Original Article

Effectiveness of Nurse-led Educational Intervention on Therapeutic Communication of Undergraduate Nursing Students by Using SBAR tool

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ABSTRACT

Efficient communication is most noteworthy because it impacts patient quality care. A prepared tool might be helpful to adequately impart patient data, lessen unfavorable incidents, improve patient safety, enhance quality of care, and amplify the healthcare team members' satisfaction. **Objective:** To identify the effectiveness of nurse-led educational intervention on therapeutic communication of undergraduate nursing students by using the SBAR tool. **Methods:** This pre & post-quasi-experimental study was conducted from Jan-2021 to May-2021 among 120 undergraduate students from two different nursing institutions in Karachi by using a purposive sampling technique. Ethical approval was obtained and written informed consent was taken from each participant in the study. Data was collected by adopting the SBAR tool comprising 10 multiple-choice questions. Nurse-led educational intervention was provided after pre-assessment through lectures and discussion in the classroom. Data were analyzed using SPSS version-23. **Results:** Results showed a mean ± SD of age 30.44±5.40 varied from 23 to 51 years. Most of the participants (51.7%) were female and 70.8% of the participants had working experience ranging from 2 to 10 years. In the pre-test assessment, most of the participants secured a 4 out of 10 score (25.0%) whereas 8 out of 10 score (29.2%) in the post-test. A significant impact on the knowledge of undergraduate nursing students after educational intervention (p<0.001) was seen. **Conclusions:** This study concludes that undergraduate student nurses have very low knowledge related to the SBAR tool for therapeutic communication. Nurse-led education interventions improve nursing knowledge and understanding of the SBAR tool, as evident by post-test scores.

INTRODUCTION

Healthcare professionals must have effective communication abilities in order to be good listeners, observers of critical and crucial non-verbal signs by the client, and lastly be able to answer the relevant queries of the client in an effective manner[1]. Nurses and Physicians are the adjoining members of any healthcare setup and have a shared objective, to give care. Effective communication between nurses and physicians leads to the provision of comprehensive services for patients[2]. Under-valuation for the significance of efficient Physicians-Nurses skills and lacking effective correspondence abilities can have real inference in nursing practice. Efficient communication delivery is a substantial component when planning to give quality and exceptional care to the client and family approaching a healthcare facility[3]. Efficient communication by nurses is essential to guarantee clients' wellbeing. A lack of professional communication and collaboration may be one of the main causes of medication errors. An organized communication ensures clearness, satisfaction, and positive attitudes during interprofessional cooperation among nurses [4]. Nursing students consider therapeutic communication to be stressful and of the least significant segments of nursing curriculum [5]. In addition, bad interaction experiences of nursing students with the patients lead to low confidence, anxiety, burnout, career dissatisfaction

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and decreased motivation [6]. A prepared tool might be useful to adequately impart the patient data, lessen the unfavorable incidents, improve patient safety, enhance the quality of care, and amplify the healthcare worker's fulfillment [7]. Analysts recommended that the utilization of tools, such as the Situation, Background, Assessment and Recommendation (SBAR) tool, assumes a job in keeping away from communication gaps and mistakes. Studies assessing the SBAR have additionally appeared to expand the view of Nurse-Physician correspondence and coordinated effort in surgery and medicine wards just as in the rehabilitation facilities. In any case, training is required before the SBAR tool is utilized, as the SBAR method might be tedious [8]. The SBAR tool is a user-friendly, organized, and standardized method that the United States military created and used to enhance communication between colleagues during intense circumstances. Individuals from the healthcare organizations later adopted it and the Joint Commission and the Institute for Healthcare Improvement presently prescribe this specialized tool to be utilized in a wide assortment of settings [9]. Effective therapeutic communication by nurses is particularly important to ensure patient care. The World Health Organization reports that the density of nurses (per 10,000 population) in urban and rural areas of Pakistan is 7.6% [10]. In such circumstances the chances of communication errors do increase and may also compromise the patient's safety. Standardized communication may ensure the safe transfer of patient information with minimal margin of error. The training to use such tools of communication is especially important as it will aid in uniformity and completion of patient's essential data properly and with least effort. Hence, the objectives of this study were to assess the knowledge level of communication skills among undergraduate nursing students and to determine the effects of SBAR communication tool as an educational intervention in undergraduate Nursing students' therapeutic communication.

METHODS

This pre and post quasi-experimental study was conducted by using purposive sampling approach among Post RN BS-Nursing and Post RN BS-Midwifery students at Institute of Nursing, Dow University of Health Sciences and St. James Institute of Nursing & Health Sciences, Karachi with having minimum of one year of clinical experience were included. Four-year BS-Nursing students were not part of this study. Sample size calculation was performed by using PASS version 11 with a 95% confidence Interval, 80% power of test, 5% margin of error, and a mean score of 94% of post-assessment of study participants [11], the calculated sample size was 120 participants. Approval was obtained from the Institutional Review Committee of the Institute of

Nursing and Midwifery, Dow University of Health Sciences (Ref No. DUHS/ION/MSN/2020/-18/412). Permission was taken from the Principals of both nursing institutions. Written informed consent was taken from each participant of the study. Two sets of data were collected between January to May 2021 by administering the pre-test and the post-test questionnaire. The validity and reliability of this tool, while used by Murray had scores that ranged between 10/50 and 50/50 (r=0.82) [12]. All participants completed the pre-test in January 2021, followed by the intervention. The educational intervention was prepared using Microsoft PowerPoint which intended to discuss each component of the SBAR i.e. How the raw data of the patient can be transformed into intelligent, SMART, segregated information under S-B-A-R components for better understanding of all healthcare team members. This was supported by real-time scenarios and examples that nurses encounter daily during therapeutic communication. The total duration of the intervention was 2 hours (120 minutes). The participants were answered to their queries during interactive discussions with the research team. At the end of the session, the participants were given an SBAR take-away card with a summary of each component to assist as a road map to employ the tool. The post-test was done in May 2021. Data were analyzed by using SPSS version 23.0. Paired sample-t test and Pearson correlation analysis were used for pre and post-test score comparison was used. Moreover, a p-value<0.05 was considered significant.

RESULTS

Table 1 shows the socio-demographic characteristics of the study participants. A total of n=120 undergraduate nursing students were included in this study with a mean± SD of age 30.44±5.40 varied from 23 to 51 years. The results highlighted that most of the participants were female 62 (51.7%), and most of the participants 69 (57.5%) were unmarried. The majority of the students (90.8%) were enrolled in Post RN BSN program and had experience ranging from 2 to 10 years (70.83%). Their clinical exposure was further characterized in various sectors: The Government sector (15.0%), the private (73.3%), Welfare/NGO (6.7%), and others (5%).

Table 1: Socio-Demographic Characteristics of Participants

Study Variables		Frequency (%)/ Mean ± SD
Age	–	30.44±5.40
Gender	Male	58 (48.3)
	Female	62 (51.7)
Marital Status	Married	49 (40.8)
	Unmarried	69 (57.5)
	Divorced/Widow	1 (0.8)
	Others	1 (0.8)

Study Variables		Frequency (%)/ Mean ± SD
Program Enrolled	Post RN BSN	109 (90.8)
	Post RN BSM	11 (9.2)
Work Experience	1-2 years	19 (15.8)
	2-5 years	44 (36.7)
	5-10 years	41 (34.2)
	10 and above	16 (13.3)
Work Sector	Government	18 (15.0)
	Private	88 (73.3)
	Welfare/NGO	8 (6.7)
	Others	6 (5.0)

Table 2 reveals the Mean test scores of the pre and post-test results. Pre-test score Mean ± SD 4.18±1.88 and for the post-test score Mean ± SD 7.51±1.57. It is evident that most undergraduate nursing students do not have adequate knowledge regarding the usage and the various components of the SBAR tool. However, the participants demonstrated improved knowledge about the general usage after the post-test scores were analyzed. Hence, the scores improved after the educational intervention showing significant impact (p-value= <0.001) in the comparison analysis between pre-test and post-test.

Table 2: Comparison Analysis between Pre-test and Post-test

Test Scores	Mean ± SD	Paired t test
Pre-test Score	4.18±1.886	p<0.001*
Post-test Score	7.51±1.572	

*p-value <or =0.05 is considered as significant

DISCUSSION

The findings of this study highlighted that nurse-led education intervention showed a significant improvement in the SBAR score on pre v/s post-assessment. These results were similar to the studies conducted in the Republic of Korea in 2017 [13], Iran (2023) [14], Korea in 2023 [15] and Norway in 2023 [16]. However, these findings were not supported by the study conducted in Indonesia in 2023 [17]. In this study participants with age of 30-35 years were included. Similar age group were part of the studies conducted in Indonesia in 2023 and Egypt in 2023 [17, 18]. In contrast, a study conducted in Ireland in 2019, showed that most of the age group of the participants were with slightly higher age group [11]. This study highlighted that more than ¾ of the study participants (86%) were having the clinical experience between 2-10 years. Participants with clinical experience ≤ 10 years did understand the tool in better way. These findings are supported by a previous study (2015) conducted on Chinese nursing students with having less than 6 years clinical experience shows a significance improvement of the study participants' knowledge of SBAR and their self-perceived attitudes towards using SBAR tool [19]. These findings are contradicted to a previous study which was published in 2017 and was conducted in Qatar.

This study was comprised on nurses with a range of 2-13 years of experience. However, this study did not show any significant association between SBAR score and the total experience of study participants [20]. Findings of this study highlighted that majority of the participants were female. These findings were similar to the studies conducted in Korea (2021), China (2021) and Korea in 2020, which showed the mostly highlighted participants were female [21-23]. In addition, our study found no significant difference between gender and SBAR tool score. These findings are opposed by a previous study which found a significant association between gender and satisfaction of nurses towards usage of SBAR tool [24]. The results of this study showed that most of the study participants were enrolled in a two-year associate degree program. Whereas study conducted in Jordon in 2020, evident that most of the study participants belonged to a four-year undergraduate program [21]. Our study found a significant difference between program enrolled of the participants and SBAR test score (p=0.032). Although, there are studies which show the association between score improvement with SBAR intervention [13-17, 20, 22]. However, no previous study found that showed the association between the SBAR scores specifically with the programs enrolled of the participants.

CONCLUSIONS

This study concludes that undergraduate student nurses have a very low knowledge related to the SBAR tool for therapeutic communication. Nursing education interventions, improve nursing knowledge and understanding about SBAR tool, as evident by post-test scores.

Authors Contribution

Conceptualization: AI
Methodology: AA
Formal analysis: TA
Writing-review and editing: AI, AA, TA

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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