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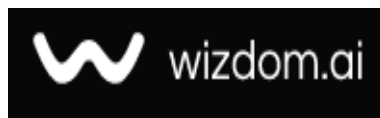
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Challenges to Nursing Process Implementation in Clinical Practice

Mohammed Salih Jasim, mohammed.mohamed@uomosul.edu.iq, ()

Department of Clinical Nursing Sciences, College of Nursing, Adult Health Nursing, University of Mosul, Iraq

Younes K. Attia , younes.khalaf@uoninevah.edu.iq, ()

Department of Clinical Nursing Sciences, College of Nursing, Community Health Nursing, Ninevah University, Iraq

Atheer Abd Ahmed , atheer.ahmed@uomosul.edu.iq, ()

Department of Clinical Nursing Sciences, College of Nursing, Adult Health Nursing, University of Mosul, Iraq

⁽¹⁾ Corresponding author

Abstract

Background (General): The nursing process (NP) is a systematic framework for delivering holistic, evidence-based, and patient-centered care, yet its consistent application remains limited in many clinical contexts. **Background (Specific):** In Iraq, nurses face systemic, organizational, and cultural barriers that compromise the effective use of the NP, despite its foundational role in nursing practice. **Knowledge Gap:** While prior studies have identified individual challenges, few have comprehensively examined barriers using mixed-method approaches that integrate both quantitative and qualitative perspectives. **Aim:** This study sought to identify and analyze the barriers hindering the implementation of the NP among nurses in Mosul through a sequential mixed-method design. **Results:** Quantitative findings from 500 nurses revealed that lack of knowledge and skills (78.4%), insufficient organizational support (86.2%), and inadequate training (77.0%) were major barriers, while qualitative interviews highlighted themes of poor interprofessional communication, cultural resistance to change, and resource shortages. **Novelty:** By combining statistical analysis with thematic insights, this research offers a multidimensional understanding of NP challenges, emphasizing the interplay between personal competencies and systemic constraints. **Implications:** The findings underscore the urgent need for targeted interventions in training, policy, and organizational support to strengthen NP implementation and improve patient outcomes in resource-limited healthcare systems.

Highlights :

- Lack of knowledge, training, and organizational support are the main barriers.
- Mixed-methods approach reveals both statistical trends and thematic insights.
- Urgent need for targeted interventions to improve nursing practice and patient outcomes.

Keywords: Nursing Process, Barriers, Organizational Support, Training, Patient Care

Introduction

The nursing process (NP) is introduced as a systematic approach to using scientific reasoning, problem solving, and critical thinking to guide the nurse in providing care to patients [1]. Even now, the fundamental concept of holistic patient-centered care, called the Nursing Process, is one of the foundations of nursing care. It is a cyclical process that allows nurses to evaluate, diagnose, plan, implement, and evaluate [1]. The nursing process is focused on providing holistic patient care in line with healthcare trajectories designed to enhance health and relieve suffering and is therefore fundamental to providing care grounded in evidence-based practice. Despite the recognition of the nursing process as valuable, its application is seldom carried out with rigor due to global challenges in nursing literacy and systemic level barriers in healthcare settings [2]

Nurses are first-line caregivers and bridge the gap between theoretical frameworks such as the nursing process and direct actions that affect the health and well-being of patients. The way they practice this nursing process reflects the quality of care given. In this context, the evaluation of nurses' knowledge is an initial step in identifying gaps and designing targeted educational interventions to remediate knowledge practice gaps [3]. Furthermore, although the Nursing Process has a theoretical basis, several obstacles prevent its actual use in practice by nurses. These barriers can be at different levels, organizational, resource, and cultural [3]. Identifying these barriers is essential to find ways to reduce their effect and create a climate that cultivates evidence-based nursing practice [4]

One of the major challenges facing nursing practice worldwide is the shortage of nursing staff. This shortage not only increases the workload of existing nurses, but also limits the time and resources available to provide comprehensive patient care [5]

This is particularly true in settings such as Rwanda, where the nurse-to-patient ratio is alarmingly high, placing additional pressure on the need to monitor nurses' activities, perhaps at the expense of the full implementation of the nursing process [6]

Secondly, scarce resources and inadequate staffing appear to exacerbate the challenges nurses face in trying to provide patient-centered nursing care. Furthermore, cultural attitudes or organizational imperatives can mitigate the nursing process as an organizational imperative in a given healthcare setting [7]

Hierarchical structures in some organizations can prevent open communication and collaboration among healthcare professionals, creating a barrier to the interdisciplinary application of the nursing process. Similarly, if organizational policies do not value quality over efficiency, there is likely to be pressure to simplify practice, but ignore the holistic nature of patient care advocated by the nursing process [8]. The introduction is essential to understanding the critical need to identify the knowledge of nurses and the barriers to implementing the nursing process. Specifically, by investigating these factors in depth, this study is able to contribute to improving nursing practice to improve patient outcomes and advance healthcare delivery. Being at the forefront, these nurses will need to translate these theoretical frameworks that shape the nursing process into action that will bring about positive factors for patient well-being [7].

Knowledge and skills associated with understanding and implementing the nursing process will directly impact the quality of care provided. Therefore, it provides a baseline from which specific deficits can be identified and educational interventions designed to address deficiencies [9]

Although the nursing process is well known in theory, in reality there are many influential factors that inhibit its successful implementation and behavior in clinical practice at any given [10]

These factors occur at the organizational, resource and cultural levels within health care services. For this reason, understanding these barriers will be essential to formulate ways to mitigate their impact and provide a mature environment for evidence-based nursing practice [11]. In many cases, the nursing process is the center of excellent care for patients, but is mostly severely hampered in its delivery, causing missed care. Previous studies showed the identification of such barriers; however, there was a limited number of comprehensive studies covering the integration of quantitative and qualitative data. Much of the literature primarily isolates the elements and does not address the issues as they are related. This gap in the literature points to a greater need for a comprehensive understanding of the specific barriers facing nurses, as this can support targeted interventions to improve nursing practice and patient care.

Specific objectives of the study To:

1. Explore the specific barriers that nurses face in implementing the nursing process.
2. Analyze qualitative data from nurse interviews to identify recurring themes and provide a deeper understanding of the challenges faced in applying the nursing process.
3. Formulating recommendations to improve the implementation of the nursing process based on the identified barriers and the suggestions of the participants.

Method

Before data collection, ethical clearance was obtained from the Nursing College Committee and the task of facilitating the book was from the Ninawah Health Directorate Training and Human Development Center. Informed consent was obtained from the field supervisor and all participants, highlighting confidentiality and the voluntary nature of participation. The qualitative aspect also adhered to these ethical guidelines, ensuring that the participants felt comfortable sharing their experiences.

Mixed-method design, sequential, quantitative, self-reported, cross-sectional survey, qualitative, semi-structured interviews selected specifically during the second, half of 2024, this approach enabled nurses' knowledge and barriers to care to be carried out in various healthcare settings.

The study took place in government hospitals such as Al Salam Teaching Hospital and Ibn Sina Teaching Hospital in Mosul, along with Mosul General Hospital and others such as Al Batoul Teaching Hospital and Al Khansaa Teaching Hospital). These hospitals offer a variety of health services, making them an ideal setting to explore the experiences and obstacles nurses face when applying the nursing process.

Quantitative survey data were collected selected specifically during the second, half of 2024 by semi-structured interviews to dig deeper into the barriers discovered during the quantitative phase examination.

A nonprobability sample was deliberately selected based on pre-specified inclusion and exclusion criteria. The sample consisted of 500 nurses for the quantitative phase and a subset of 30 nurses was deliberately selected for qualitative interviews.

Inclusion criteria:

- a. Nurses who agreed to participate in the investigation.
- b. Nurses with a bachelor's degree in nursing.
- c. Nurses who hold a master's degree in nursing.

Exclusion criteria:

- a. Nurses who did not provide their informed consent to participate in the investigation.
- b. Nurses without a bachelor or master degree in nursing.
- c. Nurses currently do not practice in a clinical setting.

For the quantitative phase, a questionnaire (Torrens et al., 2020) was developed that was used to assess nurses' knowledge of the nursing process and identify barriers to its application. For the qualitative phase, semi-structured interview guides were developed to explore nurses' experiences and perceptions regarding the barriers to implementing the nursing process.

The validity of the content of the quantitative questionnaire was evaluated by a panel of 10 experts in nursing education and practice. The reliability of the test and the repetition of the test was evaluated by repeated administration, demonstrating high internal consistency (Cronbach alpha = 0.91).

A pilot study was conducted with a sample of 50 nurses for the questionnaire and some preliminary interviews were held to refine the interview guide. Feedback from these participants was used to improve the clarity and relevance of the questionnaire and interview items from April 5th to April 12th 2024.

Quantitative data was collected in groups in each of the groups we visited the hospitals. The access to nursing staff was facilitated by the nursing directorate, which informed the participants about the study and invited them to participate. For the qualitative phase, nurses who were willing to share their experiences in the responses to the survey were contacted for interviews. First, anonymity and confidentiality were ensured in both phases; second, there was enough time for participants to complete the questionnaire and participate in interviews.

Quantitative data was collected using Excel and analyzed using the Statistical Package for the Social Sciences (SPSS), version 26. Descriptive statistics, including frequency distributions and means, summarized demographic characteristics, knowledge levels, and perceived barriers. Inferential statistics, such as chi-square tests and regression analysis, explored the relationships between variables. Statistical significance was established at $p < 0.05$. For the qualitative data, thematic analysis was used. The interviews transcripts were coded and themes were identified to elucidate common barriers and experiences related to the nursing process.

Limitations

1. Potential limitations included sampling bias and the dependence on self-reported data, which may have influenced the accuracy of responses. Rigorous sampling techniques and transparent reporting of findings were used to mitigate these limitations.

- 2.The nursing staff had limited time to participate.
- 3.The focus was on nurses with only master's and bachelor's degrees.
- 4.Some nurses left the questionnaire incomplete due to its length.

Result and Discussion

A . Result

To better understand the context of this study, it's important to first look at the background of the nurses who participated. As shown in Table 1, most of the nurses were relatively young, with over three-quarters of them under the age of 32. The gender distribution was almost equal, with a slight majority being female. Educationally, nearly all of the nurses held a bachelor's degree in nursing, while only a small number had pursued a master's degree, suggesting limited access to or pursuit of advanced training. Participants came from a variety of clinical settings, including intensive care units, emergency rooms, and general hospital departments, which brought a range of experiences to the study. However, a key finding was that only 24.8% of the nurses had ever participated in a program focused on the nursing process. This points to a clear gap in professional development and raises questions about how well-equipped nurses are to consistently apply structured care planning in their daily practice.

Demographic description of nurses participating in the study show the workforce was less than 45 years The gender balance was 1-3/5 between men and women, but most only have bachelor's degrees, which can mean less specialized training. - Not all nurses were trained in specialized units, which means more diversity in clinical experience. Likewise, low participation in nursing process programs recognizes gaps in practice-specific evidence and opportunities for care. The implications of these findings will provide direction for the development of interventions that aim to increase the benefit of professional development in nursing practice.

The subsequent table on barriers to the application of the nursing process highlights some of the key challenges faced by nurses worldwide with a lack of knowledge/skills noted by 78.4% of respondents as an important barrier to implementing the nursing process and an indicator that more focus needs to be placed in this area. Furthermore, 86.2% of the respondents felt that the support of healthcare organizations is poor, demonstrating the need for institutional buy-in through dedicated resources and transparent policies. Domenico also added that, not surprisingly, 48 participants, or 52.4 percent of the respondents, identified the cultural reluctance to change as a barrier that will require robust change management plans to overcome. The lack of communication and collaboration between healthcare workers was another major barrier to effective pain management, according to 80% of nurses, and the authors called for greater interdisciplinary teamwork. In summary, these findings suggest that specific educational, organizational, and communicative interventions are needed to support the successful introduction of the nursing process and improve the quality of care.

[Table 1 . about here]

[Table 2. about here]

[Figure 1 . about here]

1. Qualitative Data Analysis: Thematic Analysis

A qualitative data analysis to examine the perceived barriers to the implementation of the nursing process reported by nurses through interviews The thematic analysis was completed by taking the following key steps in a structured manner; First, the researchers read the interview transcripts to gain a general feel for the overall experiences and perspectives of the participants. Immersed in the topic helped to identify some of the key problems and common themes related to the struggles experienced while using the nursing process. During the initial coding phase, the responses were classified according to their relevance to the identified barriers. Specific codes were developed to represent common themes in the participant narratives.

Following the coding, several overarching themes emerged, reflecting the complex challenges nurses face in implementing the nursing process.

a.Inadequate knowledge and training: A significant theme emerged around the lack of formal training and ongoing professional development related to the nursing process. Many nurses expressed feelings of uncertainty and insecurity in their knowledge, which directly impacted their confidence and ability to apply the nursing process effectively. One of the participants said: 'I have difficulty applying the nursing process due to my lack of knowledge of the mechanism to apply this process and transform it into a tangible skill' (participant # 3)

b.Resource Limitations: Nurses frequently pointed out that inadequate staffing and resources, such as time restrictions and insufficient materials, were the main barriers. The high patient-to-nurse ratio often left little room for the complete application of the nursing process, as nurses felt rushed to complete their tasks. One of the participants mentioned that there is a lack of resources to implement the nursing process. We have a lack of hospitals and medical equipment, and most hospitals were destroyed as a result of the war, in addition to the lack of nursing staff compared to the large number of

patients '(participant #10)

c.Lack of organizational support: Many participants noted that inadequate support from healthcare organizations, including unclear policies and limited access to the necessary tools and resources, hindered their ability to implement the nursing process effectively. This lack of support contributed to feelings of frustration and disengagement. One of the participating nurses said: 'As a nurse in the hospital, many policies and laws within the hospital prevent me from performing the nursing process. For example, many times, if I want to implement the nursing process, I am told that this work is not my responsibility, but rather the responsibility of the doctor, and if I make any assessment of the patient's condition, this assessment is questioned and repeated by the doctor (participants # 17).

d.Poor interprofessional communication: A recurring theme involved communication challenges between members of the healthcare team. Nurses described situations where misunderstandings or lack of collaboration led to difficulties in implementing the nursing process, highlighting the need for better communication strategies. One nurse said: "There is no cooperation and coordination between healthcare workers within the hospital when providing patient care. For example, we all know that the patient's treatment plan is carried out in cooperation between the various specialties, but in reality, developing a patient care plan is always the responsibility of the physician, and this neglects the role of other specialties and thus prevents us as nurses from implementing the nursing process. (participant # 22)

e.Cultural Resistance to Change: Nurses expressed concerns about cultural resistance to change within their work environment. Many felt that there was an established reluctance to adopt new practices or approaches, which hindered progress and innovation in patient care. One of the nurses said: "The nursing process is just talk that cannot be applied because if I wanted to apply it, I would encounter many obstacles. Not everyone applies it, and my application makes many people bully me. Sometimes, the nurse is told that this is not his duty, and even patients are used to the traditional role of the nurse in only giving treatment and implementing the doctor's instructions. ' (participant # 7).

[Figure 2 . about here]

2. Improvement Suggestions

When asked about their suggestions related to better operationalization of the nursing process, the participants provided important recommendations, such as:

Allow for more extensive training programs: Numerous nurses suggested that training programs on the nursing process should be more extensive, stating that there is a need for continued education around this topic to fill the knowledge gap.

More staff, more resources: There were recommendations to push for staffing levels and resource availability to ensure adequate time spent in the nursing process.

Organizational commitmentParticipants requested more organizational commitment to enable the nursing process by developing clear policies and providing access to tools and resources. Communication Standards: Nurses advocated for clarity in communication protocols to advance collaboration between health professions, creating an environment conducive to teamwork.

B. Discussion

The results of this study on demographic characteristics and barriers to the nursing process can be significant in how nurses practice in clinical areas. Results: The review identified a variety of clinical experiences between nurses, with a particular deficiency of nurses participating in programs centered on the nursing process. This indicates that there is an urgent need to improve the training opportunities available to healthcare institutions for nurses, which complements the literature on the need for ongoing professional development within nursing.

1. Workplace Settings and Program Participation

The diverse experiences that shape the clinical practice of nurses can manifest in their distribution across different clinical settings, namely: 46.4% in general departments, 33.2% in emergency units, and 20.4% in intensive care units (ICU) .Less than half (24.8%) of nursing process-focused programs had low participation, representing an area worth addressing. [12] arrive at similar findings [13] advocate for training programs to provide nurses with the specific skills required to implement the nursing process.

2. Barriers to the Implementation of the Nursing Process

The study shows that 78.4% of nurses indicated lack of knowledge and skills as an important barrier to the application of the nursing process. Our finding aligns with Patrylo [14], who also found that nurses' concerns about insufficient training and professional development are associated with decreased confidence and less quality patient care. Furthermore, 86.2% of the respondents mentioned lack of organizational support as an obstacle, and healthcare systems must create an environment to support nursing activity . Tonkikh [15], previously noted that a lack of resources and a lack of defined policies are significant barriers that hinder nurses' ability to put into practice effective nursing practices.

3. Communication Barriers and Resistance to Change

Barriers to communication and resistance to modifications are systemic problems plaguing healthcare teams. Almost 80% of the participants have cited poor interprofessional communication, corroborating the work of Heier [16], who assessed the fact that poor communication can cause confusion and disrupts conjunctional work. In addition, hostile attitudes towards change, as reported by 52.4% of the participants, stress the importance of developing an environment of tolerance and adaptability in healthcare institutions.

4. Thematic Analysis of Qualitative Data

The qualitative analysis corroborates the quantitative findings, particularly with respect to the inadequacy of knowledge and training. Many nurses expressed feeling ill prepared to implement the nursing process, reinforcing the call for continuous education highlighted in previous studies by Attia [16]. Furthermore, the recurring theme of resource limitations aligns with quantitative evidence that indicates that high patient-to-nurse ratios pose serious risks to patient care.

5. Improvement suggestions

However, the suggestions of the respondents to improve the nursing process indicate a multifaceted approach. Nor should barriers be ignored, for appropriate recommendations were made to improve training programs, increase staffing, and improve communication procedures. These recommendations are in line with those of the recent meta-analysis conducted by [17], where they encouraged healthcare facilities to create enabling environments for the integration of the nursing process into clinical practice.

Conclusions

This research draws attention to significant obstacles nurses face in performing the nursing process with indications of lack of knowledge, organization, and resources. The demographic study indicates a young and varied workforce that could provide diverse perspectives, but the low level of participation in specialty courses indicates a gap in the professional development of nurses. Knowledge was the most common reason for nonparticipation in 78.4 % of the participants, which indicates an urgent requirement for training programs and measures, whilst low organizational concern voiced by 86.2 % of respondents indicates the need for commitment at the level of the organization.

Thematic interpretation of qualitative data shows that these issues have been also raised in other studies with inadequate knowledge of the subject, lack of resources and opposition as the key ones. These issues require response that would include in policies enhanced organizational procedures, training strategies, and improvement of resources. These activities might include improving organizational policies, training strategies, and improving resources. Through these strategies, healthcare organizations will be able to improve the working conditions necessary for nursing processes while improving the standard of patient care offered within the healthcare system.

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