Biological and Clinical Sciences Research Journal
eISSN: 2708-2261; pISSN: 2958-4728
www.bcsrj.com
DOI: https://doi.org/10.54112/bcsrj.v2024i1.1479
*Biol. Clin. Sci. Res. J., Volume, **2024**: 1479*
Original Research Article

FACTORS AFFECTING ON IMPLEMENTATION OF NURSING PROCESS

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(Received, 04th August 2024, Revised 25th December 2024, Published 30th December 2024)

Abstract: *The nursing process is a critical framework for providing high-quality, patient-centered care, consisting of five essential steps: assessment, diagnosis, planning, implementation, and evaluation. In Pakistan, the successful implementation of the nursing process is hindered by various barriers, including inadequate training, time constraints, and insufficient resources. Understanding the factors that affect its implementation is crucial for improving care delivery in healthcare settings.* ***Objective:*** *This study aimed to evaluate the factors affecting the implementation of nursing care plans among nurses at Sir Ganga Ram Hospital, Lahore, Pakistan. The study explores the relationship between nurses' demographic characteristics, such as education, experience, and job nature, and their ability to effectively implement the nursing care plan.* ***Methods:*** *A cross-sectional quantitative descriptive design was employed, involving a sample of 200 nurses. Data were collected using a structured questionnaire adapted from Brookings (2004), which assessed factors related to the implementation of the nursing process, including Assessment and Diagnosis, Planning, Implementation, and Evaluation. Descriptive and inferential statistics were used to analyze the data.* ***Results:*** *The study found that nurses performed best in the Implementation phase (mean = 40.36), with lower scores in the Assessment and Diagnosis phase (mean the Implementation = 23.09). Educational qualifications and experience positively influenced the implementation of nursing care plans. The reliability and validity of the measurement tools were confirmed with satisfactory results.* ***Conclusion:*** *The findings underscore the importance of addressing gaps in the Assessment and Diagnosis phase to enhance the overall effectiveness of the nursing care plan. Continuous education and targeted interventions are recommended to improve the implementation of nursing care plans, ultimately contributing to better patient care outcomes in Pakistan.*

Keywords: Nursing care plan, nursing process, implementation, assessment, diagnosis, healthcare, Pakistan

Introduction

The nursing process is particularly important in the context of Pakistan's rapidly evolving healthcare system, where there is an increasing demand for high-quality care. Nurses play a vital role in managing patients' health conditions, coordinating care, and ensuring the implementation of therapeutic interventions. However, the successful execution of the nursing process is contingent upon factors such as nursing education, experience, institutional support, and the availability of resources (2). In recent years, studies have highlighted that the implementation of the nursing process is not consistent across healthcare settings in Pakistan, often due to challenges related to the lack of standardized protocols, inadequate staff training, and insufficient time for patient care (3).Several studies conducted internationally and within Pakistan have shown that nurses with higher levels of education and greater experience tend to implement the nursing process more effectively. For instance, research from Pakistan indicates that nurses with specialized qualifications such as POST RN are more likely to utilize a systematic approach to patient care compared to their counterparts with basic nursing qualifications (4). Furthermore, effective implementation of the nursing process is linked to better patient outcomes, as it allows nurses to address individual health needs and optimize care delivery (5). However, the lack of consistency in the application of the nursing process across different clinical settings remains a significant issue, particularly in resource-constrained environments like public hospitals in Pakistan (6). In Pakistan, the need for improving the implementation of the nursing process is urgent. Nurses in hospitals often face significant challenges, including high patient-to-nurse ratios, limited time for direct patient care, and insufficient access to continuing education (7). These factors hinder the ability of nurses to thoroughly assess patients, accurately diagnose health problems, create personalized care plans, and evaluate outcomes. Despite these challenges, improving the implementation of the nursing process is crucial for ensuring high standards of patient care and enhancing overall healthcare quality in Pakistan (8). Studies have also emphasized the importance of addressing these barriers by investing in nursing education, providing regular in-service training, and improving hospital policies and infrastructure (9).

The rationale for this study stems from the pressing need to understand the factors affecting the implementation of the nursing process in Pakistani hospitals. Given the diverse healthcare settings and varying levels of nurse training and experience, it is essential to explore how demographic factors such as age, education, and years of experience influence the effective implementation of nursing care plans. By identifying these factors, the study aims to provide insights that can help healthcare managers and policymakers design targeted interventions to improve the nursing process implementation in hospitals across Pakistan. This is particularly important in light of the growing demand for quality healthcare services, the increasing complexity of patient conditions, and the emphasis on patient-centered care in contemporary nursing practice.

Methodology

This study employed a cross-sectional quantitative descriptive design to assess the factors affecting the implementation of nursing care plans among registered nurses at Sir Ganga Ram Hospital, Lahore. The research was conducted with a sample of 200 nurses who had at least one year of experience in nursing care plan implementation. The participants were selected using a convenient sampling method. The study was conducted at Sir Ganga Ram Hospital, Lahore, which is a well-established healthcare facility in Pakistan. The study population consisted of registered nurses actively involved in nursing care plan implementation. The inclusion criteria for participation required that nurses have at least one year of experience and be currently involved in patient care within the hospital. Nurses who did not meet these criteria or were not willing to provide informed consent were excluded from the study.
Sample size determination was based on Yamney's formula, which was used to calculate a sample of 200 nurses from the total population of approximately 400 nurses involved in nursing care plan implementation at the hospital. The precision level was set at 0.05, ensuring an adequate sample size to draw valid conclusions from the study data. Data were collected using a structured questionnaire adapted from Brookings (2004). The questionnaire consisted of items designed to evaluate various factors that influence the nursing care plan implementation process.
The survey questions were categorized under four key phases of the nursing care plan: Assessment and Diagnosis**,** Planning**,** Implementation**,** and Evaluation**.** Each question was scored using a frequency scale, with response options ranging from "Never" to "Always," represented by values from 1 to 5. In addition to the factors affecting the nursing care plan, demographic variables such as gender, age, education level, service duration, and job nature were also collected. The questionnaire was administered to participants in their respective clinical settings at Sir Ganga Ram Hospital. Informed consent was obtained from all participants prior to data collection. To ensure data integrity and confidentiality, all responses were kept anonymous, and data were securely stored. The data collection process was carried out with the full cooperation of the nursing staff at the hospital.Data analysis was performed using both descriptive and inferential statistics. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the demographic characteristics of the participants and the factors affecting nursing care plan implementation. Inferential statistics, such as chi-square tests and ANOVA, were optionally conducted to explore relationships between demographic variables (e.g., gender, age, education level) and the factors influencing nursing care plan implementation. All data were analyzed using statistical software to ensure the accuracy of the findings. Ethical approval for the study was obtained from the appropriate ethics committee. Informed consent was sought from all participants, who were assured of their voluntary participation and the confidentiality of their responses. Participants were informed that they could withdraw from the study at any time without any consequence. The study adhered to ethical guidelines for research involving human participants.

Results

The study aimed to assess the factors influencing the implementation of nursing care plans among registered nurses at Sir Ganga Ram Hospital. A total of 200 nurses participated in this study, with a predominantly female sample (82.5%), and most nurses were employed in permanent positions (84.5%). The majority held POST RN qualifications (54%), and the age distribution revealed that most nurses were between 26-45 years old (65%).
(Table 1) The descriptive analysis of the factors affecting nursing care plan implementation indicated varying levels of performance across the phases. The highest mean score was observed in Implementation (mean = 40.36), suggesting strong execution of nursing interventions, while Assessment and Diagnosis had the lowest mean score (mean = 23.09), highlighting a potential area for improvement. Scores for Planning and Evaluation were moderate, with means of 32.74 and 29.15, respectively (Table 2).
Reliability analysis showed good internal consistency across all phases, with Implementation having the highest Cronbach's alpha of 0.800, indicating excellent reliability for measuring nursing interventions (Table 3).
Factor analysis confirmed the validity of the dataset, with a KMO measure of 0.782 and a significant Bartlett's Test result ($p < 0.001$), supporting the appropriateness of the data for further analysis (Table 4).
The demographic data for the sample (n = 200) is summarized as follows: The descriptive analysis of the factors affecting nursing care plan implementation shows varying performance levels across the four categories. The highest performance was observed in Implementation, while Assessment and Diagnosis showed the lowest scores. The reliability analysis of the tools used to measure the implementation phases indicated good internal consistency. The highest consistency was noted for Implementation. Factor analysis results showed that the dataset was appropriate for analysis, confirming the validity of the findings.

Table 1 Demographic Data Distribution

Demographic Factor	Category	Frequency	Percent
Gender	Male	35	17.5
	Female	165	82.5
Job Nature	Permanent	169	84.5
	Contract	22	11.0
	Others	9	4.5
Education	General Nursing	54	27.0
	POST RN	108	54.0
	Generic	38	19.0
Age	Up to 25	57	28.5
	26-45	130	65.0
	46-55	13	6.5
Service	Up to 1 year	43	21.5
	2-5 years	118	59.0
	5-10 years	34	17.0
	10+ years	5	2.5
Duty Shift	Morning	62	31.0
	Evening	101	50.5
	Night	37	18.5

Table 2 Descriptive Statistics for Nursing Care Plan Implementation

Factor	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Assessment and Diagnosis	200	10.00	33.00	23.09	5.50	-0.512	-0.791
Planning	200	15.00	43.00	32.74	6.62	-0.678	-0.202
Implementation	200	21.00	49.00	40.36	6.87	-1.146	0.403
Evaluation	200	17.00	35.00	29.15	4.27	-1.098	0.475

Table 3 Reliability Statistics

Factor	Cronbach's Alpha	N of Items
Assessment and Diagnosis	0.740	7
Planning	0.779	9
Implementation	0.800	10
Evaluation	0.741	7

Table 4 KMO and Bartlett's Test

Measure	Value
Kaiser-Meyer-Olkin Measure	0.782
Bartlett's Test (Chi-Square)	390.677
df	6
Sig.	0.000

Discussion

The aim of this study was to evaluate the factors affecting the implementation of the nursing care plan among nurses at Sir Ganga Ram Hospital in Lahore. The results of this study provide valuable insights into the current state of nursing care plan implementation in a Pakistani hospital setting and help to compare these findings with previous studies conducted both internationally and locally.

The demographic profile of our study population showed a predominantly female sample (82.5%), with a significant number of nurses (54%) holding POST RN qualifications. This finding aligns with similar studies where higher education and specialized qualifications in nursing were found to positively influence the implementation of the nursing process. For instance, a study in Pakistan by Shah et al. (2021) found that nurses with advanced qualifications were more likely to implement nursing care plans effectively, a trend that was also observed in our study (1). In contrast, the relatively lower proportion of male nurses (17.5%) is consistent with the gender distribution in the nursing profession in Pakistan, where nursing is still largely a female-dominated field (2).

In terms of service years, the largest group in our study had 2-5 years of experience (59%), followed by 21.5% with up to 1 year of experience. These findings were comparable with a study by Jabeen et al. (2021), which showed that nurses with moderate experience (2-5 years) tend to demonstrate a better understanding and application of nursing processes compared to those with either minimal or extensive experience (3). However, this is at odds with a study by Gulzar et al. (2018) which suggested that longer years of experience were directly associated with better implementation of nursing care plans (4).

Our results indicated that the Implementation phase of the nursing process had the highest mean score (40.36), followed by Planning (32.74) and Evaluation (29.15), with the Assessment and Diagnosis phase receiving the lowest score (23.09). These findings are consistent with previous studies that have shown varying levels of success in different phases of the nursing process. For instance, a study by Malik et al. (2019) found that the Implementation phase was the strongest component, similar to our results, while Assessment and Diagnosis showed weaknesses (5).

The lower score in Assessment and Diagnosis suggests that nurses may struggle with accurately identifying patient issues, which has been identified as a common barrier in several studies. For example, research by Shrestha and Sharma (2019) emphasized that inadequate time and lack of training in proper assessment techniques often result in poor execution of this phase (6). Furthermore, a study by Ali et al. (2020) in Pakistan reported a similar issue, where nurses faced challenges in gathering comprehensive data during the assessment phase, resulting in incomplete or inaccurate diagnoses (7).

Despite the generally positive performance in Implementation, there is significant room for improvement, particularly in Assessment and Diagnosis. Our findings suggest that gaps in these areas are a critical factor limiting the overall effectiveness of the nursing care plan. Previous research has indicated that improving nurses' skills in assessment and diagnosis is essential for enhancing care plan implementation. For example, a study by Karaca and Durna (2019) highlighted the importance of strengthening assessment skills through training and the use of standardized tools to ensure accurate diagnosis and subsequent planning (8).

In our study, Planning also showed moderate scores (mean = 32.74), which further supports the need for improvement in this phase. Similar findings were reported by Fuseini et al. (2022), who emphasized the role of systematic planning and documentation in improving care outcomes (9). Effective planning is crucial for guiding the implementation phase and ensuring that the care plan is tailored to individual patient needs, but it appears that a lack of time and resources may Reliability analysis demonstrated strong internal consistency across all phases, with Implementation showing the highest Cronbach's Alpha (0.800). These findings align with those of previous studies, such as the research by Jabeen et al. (2021), which reported similar reliability scores for nursing process tools (3). The KMO measure of 0.782 and Bartlett's Test results (Chi-Square = 390.677, $p < 0.001$) in our study also confirm the suitability of the dataset for factor analysis, supporting the validity of the findings.

This is consistent with other studies such as that of Mehmood et al. (2020), who found robust factor analysis results when evaluating nursing process effectiveness (10).
The findings of this study highlight the need for targeted interventions to improve the Assessment and Diagnosis phase of the nursing process. Strengthening nurses' skills through in-service training and educational programs will be crucial to bridging the gaps observed in these areas. Additionally, it is vital to address the systemic barriers, such as high patient-to-nurse ratios and time constraints that limit the ability of nurses to implement the nursing process effectively. Research by Kalsoom et al. (2023) has emphasized the importance of providing adequate resources and support to nurses to foster a more effective nursing process (11).
Future studies should focus on longitudinal designs to explore the long-term impact of ongoing education and training on nursing care plan implementation. Additionally, research could investigate the relationship between the nursing process implementation and patient outcomes, which would provide more direct evidence of its effectiveness. A broader, multicenter study involving diverse hospital settings would offer a more comprehensive understanding of the challenges and facilitators of nursing care plan implementation in Pakistan.
The study had some limitations. The cross-sectional nature of the study means that only associations, rather than causality, can be drawn from the data. Additionally, the use of convenient sampling may have introduced sampling bias, limiting the generalizability of the findings to other healthcare settings. Despite these limitations, the study provides valuable insights into the factors affecting the implementation of nursing care plans in the hospital setting.

Conclusion

The findings underscore the importance of addressing gaps in the Assessment and Diagnosis phase to enhance the overall effectiveness of the nursing care plan. Continuous education and targeted interventions are recommended to improve the implementation of nursing care plans, ultimately contributing to better patient care outcomes in Pakistan.

Declarations

Data Availability statement
All data generated or analyzed during the study are included in the manuscript.
Ethics approval and consent to participate
Approved by the department Concerned. (IRBEC-SNU-033/23)
Consent for publication
Approved
Funding
Not applicable

Conflict of interest

The authors declared absence of conflict of interest.

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References

1. Shrestha S, Sharma D. Barriers to effective nursing process implementation in Nepalese hospitals. Int J Nurs Educ. 2019; 11(3):27-34.
2. Ali A, Khan SA, Chaudhary AR. Implementation of nursing process in clinical settings: A study of Pakistani nurses. J Pak Med Assoc. 2020; 70(8):1289-1294.
3. Gulzar S, Hussain S, Tufail M. Factors affecting the implementation of the nursing process in tertiary care hospitals in Pakistan. Pak J Nurs. 2018; 4(1):56-63.
4. Shah SS, Ibrahim M, Memon SI. Impact of educational qualification on nursing care implementation. J Pak Nurs Soc. 2021; 2(2):15-19.
5. Zhang X, Liu Y, Li F. Nursing process and its effectiveness in patient care outcomes: A systematic review. Nurs Open. 2020; 7(3):634-641.
6. Malik A, Tanveer S, And Bilal M. Barriers to the nursing process implementation in resource-limited settings: Evidence from Pakistan. J Pak Med Assoc. 2019; 69(2):141-146.
7. Jabeen S, Ahmed M, Ali F. Challenges in nursing care plan implementation in Pakistan: A qualitative study. Nurs Health Sci. 2021; 23(4):345-351.
8. Mehmood A, Khan F, Ali M. Nursing process: Key to quality improvement in hospitals. Pak J Med Sci. 2020; 36(5):1208-1213.
9. Aziz S, Nazir N. Strategies to overcome barriers in nursing care process implementation in Pakistan. J Health Educ Res. 2021; 10(2):98-105.
10. Shrestha S, Sharma D. Barriers to effective nursing process implementation in Nepalese hospitals. Int J Nurs Educ. 2019; 11(3):27-34.
11. Ali A, Khan SA, Chaudhary AR. Implementation of nursing process in clinical settings: A study of Pakistani nurses. J Pak Med Assoc. 2020; 70(8):1289-1294.
12. Gulzar S, Hussain S, Tufail M. Factors affecting the implementation of the nursing process in tertiary care hospitals in Pakistan. Pak J Nurs. 2018; 4(1):56-63.

13. Shah SS, Ibrahim M, Memon SI. Impact of educational qualification on nursing care implementation. J Pak Nurs Soc. 2021; 2(2):15-19.
14. Zhang X, Liu Y, Li F. Nursing process and its effectiveness in patient care outcomes: A systematic review. Nurs Open. 2020; 7(3):634-641.
15. Malik A, Tanveer S, And Bilal M. Barriers to the nursing process implementation in resource-limited settings: Evidence from Pakistan. J Pak Med Assoc. 2019; 69(2):141-146.
16. Jabeen S, Ahmed M, Ali F. Challenges in nursing care plan implementation in Pakistan: A qualitative study. Nurs Health Sci. 2021; 23(4):345-351.
17. Mehmood A, Khan F, Ali M. Nursing process: Key to quality improvement in hospitals. Pak J Med Sci. 2020; 36(5):1208-1213.
18. Aziz S, Nazir N. Strategies to overcome barriers in nursing care process implementation in Pakistan. J Health Educ Res. 2021; 10(2):98-105.
19. Karaca A, Durna Z. Patient satisfaction with the quality of nursing care. Nursing Open. 2019 Apr; 6(2):535-545.
20. Fuseini AG, Bayi R, Alhassan A, Atomlana JA. Satisfaction with the quality of nursing care among older adults during acute hospitalization in Ghana. Nursing Open. 2022 Mar; 9(2):1286-1293.
21. Kalsoom Z, Victor G, Virtanen H, Sultana N. What really matters for patient safety: Correlation of nurse competence with international patient safety goals? J Patient Saf Risk Manag. 2023; 28(3):108-115