

Effect of SBAR Training Program on Baccalaureate Nursing Students' Self-Confidence in Shift Reporting

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BACKGROUND: Patients can receive complete care through accurate and concise transfer of patient's clinical information from one nurse to another during different shifts. Effective communication plays an important role in providing safe patient care and decreasing medical mistakes.

AIM: The aim of this study was to assess the effect of SBAR communication training program on baccalaureate nursing students' self-confidence in shift reporting. This study was conducted at Nursing Faculty, Zagazig University, Egypt. For this research, a quasi-experimental design was used with a simple random sample of 81 students from the above mentioned setting. Data was collected using two tools; SBAR Knowledge Acquisition Quiz (SBRKAQ) and Self-Reported Anxiety and Confidence Scales (SRACS).

RESULTS: Results showed that there was highly statistically improvement in nursing students' SBAR communication mean score, self-reported confidence and self-reported level of preparedness during shift reporting after training program implementation where P -value < 0.01. Moreover, the mean score of nursing students' self-reported anxiety during shift reporting decreased after training program implementation (p -value < 0.01).

CONCLUSION: SBAR communication was significantly correlated with improving nursing students' self-confidence in shift reporting.

RECOMMENDATIONS: Healthcare facilities and educational institutions should adopt the use of the SBAR and provide continuous instructions for the SBAR tool throughout the curriculum includes specific applications at each student's level.

Keywords: SBAR communication; Intervention; Confidence in shift reporting; Nursing students

INTRODUCTION

Reporting of information occurs between various health care members including nurses and physicians. Although the importance of patient information for the delivery of safe patient care, it is also liable to reporting errors due to the continuous presence of communication barriers. These barriers include the hierarchical nature of nursing field, culture of the organization, diversity in styles of communication among healthcare members, lack of a standardized process and the complexity of health care environment [1]. In addition to these barriers, the variation in the parties involved and the complexity of the information contained in the reports also contribute to information discrepancies and omissions in reporting; ultimately lead to patient harms [2].

In an effort to minimize communication errors occurring at reporting times; Situation, Background, Assessment, and Recommendation (SBAR) communication tool gives a simple framework for conducting effective reporting through standardization of communication [3]. SBAR was initially created to serve as a way to convey important information in an efficient and timely manner [4]. Communication is defined as a two-way process in which the involved parties not only exchange information, ideas or feelings but also reach to a shared meaning [5]. It is used by everyone and every day. Communication skills are considered fundamental elements in nurses' daily performance; poor communication has a direct relation with poor outcomes, adverse events, and increased lengths of patient stay [6]. Effective communication plays a main role in building collaborative relationship among all members of healthcare team and patients [7].

Reporting among health care providers is essential for providing efficient and safe patient care and enhancing continuous care, [8] and it is one of the major responsibilities of nursing profession [9]. Shift report is the most important communication method of sharing essential information on patient-care with other care providers [10]. Using SBAR communication requires the nurses to include situation, background, assessment and recommendations in all cases of communication between nurses and physicians [11].

Nursing education should include opportunities to role play professional and effective communication that are vital to the development of communication

skills within nursing students [7,12]. SBAR is an efficient and easy tool that can be used in shift reporting [13,14]. In addition, it can improve the team spirit of staff nurses; also, it provides nursing students, staff nurses, and other members of the healthcare with a framework for increasing their self-confidence in the clinical setting to increase autonomy during practice [7]. This tool contains standardized questions divided into four sections that are used to ensure that the nurses quickly and concisely share patient's information [15]. In the SBAR framework, the communication styles of nurses and physicians and other health care givers are combined to establish a method for effective reporting that promotes effective informational exchange [16].

SBAR allows health care team to communicate with each other in an effective way especially in critical situations [17]. It is used to guide the nurse-to-nurse shift reporting through giving the on-coming nurse a full clinical picture of the health status of the patient [13]. The first step is the situation: which means what is the problem, the speaker gives his or her own name and role, the patient's name and room number and the reason for the communication [18]. Next step is background: which provides a brief relevant medical history about the patient or the problem, any treatment measures, the admitting diagnosis, and any past significant assessment data related to the patient. While making an assessment is the third step: which includes an overview of what is happening right now, recent progress in the patient's condition, and any new assessment data [19].

Finally, recommendations which includes giving recommendation based on the situation, background, and assessment, the speaker lists his or her questions and any specific requests for tests, consultations, changes in treatments, or transfers [20]. Utilization of the SBAR technique improves the safety culture of healthcare organizations [21]. Its consistent use helps in reducing communication errors, subsequently improving the receiver's confidence in the information contained in the reports [22]. So it is essential to train nursing students on SBAR communication.

Significance

Patient safety and effective communication both are important in clinical

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practice and must be a priority in clinical education; nursing students can be hesitant to communicate with nurses and other healthcare professionals in the clinical setting because they might not have necessary skills to communicate [6]. Failure to deliver effective shift or handover reports can lead to adverse events; reducing patient safety and harming patients [12]. Additionally, many health care facilities do not give nursing students the opportunity to practice communication skills with health care providers during their clinical education.

Subsequently, nursing education should include opportunities to role play professional and effective communication that are vital to the development of communication skills within nursing students [22]. On the other hand, the curriculum need to provide tools and practices such as SBAR tool that enable new nurses to be equipped with effective inter-professional communication skills [23]. In Nursing Faculty; students in the fourth year, enrolled in nursing administration course have the opportunity to make reports and records in real situation during the practical part of the course but they may not have the skills to write complete report and record. So it is important to implement SBAR training program on nursing students with hope that it will increase their self-confidence in shift reporting and communication with nurses.

Aim

The aim of the present study was to determine the effect SBAR communication training program on baccalaureate nursing students' self-confidence in shift reporting.

Hypotheses

- Nursing students' score regarding SBAR communication knowledge will be significantly improved after program implementation.
- Nursing students' self-reported anxiety in shift reporting score will be decreased after program implementation.
- Nursing students' confidence in shift reporting score will be increased after program implementation.

RESEARCH METHODOLOGY

Design

The study used one group quasi-experimental study.

Setting

This study was carried out at Nursing Faculty, Zagazig University, Egypt, which comprises seven scientific departments; nursing administration, pediatric nursing, psychiatric and mental health nursing, community health nursing, maternal and new born health nursing, medical surgical nursing, and geriatric nursing. Its aim is to prepare highly qualified nursing students able to compete nationally and internationally and provide nursing care with high quality.

Subjects

Simple random sample of fourth year nursing students, enrolled in nursing administration course, academic year 2018-2019.

Sample size

It was calculated using Yamane's [24] simplified formula ($n = N / 1 + N(e)^2$), at confidence interval 95% and margin of errors 5.0%, with a total population size of 436 nursing students; accordingly, the required sample size was 81. They were randomly selected by placing all students' names in containers and starting to pick up until the required number was collected.

Instruments

Two tools were used to collect data for this study.

Tool I:

The SBAR Knowledge Acquisition Quiz (SBRAKAQ): It was developed by Kesten [12] to assess nursing students' knowledge of SBAR communication before and after implementation of the training program. The quiz consisted of 10 multiple-choice questions with four options to answer. Scoring of the answers of nursing students was (1) for correct answer and (0) for incorrect. Tool's reliability was calculated by estimating its internal consistency using Cronbach's alpha coefficient, and it was 0.75.

Tool II:

Self-Reported Anxiety and Confidence Scales (SRACS): It was developed

by Kwong [23], it consisted of two parts as follows; the first part: Personal characteristics of nursing students. The second part: self-reported anxiety and confidence scales (SRACS); self-administered questionnaire to assess nursing students' shift reporting confidences before and after implementation of the training program. It is grouped under three subscales namely: anxiety (five items), confidence (five items) and the use of SBAR (three items) and one additional question to assess the self-report level of preparedness for shift reporting. The responses of nursing students to the questionnaire were measured on a five point Likert scale ranged from strongly disagree (1) to strongly agree (5). Tool's reliability was calculated by estimating its internal consistency using the Cronbach's alpha coefficient, and it was 0.75.

Field work

Preparatory phase: It started with a review of the theoretical and empirical literature of national and international study resources using textbooks, articles, journals, research, and internet search to get a clear picture of all aspects related to the studied topic. The pre-test tools were distributed to the nursing students to assess the baseline knowledge regarding SBAR communication and self-reported anxiety and confidence scale (SRACS). Based on the result of pre-test, the nursing students learning needs were identified. Accordingly, the objectives of the program were formulated and the content was designed.

Implementation phase: The training program planned for this study was carried out during 18 sessions (8 theory and 10 practical sessions). Those sessions lasted for 28 hours; 8 hours theory (an hour per session) and 20 hours for the 10 practical sessions (Two hours per session). The program was 9 weeks in length and the program sessions implemented two days per week. A special class has been assigned to teach the programme sessions at the Nursing Faculty, Zagazig University.

The program consisted of two main parts; the first theoretical part covering information about the program, included introduction, information on the communication which include definition, process, concept of SBAR communication, benefits of SBAR, areas of using SBAR, elements (situation, background, assessment and recommendation), barriers that hinder effective communications and how to apply SBAR tool in shift reporting in clinical settings. The second part is practical in form of situations for nursing students about SBAR communication.

Evaluation phase: focused on estimating the effect of the training program on nursing students' self confidence in shift reporting using the same tools that was used before program implementation. Assessment of the program was applied twice for the same students, one before starting the program and the second was done immediately after the program's completion.

Pilot study

It was conducted before collection of data in order to confirm understanding and applicability of the tools. Additionally, to estimate the time required for filling the questionnaire. It was carried out on 8 students (10% of the sample). They were selected randomly and not involved in the main research sample. Accordingly, the required adjustments were done.

Ethical consideration

The study was approved by Nursing Faculty's Dean and ethics committee, Zagazig University. An explanation was given verbally and in writing about the nature and aim of the study to nursing students who voluntarily participated in the study. They were given an option to discontinue at any time without explanation; also, the researchers told the students that they weren't forced to write their names with emphasis on information confidentiality as it would only be used for the research purpose and will be discarded after publication of the research.

Statistical analysis

It was performed using the Statistical Package for Social Science (SPSS), version 21.0. Data were presented in form of frequencies and percentages for categorical variables while means and standard deviations for continuous variables using descriptive statistics. Pearson correlation was used to determine the inter-relationships between variables.

RESULTS

Descriptive statistics for personal characteristics of nursing students presented in Table 1; about three quarters of nursing students (74.1%) were 23-24 years old, with mean age 21.23 ± 22.97 . The majority of them were females, didn't work during study and singles (79%, 84% & 87.7% respectively).

Total mean score of nursing students' knowledge regarding SBAR communication during the program phases illustrated in Table 2; there was highly statistically significant difference between level of students' knowledge of SBAR communication before and after implementation of the training program $P < .01$.

Descriptive statistics for the domains of self-reported confidence during shift reporting and comparison between before and after the program implementation presented in Table 3; nursing students' self-reported anxiety decreased immediately after implementation of the program (mean score 21.209 ± 7.298 & 17.236 ± 3.698 respectively) with statistically significant difference at p -value = 0.000. While self-reported confidence and preparedness for shift reporting increased immediately after implementation of the program with statistically significant differences at p -value = 0.000.

Correlation between total score of nursing students' knowledge about SBAR communication and self-reported confidence in shift reporting throughout the program phases addressed in Table 4; there was statistically significant correlation between total score of nursing students' knowledge about SBAR communication and self-reported confidence in shift reporting after termination of the training program only ($P < 0.05$).

Relation between nursing students' knowledge about SBAR communication and their personal characteristics presented in Table 5; there was statistically significant relation between nursing students' SBAR communication knowledge and gender only after implementation of the training program ($P < 0.05$). Relation between total score of nursing students' self-reported confidence in shift reporting and their personal characteristics presented in Table 6; there was no statistically significant relation.

Table 1: Distribution of personal characteristics of nursing students (n=81).

| Personal characteristics | No | % |
|--------------------------|-------------|--------|
| Age in year | | |
| 21- | 21 | 25.9% |
| 23-24 | 60 | 74.1% |
| Mean ± SD | 21.23±22.97 | |
| Gender | | |
| Female | 64 | 79% |
| Male | 17 | 21% |
| Marital status | | |
| Single | 13 | 16% |
| Married | 68 | 84% |
| Working during study | | |
| Yes | 10 | 12.3 % |
| No | 71 | 87.7% |

Table 2: Total mean score of nursing students' knowledge regarding SBAR communication during the program phases (n=81).

| Domains | Before program | After program | Paired t-test | P value |
|------------------------------|-------------------|-------------------|---------------|----------|
| | Mean \pm SD | Mean \pm SD | | |
| SBAR communication knowledge | 2.456 \pm 1.688 | 8.299 \pm 1.770 | 12.715 | <0.001** |

Paired t-test: Compare means scores pre-program and immediate post. ** Highly statistically significant at $P < .01$

Table 3: Total mean score of the domains of self-reported confidence during shift reporting throughout the program phases as reported by nursing students (n=81).

| Domains | Before program implementation | After program implementation | Paired t-tests | P value |
|---|-------------------------------|------------------------------|----------------|---------|
| | Mean \pm SD | Mean \pm SD | | |
| Self-reported anxiety | 21.209 \pm 7.298 | 17.236 \pm 3.698 | 4.532** | 0.000 |
| Self-reported confidence | 15.049 \pm 2.953 | 16.013 \pm 2.405 | 2.293** | 0.000 |
| Use of SBAR communication | 10.925 \pm 2.630 | 12.444 \pm 1.717 | 4.197** | 0.000 |
| Self-reported level of preparedness for shift reporting | 3.185 \pm .838 | 8.777 \pm .987 | 2.700** | 0.000 |
| Total Score | 50.368 \pm 13.719 | 54.47 \pm 8.807 | 12.546** | 0.000 |

Paired t-test: Compare mean scores pre-program and immediate post. ** Highly statistically significant at $P < .01$

Table 4: Correlation between total scores of nursing students' SBAR communication knowledge and their self-reported confidence in shift reporting during the program phases (n= 81)

| Variables | Before the program implementation | | After the program implementation | |
|---|-----------------------------------|-------|----------------------------------|-------|
| | SBAR communication knowledge | | SBAR communication knowledge | |
| | R | P | R | P |
| Self-reported confidence in shift reporting | 0.44 | 0.694 | 0.234* | 0.036 |

*Statistically significant at $P < .05$

Table 5: Relation between total score of nursing students' SBAR communication knowledge and their personal characteristics during the program phases n= (81).

| | Before the program implementation | | | After the program implementation | | |
|----------------------------|---|--------------------------|---------|--|----------------------------|---------|
| | Mean ± SD | Independent t-test(1) | P value | Mean ± SD | Independent t- test (2) | P value |
| Age in year | | | | | | |
| 21 | 3.684 ± 1.492 | 0.728 | >.05 | 7.315 ± 1.765 | 0.025 | >.05 |
| 23-24 | 3.387 ± 1.749 | | | 7.290 ± 1.786 | | |
| Gender | | | | | | |
| Male | 4.411 ± 1.502 | 2.727* | < .05 | 6.352 ± 0.931 | 2.555* | < .05 |
| Female | 3.203 ± 1.654 | | | 7.546 ± 1.859 | | |
| Marital status | | | | | | |
| Single | 3.397 ± 1.658 | 0.667 | >.05 | 7.338 ± 1.767 | 0.411 | >.05 |
| Married | 3.769 ± 1.877 | | | 7.076 ± 1.846 | | |
| Working during study | | | | | | |
| Yes | 3.500 ± 1.646 | 1.088 | >.05 | 7.200 ± 1.316 | 0.234 | >.05 |
| No | 3.547 ± 1.705 | | | 7.309 ± 1.823 | | |
| Entering faculty on desire | | | | | | |
| Yes | 3.400 ± 1.515 | 2.89 | >.05 | 7.725 ± 1.907 | 2.203* | < .05 |
| No | 3.512 ± 1.859 | | | 6.878 ± 1.536 | | |

*Statistically significant at P < .05

Table 6: Relation between total score of nursing students' self-reported confidence in shift reporting and their personal characteristics during the program phases (n=81).

| | Total score of self-reported anxiety and confidence during shift reporting | | | | | |
|----------------------------|--|-----------------------|---------|-------------------|------------------------|---------|
| | Before the program | | | After the program | | |
| | Mean ± SD | Independent t-test(1) | P value | Mean ± SD | Independent t- test(2) | P value |
| Age in year | | | | | | |
| 21 | 47.315 ± 8.762 | 1.883 | >.05 | 60.631 ± 16.836 | 1.319 | >.05 |
| 23-24 | 51.229 ± 8.646 | | | 57.30 ± 6.007 | | |
| Gender | | | | | | |
| Male | 50.176 ± 8.427 | 0.239 | >.05 | 56.294 ± 5.871 | 1.175 | >.05 |
| Female | | | | 58.652 ± 10.422 | | |
| Marital status | | | | | | |
| Single | 40.808 ± 9.111 | 0.519 | >.05 | 57.426 ± 8.491 | 1.004 | >.05 |
| Married | | | | 14.286 ± 3.962 | | |
| Working during study | | | | | | |
| Yes | 54.700 ± 9.684 | 1.443 | >.05 | 57.900 ± 6.008 | 0.095 | >.05 |
| No | 50.042 ± 8.601 | | | 58.114 ± 10.098 | | |
| Entering faculty on desire | | | | | | |
| Yes | 49.500 ± 9.427 | 1.27 | >.05 | 59.875 ± 12.060 | 1.652 | >.05 |
| No | 51.707 ± 8.137 | | | 56.341 ± 6.203 | | |

*Statistically significant at P < 0.05

DISCUSSION

Our study aimed to determine the effect of SBAR communication training program on baccalaureate nursing students' self-confidence in shift reporting; evaluate the program effect on students' level of self-confidence and anxiety during making reports especially shift report and assessing their knowledge about SBAR communication tool.

Concerning total mean score of nursing students' knowledge regarding SBAR communication during phases of the program; the findings of the present study showed that there was highly statistically improvement in

nursing students' knowledge regarding SBAR communication immediately after training program implementation. This finding supports the first hypothesis of the research which stated that nursing students' knowledge regarding SBAR communication will be significantly improved after program implementation. This improvement may be due to that completion of SBAR communication training program was helpful for nursing students to understand the concept of SBAR tool and its practical application, the encouragement by the researchers through role-plays and simulated scenarios was also helpful for nursing student to organize his or her thoughts quickly and to understand SBAR communication.

This result is consistent with Kwong [23] who conducted a study at Northern California to measure the effectiveness of SBAR training on LVN students' communication with nurses and found that there was statistically significant difference for the SBARKAQ scores after the students received the SBAR lecture.

Concerning total mean score of nursing students regarding domains of self-reported confidence in shift report; the findings of the current study clarified that there were highly statistically significant improvements in all domains and the total mean score among nursing students immediately after the program implementation; students' self-reported anxiety level decreased while self-reported confidence and preparedness for shift reporting increased immediately after implementation of the program. This finding supports the second hypothesis of the research which states that nursing students' self-reported anxiety level will be decreased after program implementation and the third research hypothesis which stated that nursing students' self-reported confidence in shift reporting will be increased after program implementation.

From the opinion of the researchers, the results that were previously presented may be due to the efficiency of the training program on eliminating anxious and frightened thoughts about collecting patient data and providing a shift report to a nurse. As well as, the methods and procedures contained in the program represented by playing roles, scenarios, modeling, reinforcement and reorganization of knowledge, discussion, feedback and duties. Also they were allowed to practice shift reporting in clinical area that enhances positive self-confidence and reduces anxiety.

The above mentioned findings support the results of McCrory et al. [20], which performed a study on 26 interns at John-Hopkins University to assess if SBAR can improve handoff, and found that the total mean score of the handoff anxiety decreased post-intervention. Also Ascano-Martin [25] who conducted a study to assess the impact of SBAR on enhancing nursing students' confidence and found that applying SBAR communication knowledge reduced nursing students shift report anxiety after implementation of the training program.

This finding in the same line with Thomas, et al. [26] who performed a study to evaluate the effect of SBAR in improving the clinical practice preparation and communication competency of senior nursing students, and found that nursing students anxiety in shift reporting decreased after training program. Similar results found by with Kostjuk [7], in Canada to evaluate whether learning the ISBARR communication tool framework had a relationship with nursing student's perceived confidence and anxiety levels associated with handover reports, found a statistically significant difference in nursing students' reported levels of anxiety associated with reporting before and after the ISBARR framework was learnt.

Concerning, correlation between total scores of nursing students' knowledge regarding SBAR communication and their confidence in shift report during phases of the program; the present study revealed that there was statistically significant correlation between total scores of nursing students' knowledge regarding SBAR communication and self-reported confidence during shift report after training program.

From researchers' point of view, these findings could be because the training program had contributed to the development of self-confidence of nursing students; the program's sessions gave students the freedom, enthusiasm and openness to debate particularly in the presence of a supportive and respectful atmosphere for their beliefs and ideas. Another possible explanation for the obtained results is that the students who had participated in the program became more successful in using and applying SBAR communications and therefore their confidence in reporting had increased. Similar results found by Edwards [27] who examined the effect of ISBARR communication workshop with role-play on novice baccalaureate nursing students' self-confidence in patient handover shift reporting at a southern Colorado university and reported that there was a correlation between total scores of nursing students' knowledge regarding SBAR communication and shift report confidence. Also, Randmaa [12] found the same results.

Regarding relation between total use of SBAR communication knowledge score of nursing students and their personal characteristics, the results of the current study revealed that there was a statistically significant relation between total score of nursing students' SBAR communication knowledge and their personal characteristics regarding gender and entering faculty on desire before and after training program. This may be due to that nursing students who enter faculty on desire focus their times on studying to acquire knowledge and skills, sharing their peers in experience and feelings so they can learn and gain confidence by observing each other as well as working

as a team in the classroom, this increased students' retention of SBAR knowledge and reduced their anxiety which in turn enriched performance and confidence.

In the same respect, Randmaa [12] carried out a study at Sweden to examine novice nurses perceptions of communication within and between different professions prior to and after implementation of the communication tool (SBAR), found that there was a statistically significant relation between total score of SBAR communication of novice nurses and their personal characteristics.

Concerning relation between total score of students' self-reported confidence in shift report and personal characteristics of nursing students; the present study findings demonstrated that there was no statistically significant relation between total score of nursing students' confidence in shift report and their personal characteristics after training program. This may be due to confidence in shift report depend on identified strategies and unique form and standardized tool that foster critical self-examination and confidence development of shift reporting. Also might be due to the standard order of reporting irrespective of the user's occupation, experience or role and the use of the SBAR model allow the speaker and the receiver to concentrate on the information being shared as the requirements for the report are clearly defined and consistent between the two parties. This result is supported by Edwards [27] who reported that there was no statistically significant relation between total score of self-reported confidence in shift report and personal characteristics after training program.

CONCLUSION

SBAR communication was significantly correlated with improving nursing students' self-confidence in shift reporting. Healthcare facilities and educational institutions should adopt the use of the SBAR and provide continuous instructions for the SBAR tool throughout the curriculum includes specific applications at each student's level.

RECOMMENDATIONS

- Starting the instruction of the SBAR tool at the fundamental nursing level with the introduction of the tool and its application in shift reporting.
- Continuous instruction for the SBAR tool throughout the curriculum includes specific applications at each student's level.
- Training program for nurse interns about SBAR communication.
- Developing strategies to enhance the use of SBAR during all patient-related communication among health care providers.

FURTHER RESEARCH

- Further research to investigate the effect of SBAR on novice nurses in reducing communication errors.
- Continued research in communication skills and tools are necessary for improving patient safety outcomes for all patients.
- Additional research regarding the education and cultivation of strong communication skills among nurses and other healthcare disciplines should be a top priority for nursing education and healthcare facilities.

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