



Original Article

Effectiveness of Standardized Nursing Care Plan on Nurses' Usability Regarding Quality Nursing Care in Private Tertiary Care Hospital Lahore

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ABSTRACT

Nursing care entails both an art and a science, involving the provision of tailored patient care based on individual healthcare requirements. The nursing care plan is instrumental, serving as a precise guide for nurses in delivering patient-centered, high-quality care. It functions as a roadmap, enabling nurses to monitor the patient's response to treatment and make necessary adjustments to meet medical needs. Challenges such as excessive workload, absence of policies, inadequate resources, understaffing, and unavailability of assessment forms hinder the effective utilization of nursing care plans. **Objective:** To evaluate the effect of standardized nursing care plan on nurses' usability of nursing process during patient care. **Methods:** A quasi-experimental study was conducted at a Tertiary Care hospital Lahore Pakistan. A stratified Random sample of n=47 participants intervention group was recruited. A validated questionnaire of Nurses' usability of standardized nursing care plan consisted of 23 items. Data were analyzed through SPSS version 21. **Results:** Majority of the participants 44.7% (n=21) were between 26-30 years of age, 46.8% of the participants (n=22) had working experience between 1-4 years, 70.2% (n=33) of them having nursing diploma, 23.4% (n=11) were attained Post RN BSN. A significant difference was found between Nurses' usability scores before and after intervention as evident by p=0.000 with mean and SD of 2.8085+0.79778 and 3.7872+0.41369, respectively. **Conclusions:** It is evident from results that standardized nursing care plan has a significant effect on nurse's usability that improve the quality of nursing care in Hospital.

INTRODUCTION

Nursing care is the art and science of providing quality nursing care to patients, depending on their healthcare needs. It is a process that ranges from determining the health to assisting the patient towards full recovery. Nursing care, therefore, refers to the care of others. Similarly, the nursing process guides all nurses to provide patient-centered quality care internationally. It is a standard procedure that is being followed by all nurses in the world. The nurse monitors the patient's reaction to the treatment being given along the way and adjusts as needed based on the patient's health situation [1, 2]. It is essential for the well-being of hospitalized people to have access to safe and effective nursing care, which is a fundamental

human right [3]. The quality of hospital healthcare is determined by the level of nursing care, which is a solid predictor of a positive patient prognosis. Therefore, it is crucial to assess nursing care quality in order to improve the standard of care [4-6]. Lack of application of nursing care plan can result in lower-quality care, a patient spending more time in the hospital, and higher treatment costs. The morbidity and mortality rates will rise as a result of poor quality. If the information acquired by nurses is well-documented, it can be a great resource for planning, providing high-quality care, reducing medical costs, lowering readmission rates, and promoting the well-being of patients [6, 7]. The aim of this study was to evaluate the

effect of standardized nursing care plan on nurses' usability of nursing process during patient care. This study also showed that participants need more instruction and hands-on practice with the nursing approach. The utilization of the nursing process is severely hampered by non-nursing factors such as a lack of policies, reference materials, incentives, supplies, staff, patient charts and printed nursing care plans. Utilization of the nursing process was further hampered by a lack of performance contracts and opposition from other disciplines [8-10].

METHODS

A quasi-experimental study (one group pre / post design) was conducted in Tertiary Care Hospital Lahore. The duration of data collection was 09 months after the approval of synopsis from Research Ethical Committee (REC), The University of Lahore. The rules and regulations set by the Researcher Ethical Committee of The University of Lahore were followed while conducting the research and the rights of the research participants were respected. Permission was taken from head of the departments and Medical Superintendent. Written informed consent was taken from all the Nurses. A stratified random sample 50% (medical and surgical ward of cardiac unit) 25% (coronary care unit) 25% (intensive care unit). Sample size of 47 cases is calculated with 95% confidence interval, 5% margin of error and expected percentage of knowledge (pre-post difference) regarding nursing care plan utilization among staff nurses is 15.8%. All registered Nurses' of cardiac unit, Nurses' who have more than 6 months clinical experience in cardiac unit, Both female and male nurses' of cardiac unit, Nurses' who are more than 20 year of age. The Exclusion Criteria was Nurses who are on Leave during data collection and Nurses who are working in post-operative unit of angiography and OPD. All information and data collection was kept confidential. Participants were kept anonymous throughout the study. A validated questionnaire of Nurses' usability of standardized nursing care plan consisted of 23 items had a four-point scale like Always use (4points), sometime use (3points), rarely use (2 points), never use (1 point). Standardized nursing care plan utilization maximum score is 92, minimum score is 23. Scoring criteria is >75%. Always use of standardized nursing care plan > 50% -75% sometime use of standardized nursing care plan > 25%-50%. Rarely use of standardized nursing care plan < 25% Never use of standardized nursing care plan. Data collection was carried out in three phases. Assessment phase for pre assess the Nurses usability and intervention phase consist of three sessions in 16 weeks and evaluation phase for post intervention assessment. Data were collected by primary researcher and analyzed into SPSS version 21.0.

RESULTS

Majority of research participants 44.7% (n=21) were between 26-30 years of age, 29.8% (n=14) were between 31-35 years, 21.3% (n=10) were between and 20-25 years, 4.3% (n=2) were 36-40 years of age. The 57.4% (n=27) were single and 42.6% (n=20) were married. In relation to the position of staff nurses 95.7% (n=45) and head nurse 4.3% (n=2). Results further indicate that 46.8% of the participants (n=22) had working experience between 1-4 years, 23.4% (n=11) had working experience between 5-9 years, 23.6% (n=11) had working experience 10-14 years and 2.1% (n=1) research participants had less than 6 months of working experience in cardiac unit. In relation to the level of education, majority 70.2% (n=33) of them having nursing diploma, 23.4% (n=11) were attained Post RN BSN, 6.4% (n=3) only were attained generic BSN education in clinical setting of cardiac unit. Detail is given in Table 1.

Table 1: Demographic characteristics of participants

Demographics	Frequency (%)
Age in years	
20-25	10 (21.3%)
26-30	21 (44.7%)
31-35	14 (29.8%)
36-40	2 (4.3%)
Marital status	
Single	27 (57.4%)
Married	20 (42.6%)
Position as a Nurse	
head nurse	2 (4.3%)
staff nurse	45 (95.7%)
Working experience	
< 6 months	1 (2.1%)
1-4 year	22 (46.8%)
5-9 year	11 (23.4%)
10-14 year	11 (23.4%)
15-19 year	2 (4.3%)
Qualification of Nurses	
Nursing diploma	33 (70.2%)
generic BSN	3 (6.4%)
Post Rn BSN	11 (23.4%)

Majority of the participants 53.2% (n=25) were found in sometime utilization of standardized nursing care plan in clinical setting in pre intervention which was found 21.3% (n=10) in post intervention, 23.4% (n=11) reveals that the nurses rarely used of standardized Nursing Care Plan in pre intervention, 0% not utilization of SNCP in post intervention, 17.0% (n=8) were found always used the Standardized Nursing Care Plan in pre intervention which was improved to 78.7% (n=37) after intervention. Only 6.4% (n=3) research participants said never use of Standardized Nursing Care Plan in pre intervention but after intervention it found 0%. Detail is given in Table 2 about utilization of Standardized Nursing Care Plan in pre and post

intervention detail given in Table 2.

Table 2: Nurses Usability of Standardized Nursing Care Plan (n=47)

Nurses Usability	Pre N (%)	Post N (%)
Never use of SNCP	3(6.4%)	0(0%)
Rarely use of SNCP	11(23.4%)	0(0%)
sometime use of SNCP	25(53.2%)	10(21.3%)
Always use of SNCP	8(17.0%)	37(78.7%)

This Table is represented the effect of educational intervention on standardized nursing care plan on Nurses' usability among staff nurses working in cardiac unit departments. A significant difference was found between Nurses' usability scores before and after intervention as evident by $p=0.000$ with mean and SD of $2.8085+0.79778$ and $3.7872+0.41369$, respectively. It was further found that the mean difference between pre and post scores of nurses' usability. It was evident from the above result that effectiveness of standardized nursing care plan based educational intervention has a significant effect on nurses' usability among staff nurses working in cardiac unit departments. In similar way, a paired sample t-test was used to see the effect of standardized nursing care plan based educational intervention in cardiac unit departments. It is evident from above result that standardized nursing care plan has a significant effect on nurses' usability that directly effect on quality of nursing care in cardiac unit departments.

Table 3: Nurses' usability of Standardized Nursing Care Plan before and After Intervention

Variable	Before intervention Mean \pm SD	After intervention Mean \pm SD	T	P-value
Nurses' usability	2.8085 +0.79778	3.7872 +0.41369	-7.484	0.001

DISCUSSION

The majority of research participants were between 26-30 years of age, (n=14) were between 31-35 years, (n=10) were between and 20-25 years, (n=2) were 36-40 years of age. These results are similar in line with an intervention study in which participants were between the ages of 30-34 years in the intervention group [11]. In relation to the level of education, majority 70.2% (n=33) of them having nursing diploma, 23.4% (n=11) were attained Post RN BSN, 6.4% (n=3) only were attained generic BSN education. These study findings are supported by a study conducted by Karachi, where four-year Registered Nurse (RN) diploma is the most common educational background among the participating nurses (59.09%). Not a single nurse has a Master's degree in nursing, which is concerning. Barret advised increasing the number of qualified nurses in specialized care units, noting that there is a strong correlation between nursing education levels and the quality of care provided [12, 13]. Results further indicate

that Results further indicate that 46.8% of the participants (n=22) had working experience between 1-4 years, 23.4% (n=11) had working experience between 5-9 years, 23.6% (n=11) had working experience 10-14 years. These findings are consistent with another study conducted in Kenya in which findings was the median years of experience of 4 to 10 years. Generally, in the cardiac unit departments, nurses have major role in providing quality care to patients by utilizing the standardized nursing care plan that indirectly linked to the patient's satisfaction. Nursing intervention play a key role in promoting the patient satisfaction by properly implemented the nursing care plan, that help nurses to provide independent patient care [14, 15]. Majority of the participants were found in sometime utilization of standardized nursing care plan in clinical setting in pre intervention which was found 21.3% (n=10) in post intervention, 23.4% (n=11) reveals that the nurses rarely used of standardized SNCP in pre intervention, 0% not utilization of SNCP in post intervention, 17.0% (n=8) were found always used the SNCP in pre intervention which was improved to 78.7% (n=37) after intervention. Only 6.4% (n=3) research participants said never use of SNCP in pre intervention but after intervention it found zero. These findings are consistent with the study conducted in Jaipur Sikar in 2017. According to the findings, the nursing intervention effectiveness in form of knowledge enhancement and training practice associated with implication of nursing care plan in providing quality nursing care to cardiac patients [16]. On the contrary, a study was conducted in Kenya in 2022. Descriptive statistics were used to summarize the data and Pearson's correlation coefficient was used to establish correlation between variables. Factors are associated with hindrance the implementation of nursing care plan [17]. Proper Implementation of the nursing care plan can be promoted through focusing on beneficial factors such as adequate staffing, training, administrative support, and providing resources [18, 19]. Similarly, in 2017, a study was conducted in Greece to examine the impact of educational intervention on nursing care plans using the NANDA, a structured questionnaire that was given before and after educational intervention. The intervention boosted their capacity for making accurate nursing diagnoses and nursing care plans. A strong impact of educational intervention on nursing care plans was shown to improve nurses' knowledge and skills in using nursing care plans and incorporating documentation into the nursing process [20].

CONCLUSIONS

It is concluded majority of participants were between 26-30 years of age having 1-4 years of working experience and had diploma level education. Nurses usability of standardized nursing care plan concluded majority of the

study participants found agreed to utilize the standardized nursing care plan in clinical setting. This study demonstrated that there is significantly effect of standardized nursing care plan on nurses' utilization of nursing care plan and in providing quality nursing care to patients. There is a significantly difference in post intervention mean scores on nurse's usability. The quality of nursing care can be monitored based on nursing care plan where nurse decide, plan, implement and evaluate the nursing care. The utilization of nursing process and availability of a clear guidelines can improve the quality of nursing care which in turn increased the health outcomes in clinical setting.

Authors Contribution

Conceptualization: MH, SM

Methodology: MH, SM

Formal analysis: MH, SM

Writing, review and editing: MH, SM

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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