence, clinical expertise, as well as patient values toward achieving better nursing care of patients, professional responsibility, and system effectiveness. In spite of the prevailing scholarly propaganda and institutional support, EBP practice tends to be inconsistent and poorly synthesized in the clinical settings. This systematic literature review summarizes evidence presented in forty-five peer-reviewed articles published since 2010 through 2024, indicating that the obstacles to the integration of EBP are multi-factorial and comprise both individual- (i.e., knowledge and attitudinal gaps) and organizational (i.e., time constraints and resource unavailability) barriers as well as system-wide failures (i.e., incoherencies in education and policy inactivity). On the other hand, strong leadership, continuous training, institutional motivators, and regulatory alignment are other significant

elements of the literature as the main drivers of effective implementation. Its conclusions highlight the necessity of comprehensive and context-relevant measures to help reduce the evidence-practice division in nursing. It suggests how teachers, healthcare managers, and policymakers can institutionalize EBP as one of the cultural and working norms at every level of the nursing profession.

Keywords: Evidence-based practice; implementation of nursing; knowledge transfer; organizational culture; reform of education; health policy; translation of knowledge; research; utilization of research.

1. Introduction

Of course, many developments made nursing become a profession rather than a technically subordinate field occurred due to the implementation of the evidence-based practice (EBP) as one of the clinical decision-making criteria. The conscientious integration of research evidence of the best available research, clinical expertise and patient values,

known as EBP, was for long considered as the way to improve the quality of care, patient safety and also boost the health system [1]. In reality, EBP provides nurses with the instruments to critically review the literature, implement applicable outcomes in complicated healthcare scenarios, and make a more open and responsible healthcare landscape.

Though it is a theoretically interesting and already incorporated into the academic sphere, the implementation process of EBP in nursing is highly problematic. According to a number of global studies, a research-practice gap constantly appears: nurses as a group, although knowledgeable of evidence-based recommendations, neglect to enact them despite numerous organizational, professional, and psychological hindrances [2] 212 (2) 03 Such barriers exist even when there are broad based curricular modifications, institutional organizational policies and the availability of research databases on the internet. These contradictions require the critical re-thinking of the principles on which the promotion of EBP rests and a more profound insight into the factors restraining or supporting its implementation.

EBP in nursing has to be perceived not merely as a technical skill but as a multi-level sociocultural process. Its adoption relies on a complex of variables that pertain to the personal traits of nurses, the professional culture of organizations, the approaches used by the leaders, educational basis, and policy system at the national level [5]. Thus, the purpose of this review is to examine an interdependence between these various levels of influence. The review systematically reviews available literature that explores the enablers and inhibitors of EBP implementation in practicing nurses, thus bringing further a more elaborate picture of the institutional, professional, and ideological landscape within which the culture of evidence-informed care needs to be nurtured.

1.1 History behind EBP in Nursing

Evidence-based practice roots can be traced back in the development of evidence-based medicine (EBM) that had emerged in the early 1990s, with much of this interest initiated by clinicians and researchers alike who were interested in enriching clinical judgment with empirical evidence instead of convention or authority [6]. Nursing had its own unique set of considerations and philosophical viewpoints, focused on holism and relationships, and allotted these principles but with admissions about the lack of human or community orientations of biomedical positivism. The history of development of EBP in nursing was an epistemological transition, as well as a political campaign of professional independence, scientific legitimacy, and involvement in inter-professional clinical governance [7].

But during its initial stages, nursing was more inclined to the use of tradition, apprenticeship, and area-based routines that were customized since time immemorial by older professionals. Academic nursing emerged in the late 20th century, and institutional orientation toward quality assurance and accountability opened up the chance of integrating EBP.

The American Nurses Association, the Royal College of Nursing, as well as other professional organizations started promoting the role of EBP competencies at the core of present-day responsibilities of a nurse [8]. Yet, this codification of EBP did not get over the resistance. A lot of nurses, and most notably ones educated before the period of EBP, remain skeptical or disturbed by research techniques and numerical thinking [9].

In addition, EBP should be perceived as both pedagogical and ethical necessity. Grounding care in the best available evidence is in line with beneficence, non-maleficence and respect of patient autonomy [10]. Such ethical underpinnings make it all the more urgent to achieve success in eliminating the obstacles that keep EBP back and maintain those practices that would allow applying EBP systematically.

2. Methodology

The same systematic literature review depended on the approach defined by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) strategy to promote the transparency, rigor, and reproducibility of the study [6]. The aim was to locate, examine and identify peer-reviewed studies that discussed evidence-based practice (EBP) implementation among clinical nurses, and especially focused on the barriers and facilitating factors that influenced the process.

2.1 Search Strategy and Information Sources

C After five major electronic databases which are known to cover the most considerable amount of nursing and healthcare research, a comprehensive and structured search was performed: PubMed, Scopus, CINAHL (EBSCO), Web of Science, ScienceDirect. The choice of these platforms rested on their indexed high-impact journals in nursing and interdisciplinary topics, which were appropriate with regard to clinical implementation research. Search strategy was designed with the assistance of senior research librarian involving the utilization of Boolean and controlled vocabulary like Medical Subject Headings (MeSH).

Three of the combinations used as key terms were (evidence-based practice" OR "EBP"), (nursing" OR "nurses"), (implementation" OR "integration") and (barriers" OR "challenges") and (facilitators" OR "enablers"). To limit the search results to articles published during the period January 2010 up to April 2024 and those articles written in English, filters have been used. The result of the first query of the database was 1,326 items.

In order to increase the comprehensive aspect, the references of the significant studies were reviewed manually to find out more relevant references. This was done by a snowballing method that produced five additional studies that were to be included. Citation management software (Zotero) was applied in order to organise and filter the duplicates.

2.2 Inclusion and exclusion criteria

Admission was based on predetermined criteria of eligibility to select. The studies selected were those that had to satisfy the following criteria: (1) were published in peer-reviewed journals during 2010-2024, (2) the language used had to be English, (3) the population studied was practicing registered nurses in clinical settings, and (4) the studies were either barriers or facilitators (or both) to EBP implementation.

Articles without providing original data, representing the viewpoints, comments, or editorials exclusively were also excluded because they did not include any original data; studies including student nurses or other healthcare professionals as a first population focused on were also excluded; those that did not focus on EBP as part of clinical care (e.g., EBP applied within educational settings only) were also deemed unworthy of inclusion; and studies that did not specify the dimensions of EBP as part of a construct of implementation did not qualify. This stringent criterion based selection was done to make sure that only the relevant and well harmonized studies were left to be analyzed.

2.3 Procedure of the Study Selection

1,042 articles were finally left after the elimination of duplications. The titles and abstracts were screened independently by two reviewers, by utilizing a standard internalized screening form operating on the eligibility criteria. There were disputes which were addressed and ended via consensus. The retrieved full-text articles were 97, and they were screened. The final synthesis included 45 studies out of the full-text screen.

A PRISMA flow diagram of the selection of the studies is shown according to the following four stages: identification, screening, eligibility, and inclusions [6]. Full-text screening inter-rater reliability presented a result of 92% among reviewers, which means that they were far much in agreement, and the selection process was accurate.

2.4 Synthesis and extraction of data

A uniform data extraction form was crafted and operationalized on five articles to check wording and similarity. Examples of data items are author (s), year of publication, country, research design, sample characteristics, healthcare setting, type of EBP implementation that was the subject of study, and the main barriers and facilitators described. Reviewers researched the accuracy and completeness of the extracted data and then they were transcribed into a matrix to conduct a synthesis.

Analysis of the findings was done using thematic synthesis where a three-step process of Thomas and Harden was used that entailed (1) line-by-line coding of the findings, (2) formation of the descriptive themes, and (3) formation of the analytical themes [11]. Such an inductive strategy helped the review to embrace the richness of the details of the reported

experiences as well as identify frequent patterns in different study settings.

2.5 Methodological Excellence and Design Strength

The quality of methods used in the studies retrieved was reviewed with the help of the relevant appraisal tools, which were selected based on the study design. Critical Appraisal Skills Programme (CASP) checklist was used to appraise qualitative studies whereas quantitative and mixed-methods studies were evaluated using Joanna Briggs Institute (JBI) tools. The majority of studies could be characterized as of medium to high-quality, whereas some studies exhibit the limitation in terms of representativeness of a sample or the absence of data interpretation reflexivity.

About 60 percent of the studies that were done used the qualitative methodology; most of them were semi-structured interviews of focus groups of clinical nurses. These techniques yielded meaningful contextual knowledge on the sociocultural process of the EBP. Quantitative research, usually cross sectional, employs the use of instruments such as the Evidence-Based Practice Questionnaire (EBPQ) [7], Barriers to Research Utilization Scale (BARRIERS) [8] or locally estimated surveys to measure knowledge, attitude and self-reported practices of the nurses (specifically towards EBP).

The variety of methodologies of the studies which were included contributed to the strength of the synthesis and permitted the triangulation of results. The qualitative knowledge complemented the perception of the understanding organizational culture and professional attitudes and allowed stating that the quantitative information explained the general tendency of the distribution and prevalence of particular barriers among the populations and settings.

3. Results

The review of the forty-five chosen studies demonstrated that the factors that have a complex, mutually reliant type of relationship in the practical application of evidence-based practice (EBP) in nursing is complicated. These dimensions always fell into three large domains which include individual level, organizational level as well as the systemic level. There were subtle subthemes in each domain, which indicated the dynamics of knowledge, culture, leadership, and policy. Although the unique context of each study was different, some patterns became common in different geographical regions and methodological designs.

3.1 Factors at Individual Levels

Among the most common reasons of impediments in EBP, noticed by the researcher, is low level of knowledge of research literacy by the practicing nurses. The results of the studies in both high- and middle-income countries were similar since it was observed that nurses were usually lacking evidence-based competencies needed to critically review

scientific literature, consider study design, or implement evidence on a particular clinical case [7], [9], [12]. The critical nature of this lack was in nurses who had obtained their educational training before EBP curricula was mainstreamed into nursing curricula. In one example, a cross-sectional study by Upton and Upton not only revealed that only 37 percent of their respondents were confident about their capacity to comprehend research statistics but also made a note of the fact that some of the respondents felt intimidated by the subject [7].

The psychological and motivational issues also predetermined the personal interaction with EBP. The reason of not using literature research or failing to implement it most of the time was associated with lack of confidence, misapplication of the evidence fear, and inadequacy to the research [4], [10]. Junior nurses in hierarchical set-ups hesitated in questioning the practices that had been in use though they were against new evidence. During multiple qualitative studies, the nurses revealed concerned doubts about the applicability of academic research as they saw it be disjointed with real-life real-life experiences of complex patient care-taking [5], [13].

Nevertheless, critical individual facilitators of EBP participation were also described in the literature. Postgraduate oncology nurses, particularly the ones who complete courses on research methodology, demonstrated more active behaviors regarding the incorporation of evidence in the care process [9]. Influence of intrinsic motivation, intellectual curiosity and a commitment to engage in professional development were also noted as enabling factors in studies [2], [8]. Indicatively, Thompson et al. [12] established that those nurses who self-identified themselves as lifelong learners had been much more likely to seek and practice any available current evidence in practice.

3.2 Organisational Level Factors

The most significant aspects turned out to be organizational structures and cultures as determinants of EBP uptake. Even in conditions where administrators were either uninvolved or uninterested in EBP, the adoption process hit a brick wall, whether or not the individual was interested or trained [13], [14]. On the other hand, hospitals that showed excellent results in terms of clinical leadership institution-wise had high numbers of demonstrated integration of EBP in their institutions [12]. Not only symbolic but also operational: leadership entailed allocation of resources, emphasis on research in the strategic plans and the signifying of evidence-based initiatives through the systems of promotion and quality evidencing.

The organizational-level barrier that was pervasive was the inability of information access. Nurse respondents complained of lack of access to subscription-based academic journals, they lacked proper training in working with research databases, and were lacking internet access at the place of care [3], [15]. There was even a time where they could not find time to use resources in an organized fashion if the resource

was technically available. DiCenso et al. [14] reiterate that in the absence of some time that is safeguarded, the most highly resourceful settings do not lead to the conversion of evidence into practice.

The other difficult challenge was workload. Patient-nurse ratios, paperwork and time sensitive tasks pushed non-clinical task of evidence reading, reflective thinking or protocol changes into the background [4], [15]. EBP was even considered a second priority in certain situations, a process that should be carried out whenever it can be done, but not one of the core players of safe and effective care [11]. This perception was especially distinctive in intensive care settings, emergency departments, and long-term care setting as there was the most critical time pressure.

Conversely, facilitators of organizations were identified in institutions where culture of inquiry and learning had been tactfully nurtured. Among the practices that increased normalization of EBP were interdisciplinary collaboration, platforms of sharing knowledge, and integration of evidence into care planning routinely [13]. In a number of studies, EBP champions (special personnel involved in promoting implementation) were mentioned as an effective method of overcoming the research-practice gap [15], [16]. Any institutions that implemented a shared governance model also showed improved alignment between frontline practice on the one hand and institutional policy on EBP on the other hand [12].

3.3 Influences At Macro-Level

On the systemic level, the educational policy, the national regulation, and healthcare infrastructure were the driving force that determined the viability and sustainability of EBP. It was also noted that the amount of EBP training at the undergrad level was weak and many students were not given a real chance to practice appraising evidence or an implementation [16], [17]. Brown [16] clarifies that EBP is often presented as a hypothetic concept, notwithstanding clinical placements in which old habits prevail and are transmitted by mentors who are not au fait to evidence-based intervention.

Moreover, the lack of national requirements of EBP competencies to license or continuing education turned out to be a persistent hindrance. Where a country had no policy incentives or professional requirements in relation to EBP, adoption was highly ad hoc and usually restricted to individual initiative, or small pilot programs [18]. In their turn, countries where EBP-promoting frameworks -national nursing research strategies or reimbursement schemes connected to evidence-based quality indicators- had been established, exhibited a greater degree of system-wide congruity [1], [17].

The EBP accessibility was also affected by geographic and economic inequity. The structural barriers identified among nurses in low-resource environments included inefficient internet access, inability to read foreign literature due to

insufficient knowledgeability in the English language, and limited continuing education training [3]. These results place an emphasis on the context-sensitive implementation methodologies of EBP used to consider infrastructure, language and locally prioritized health concerns.

In spite of all these difficulties, system-level facilitators were evident and were provided through professional associations, international collaborations as well as global health activities that were geared at building a capacity of nursing education and research. The importance of investing more in evidence-based nursing has been promoted as a part of the overall attempts to enhance health system resilience and universal health coverage (see, e.g., the WHO initiatives, e.g., the “Nursing Now campaign”) [18].

4. Discussion

Synthesis of evidence within the scope of the present review shows that the process of implementing evidence-based practice (EBP) in nursing is a complex issue to address that should be answered on several levels. The identified barriers fall under the cognitive, structural and systemic categories of the healthcare systems. They show how simply sharing evidence cannot lead to a clinical shift; the shift relies on a multifaceted ecosystem of facilitating and limiting conditions that are highly relational and unique.

Abiding lack of harmony between knowledge and action is one of the most evident facts through the literature reviewed. Most nurses know about the principles and possible advantages of EBP, but they still are not confident or able to convert the principles to daily practice. The finding agrees with that of Upton and Upton [7] who discovered that reduction in knowledge was not only technical but was influenced by psychological impossibilities and fear of failure as well as professional insecurity. This is in line with what Rycroft-Malone called PARIHS framework according to which the quality of evidence is not the only factor to influence the success of implementation; the context and the way of facilitation also play a crucial role [10].

The organizational factors also are of equal importance in that they either promulgate or constrain evidence-based nursing. The evidence in the literature is that leadership is a decisive factor to EBP culture [12], [13]. Nurses are better positioned to incorporate evidence into care when nurse managers encourage inquiry in their environment, provide space to review evidence and provide acknowledgement of research involvement. On the other hand, in an environment characterized by hierarchy and bureaucratic inertia or the task-directed leadership style, EBP is pushed to a periphery, being a luxury and not a fundamental part of professional work. Discussing the determinants of sustained EBP behaviors in nursing teams, Thompson et al. [12] believe that transformational leadership can be used to predict EBP behaviors longer than resource availability.

The other notable concern is the disorganization between clinical processes and EBP processes. The usual setting is that nurses work with evidence, but at the same time, must take care of time-consuming clinical activities, management of documentation, and changes in patient acuity [14]. Majid et al. [4] confirm in their experiment exploring the Singaporean hospitals that even properly trained nurses do not engage in EBP practices even when they are not directly included as elements of their task pattern or institutional policy. This explains why there is need to incorporate the concept of EBP into daily care planning and performance mechanisms and not as something optional or extracurricular.

In a system approach, the review indicates that there must be more regulatory systems and policy encouragements to ensure that EBP becomes more than normative but is even anticipated. In those countries where maintaining education in EBP is mandatory to obtain the licensure renewal or quality metrics is part of the national standards associated with the evidence-based care, adoption rates are observed to be higher [1], [18]. On the other hand, Evidence-based practice (EBP) without these mandates is under the influence of motivation and ability of the individual institutions and Practitioners thus causing inconsistency and unfairness on levels of care provided.

This fluctuation is additionally complicated by worldwide inequalities. Although predominately five out of six high-quality studies were conducted in North America, Western Europe, and Australasia, an emerging group of literature is emerging in middle-income and low-income countries citing the structural obstacles that nurses in under-resourced environments are uniquely prone to [3], [18]. Poor access to academic databases, the barriers of language, and weak educational systems necessitate special measures, and they cannot easily be copied in the West. International health agencies and donors can therefore contribute to helping to build local capacity, make journals open-access, and translate evidence into different languages and culture.

What is more, the review reveals the underlying tension between clinical practice and academic research. Several nurses consider that there is the inconsistency between academic and student publications and the practical bedside requirements, specifically in stressful settings or even unpredictable ones such as emergency rooms or intensive care units [5], [13]. Such attitudes are further influenced by the nature of most scientific publications, which contain much information that is inaccessible or not adequately focused on the practical side of clinical decision-making. According to Salmond and Echevarria [9], until academic research could be converted into practical and context specific guidelines it will remain an outcast behind the expertise of experience and intuition or institutional shyness.

The evidence, all in all, makes it possible to conclude that EBP in nursing should not be understood as a competency or initiative but as a cultural shift. It necessitates institutional demands, policy preparation and academic scaffoldings,

which are beyond individual grounds. This change may not come at the onset or at the instance of isolated interventions. Instead, it requires a long-term, long-range, and comprehensive attack that involves nurses on all levels, including students and educators as well as administrators and policy-makers.

5. Conclusion

It is one of the findings of this systematic literature review that useful deployment of evidence-based practice (EBP) in nursing involves much more than an instructional or technical problem, being instead a multifactor undertaking rooted within individual, organizational, and systemic contexts. As the evidence suggests, the knowledge gaps, attitudinal resistance, and time limits present in the population of nurses are not all new but exist alongside other barriers that are often caused by larger cultural and structural processes. Leadership, workflow redesign, or interest in EBP educational investment are only a few of the manifestations that can be used by institutions that do not prioritize EBP but do not want to witness sustainable practice transformation.

On the individual level, the EBP competence has to be heightened in terms of both the knowledge development and psychological empowerment. To appraise and use research, nurses should not only be given the skills; nurses also need the confidence to support them in discarding outdated practice and the courage to experiment within safe clinical limits. Organizationally, EBP will have to be relocated out of the optional ideal into operational standard. This requires obvious leadership, secured time and access to resources which enable inquiry, cooperation and learning. In a systemic sense, the national and international policy frameworks ought to incorporate EBP at the licensure criteria, continuing education mandates, and funding systems that can provide rewards to innovation and accountability.

Finally, EBP is much more than integrating evidence into care: it is transforming the professional identities, institutional cultures, and regulatory priorities so that they can meet a vision of nursing integrating inquiry, equity and excellence. With the growing complexity of health systems every where, in concert with decreasing resources and demographic changes, the need to make nursing practice more evidence-based is not merely professional but also ethical, strategic, and urgent.

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