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In-service Training Program about Situation, Background, Assessment, Recommendation (SBAR) and Patient Safety

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Abstract:
Background: High quality Patients care can achieve only through accurate and concise transfer of patient data, information through SBAR format to ensure patient's safety **Aim:** Research aim to assess the effect of SBAR in-services training program on patient's safety. **Research design:** A quasi-experimental research design. **Setting:** the present study was performed at Sohag Cancer Center. **Subject:** Consisted of 50 nurse's works at inpatients department. **Tools:** consist of **I):** SBAR knowledge questionnaire which containing:- **Part I**: Personal data sheet. **Part II:** Situation, Background, Assessment, and Recommendation sheet. **II):** Patient's safety audit checklist. **III):** SBAR practice observational checklist. **Results:** The study illustrated that the highest percentage of nurses had unsatisfactory knowledge score for three items, in pre-program phase but satisfactory, in immediate post while decline in follow-up phase to be (92%, 94%, 94%) (100%, 100%, 100%) (80%, 100%, 82%) respectively. The highest percentage of nurses had inadequate performance in pre-program phase but adequate in immediate post and follow-up phase, with no activities (25) of patient's safety in pre-program phase but established activity in immediate post(65) and follow-up(61) phase. **Conclusion:** There are significant statistical improvements of nurses′ knowledge and practice of SBAR shift report for nurses in the immediate post and follow-up phase, with significant improvements in patients' safety. **Recommendations:** Supervising nurses to ensure application of SBAR format, and Add SBAR format to Nursing Administration course curriculum at nursing faculty.

Keywords: Assessment, Background, Recommendation, Situation & Patient's safety.

Introduction
High quality of patient care which lead to positive health care out comes and patient safety need accurate and effective communication between health care providers. Ineffective verbal and nonverbal communication is considered the main cause of 70% of all sentinel indicators which mean unpredicted occurrences involving physical or psychological injuries and death **(Joint Commission, 2015).** The previous events was named sentinel because they create emergency investigation and medical attention, so communication patient information among health care team meets considerable international attention **(Kumah, 2019).**

Nurses are corner stone in the network of complex interdisplinary health care provider. Communication links nurse to patient/family, nurse to nurse and nurse to physician. Communicating patient information is the basic concept in providing safe efficient patient care. Hand over shift report which occurs during the shift change is one of a common and routine forms of nurse to nurse communication. During handover the outgoing nurses communicate patient's information to the incoming nurses to nurses in other units or other facility in order to ensure the patients receive continuous care **(Karam et al., 2018).**

Nurses Communication skills are considered the basic elements in nurses' performance; poor or ineffective nurses communication can lead to negative patient outcomes increased patient lengths of stay and adverse events. Meanwhile effective nurse communications lead to building collaborative relationship among healthcare team **(The Joint Commission, 2015).** Inter shift report is the most essential method to communicate and share patient significant information which lead to improve the care provided, so using situation, background, assessment and recommendations as a tool to enhance standardized nursing practice (**Shahid & Thomas, 2018).**

SBAR tool technique mean; 1) Situation: which mean describe the situation; why are you calling for the physician? 2) Background: what is the background information? 3) Assessment: what is the nurse's assessment of the problem? And 4) Recommendation: what are recommendation to correct the problem?, the SBAR protocol was first introduced in 2003 in health care as a framework for standardized conversations between doctors and nurses about situations which

need immediate attention **(Shahid & Thomas, 2018).** Because of the importance and benefits of SBAR shift report application and SBAR not familiar to many nurses in health care facility it's important to conduct in-service education to enable nurses to implement it in the near future.

In-service educational program is very necessary, and is defined a planned teaching and educational experience that introduced by the trainer for the trainee. Successful in-service educational program is the result of careful & planning. So planning teaching experiences is essential to meet nurse's educational needs **(Salama & Mohamed, 2017).** Conducting effective in-service training in its excellent form excepted to enhance nurses documentation of patient clinical information using SBAR shift report format which in return may or may not have positive outcome on patient health and patient's safety.

Patient's safety is means makes patient care safer, this including risk assessment, risk identification, risk prevention and risk management, incident detection reporting, analysis and prevention, the ability to learn from incidents and their follow-up, as well as implementing solutions to minimize risks and prevent of any unintentional events and conditions that result in or have the potential to result in injuries. Nurses recognize and manage problems related to patient's safety and intentional risk. Nursing personnel can improve patient's safety by their competencies which mean improving their knowledge, skills, and attitudes to which focus on protect patients from physical and psychological harm **(Jeong & Kim, 2020).**

Significance of the Study

Shift to shift nursing handover are crucial for quality nursing care and patient's safety. Effective communication and documentation is an essential nursing competencies that ensures successful handover, with subsequent mitigation of minimization of patient's adverse effects, and better patient's safety. Nevertheless, its application in the study setting is still suboptimal. Hence, it was deemed important to improve nurses' communication and documentation skills in these setting, and examine the effect of such improvement on patient's safety. Current days many researches were published in professional articles and journals nationally and internationally which focused in developing and improving communication and documenting patient clinical data between nurses**, Dowden, (2017)**, **Müller et al. (2018**) the SBAR tool is used in organizations to make communication more effective and consistent. No researches about SBAR were done at Upper Egypt, mean while few researches has been done at Ain Shams University **(Said, 2014).** This was the encourage the researcher to apply in-services training program about situation, background, assessment, recommendation and patient's safety at Sohag Cancer Center.

Aim of the present study:

Train nurses about SBAR shift report and measuring its effect on patient's safety

Specific objective:

1- Assess patient's safety and nurse's knowledge, practice about situation, background, assessment and recommendation at Sohag Cancer Center.
2- Develop of educational program to improve nurses knowledge and practice about situation, background, assessment and recommendation
3- Implementation of educational program about situation, background, assessment and recommendation
4- Evaluate the effect of educational program to nurses knowledge and practice about situation, background, assessment and recommendation and patient's safety

Research hypothesis:

1- Nurse's in-services training about SBAR shift report will improve patient's safety
2- Nurses knowledge of SBAR shift report will be improved after implementation of the program
3- Nurses practice of SBAR shift report will be improved after implementation of the program
4- patient's safety will be improved after implementation of the SBAR shift report for nurses program

Subject and Methods

Technical design: This design involves the research design, subject, and data collection tools.

Research design: A one-group quasi-experimental design with pre-post-follow-up assessment was used in carrying out the present study.

Study subject; All nurses working at inpatient units at the time of the present study, at Sohag Cancer Center. Total number =50 nurses.

Data collection tools:

Three tools were used in collecting the data required for the present study. These were namely SBAR knowledge questionnaire, SBAR practice observational checklist and patient's safety audit check list.

SBAR Shift Report knowledge questionnaire: This tool was constructed by **Said, (2014),** and some modification were done by the researchers to assess nurse's knowledge related to situation, background, assessment, and recommendation. It consisted of two main parts. **Part I:** Personal data sheet which includes information about name, age, educational qualification, marital status, and the name of department. **Part II:** It includes 25 multiple choice

questions (MCQ) covering three main areas as following:

1) Communication skills: seven questions covering the definition of communication, effective communication, elements, sending message, verbal and legality of communication, and how to improve your communication, 2) SBAR shift report: twelve questions covering its definition, intradepartmental reports, definition of SBAR, its aim, what it must include, what it is considered as, signed by whom, writing person, place, time, responsible nurse, and what is characteristics of a good report?, and 3) SBAR shift report exchange**:** six questions covering exchange place characteristics, between whom, frequency, morning to afternoon, afternoon to night, and night to morning.

Scoring: For the knowledge items, a correct response was scored 1 and the incorrect response was given zero. For each area of knowledge items, the scores of the items were summed-up and the total score were divided by the number of the items, giving a mean score for the part. These scores were converted into percent scores. Knowledge was considered satisfactory if the percent score was 60% or more and unsatisfactory if the knowledge score less than 60%.

Tool II: **SBAR practice observational checklist:** used to assess nurses' application of SBAR shift report in different shift. The tool was developed by **Said, (2014)** and modified by the researchers. Practice of nurses was observed three times, before in-service training (pretest), immediately after in-services training (immediate post) and three months later (follow-up). It consists of three parts 1) Preparation of the report before handover: covering four items, writing the report, review it, completing it if needed, and making sure that all data is presented. 2) Handover process of the report: it was contained six items as follows, conducting oral report at a time, and exchange beside patient's bed, answering oncoming nurse questions using understandable words with clear voice tone, and using authorized abbreviations, and exchange the report with clear voice tone etc.3) Exchange SBAR Shift report Contents: it was including four main items (situation, background, assessment and recommendation). Situation contains five items such as patient name, age, sex, physician name, room number; background including four items: such as date of admission, diagnosis, past medical history, allergies, and assessment including nine items: such as procedures done, vital signs, fluids/drips/site/amount, current pain score, what has been done to treat the pain, safety needs, fall risks, skin risks, assessment of body organs, finally recommendations includes sex items : includes diet, medication, consultation, discharge planning, pending lab / X-ray and call out to doctor.

Scoring: The items observed to be done were scored "1" and the items not done were scored "0", for each area, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into percent scores. The practice was considered adequate if the percent score was 60% or more and inadequate if less than 60%.

Tool III: Patient's safety audit check list. This is a standardized check list developed by the **Ministry of Health and population Egypt, (2014)**. Patient's safety was observed three times, before in-service training (pretest), immediate, after in-services training (immediate post) and three month later (follow up), the tool consists of 17 items with sub-items covering general patient's safety such as "There are policies & procedures related to patient's safety in the organization.

Scoring: Each item was to be checked as: No activity: scored (1) Starting the activity: scored (2), in progress in the activity: scored (3) and established the activity: scored (4). The total score for the 17 items thus ranged from 17 to 68. These are categorized as following: 17- 34 mean no activity, i.e. there has been no activity implemented; 35- 50 means activity was started, i.e. the related item has been formally discussed and considered and staff has been trained or has implemented it partially in some areas; 51-60 means activity is in progress, i.e. the related item has been partially implemented in all areas of the organization or fully implemented in some areas of the organization. 61-68 means established activity, i.e. the related item is fully implemented in all areas of the organization.

Administrative design:

Official agreement from the Dean of Nursing Faculty and Directors of Sohag Cancer Center were obtained to be able to collect the necessary data for the present study.

Operational design which includes Preparatory phase; during this phase the researcher reviewing the available related literature concerning the topics of the study. It took about four months from the beginning of January to the end April 2020.

Ethical considerations:

Was took for the research proposal approved from Ethical Committee at Nursing Faculty, Assiut University. The study followed common ethical principles in clinical research, then the researcher ask for oral consent were taken from all nurses who participated in the present study, after explaining the purpose of the study and informing them that they have the right to refuse/ participate/ withdraw from the study without any rational at any time, confidentiality and anonymity were assured, during

collection of data, and nurses were told that all obtained data were used only for research purpose.

Validity:

Face validity was done to assure accurate comprehension of the study tools statements. It was done through jury by (expert opinions) which was composed of 4 professors from Nursing Administration Department, and Community Health Nursing Department Faculty of Nursing, Assiut University and 3 quality specialist from Sohag Cancer Center. Also **content validity** was checked and analyzed using confirmatory factor analysis test to assure (importance, clearness, and accountability) all items of the study tools result more than one (1,8) so all of them were confirmed.

Pilot study:

Was done to test applicability of the tools, to estimate the time required for filling the questionnaire form, and to detect any problems which may encounter during data collection phase prior to actual data collection. It was carried out on 5 nurses (10% of the total sample). Nurses chosen in the pilot study were excluded from the present study. Accordingly, the required modifications were done.

Reliability data

	No of Items	Cronbach's alpha
Practice scale	18	0.88
Knowledge scale	25	0.90

Reliability which mean consistence of the study tool using cronbach's alpha coefficient method and its results revealed that all statements of the study questionnaire were 0-8 and more

Filed work:

In-service educational program was planned and develop based on the results of need assessment which were performed prior three weeks from the program preparation, planning, and actually implementation of the program. The data were collected by the researchers through distributing questionnaire form for nurses after explaining the purpose of the study. The time spend with each nurse was taken from 25-35 minutes. The obtained data from need assessment used as basis in preparing the program content. The researchers observed the nurses' performance three times consecutive in each shift. This phase took about nine months from May to December 2020.

Prepare, planning and developing in-service training program: This phase include formulating program objectives, the program was implemented by the researchers on 50 nurses within three weeks period, divided them into three groups; two groups was include 15 nurses and the third group include 20 nurse. The total time of the program was 90 hours distributed into 10 sessions along five days for each group, 2 sessions every day (start from 8am the attendance time to 2pm the leave time).Every nurse was trained 30 hours.

The program consists of many topics; the knowledge covering information about the program, included introduction, information about communication which include definition, process, concept of SBAR communication format, 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.

Then the researchers evaluate the program used questions to evaluate the following: Outcome of the program through the use of a SBAR knowledge questionnaire which used to evaluate cognitive skills of program content. The test was completed in about half an hour. SBAR practice observational checklist which used to evaluate the implementation of SBAR shift report through pre, post and follow up after three months. Patient's safety audit checklist which used to evaluate effect of in-service training program SBAR shift report on improving patient's safety performance through pre, immediately post and follow up after three months later.

Statistical Design

Statistical analysis and data entery were done using statistical software package for social sciences (SPSS), version 20 - Chicago, USA. Data were presented in the form of frequencies and percentages for qualitative variables, means, standard deviations, and medians for quantitative variables. In order to identify the independent predictors of nurses' knowledge scores. Statistical significance was considered at p-value ≤ 0.05.

Result

Table (1): Distribution of Nurses Personal Data at Sohag Cancer Center (n=50)

Personal data	Frequency	Percent
Age:		
<30	30	**60.0**
30+	20	40.0
Range	21-40	
Mean±SD	29.1±4.6	
Median	28.5	
Educational qualifications:		
Secondary Nursing school diploma	12	24.0
Diploma of Technical Institute of Nursing	34	**68.0**
Bachelor degree in Nursing Science	4	8.0
Gender		
Female	50	**100.0**
Male	0	00.0
Marital status:		
Unmarried	14	28.0
Married	36	**72.0**
Unit name:		
Surgical	13	**26.0**
Tumors	37	**74.0**

Table(2): Nurses' Total Knowledge Elements of SBAR shift report throughout study phases at Sohag cancer center (n=50).

Nurses Knowledge about SBAR:	Study phase						X2 (p-value) Pre-post	X2 (p-value) Pre-FU
	Pre (n=50)		Post (n=50)		FU (n=50)			
	No.	%	No.	%	No.	%		
Communication:								
Satisfactory	4	8	50	100	40	80	81.522 (<0.001*)	49.716 (<0.001*)
Unsatisfactory	46	92	0	0	10	20		
SBAR report:								
Satisfactory	3	6	50	100	50	100	84.946 (<0.001*)	84.946 (<0.001*)
Unsatisfactory	47	94	0	0	0	0		
SBAR report exchange:								
Satisfactory	3	6	50	100	41	82	84.946 (<0.001*)	55.5601 (<0.001*)
Unsatisfactory	47	94	0	0	9	18		
Total knowledge:								
Satisfactory	0	0	50	100	50	100	96.040 (<0.001*)	96.04 (0.001*)
Unsatisfactory	50	100	0	0	0	0		

(*) Statistically significant at p ≤.0.05

Table (3): Nurses' Total practice of SBAR report handover throughout study phases at Sohag Cancer Center (n=50)

Nurses practices of SBAR	Study phase						X2 (p- value) Pre-post	X2 (p- value) Pre-FU
	Pre (n=50)		Post (n=50)		FU (n=50)			
	No.	%	No.	%	No.	%		
Report preparation:								
Adequate	0	0	50	100	40	80	96.04 (<0.001*)	63.375 (<0.001*)
Inadequate	50	100	0	0	10	20		
Handover process:								
Adequate	0	0	50	100	38	76	96.04 (<0.001*)	58.107 (<0.001*)
Inadequate	50	100	0	0	12	24		

Exchange (situation):								
Adequate	0	0	49	98	38	76	92.197 (<0.001*)	58.107 (<0.001*)
Inadequate	50	100	1	2	12	24		
Exchange (background):								
Adequate	1	2	50	100	39	78	92.197 (<0.001*)	57.04167 (0.001*)
Inadequate	49	98	0	0	11	22		
Exchange (assessment):								
Adequate	0	0	50	100	40	80	96.04 (<0.001*)	63.375 (<0.001*)
Inadequate	50	100	0	0	10	20		
Exchange (recommendations):								
Adequate	0	0	50	100	40	80	96.04 (<0.001*)	63.375 (<0.001*)
Inadequate	50	100	0	0	10	20		
Total practice:								
Adequate	0	0	50	100	48	96	96.04 (<0.001*)	88.2016 (<0.001*)
Inadequate	50	100	0	0	2	4		

(*) Statistically significant at p ≤.0.05

Table (4): Audit of Patient's Safety Goals Achievement (pre, post and follow up intervention at Sohag Cancer Center (n=50)

	General patient's safety	Audit		
		Pre	Post	Follwup
Ps.1	Presence of policies & procedures of patients safety in the organization	2	4	4
Ps.2	Policy of Patient's safety as recommended by ministry of health and population.	2	4	4
Ps.3	Policy and procedure for handling critical values /tests.	1	4	4
Ps.4	Nurses has training regarding the Egyptian patient's safety recommendations	1	4	4
Ps.5	Standards of patient's safety are posted in suitable area	1	4	4
Ps.6	identify a patient with at least two methods when providing any treatments or procedures	1	4	4
Ps.7	Update guidelines, regulations and laws are implemented.	4	4	4
Ps.8	Disposable injection and devices must be discarded after single use	4	4	4
Ps.9	Telephone, and verbal orders must be standardized process	1	4	4
Ps.10	Implement a systems to prevent tubing and catheter miss connection	1	4	4
Ps.11	Patients risk of falling, including the potential risk associated with the patients any potential risk associated with medication regimen	1	4	3
Ps.12	Procedure were done to eliminate or prevent any risk of falling	1	4	3
Ps.13	Assessing and documenting any risk of pressure ulcers	1	4	3
Ps.14	Procedure are taken to decrease the development of pressure ulcers	1	4	3
Ps.15	Maintenance, implement, and document of critical alarm systems	1	3	3
Ps.16	Alarms are tested and must be audible with respect regarding to distances and noise within the unit	1	2	2
Ps.17	Approach to inter shift communications, including ask and answer questions	1	4	4
	Total Score	25	65	61
	Activity level	No activity	Established activity	Established activity

1=no activity; 2=start; 3=in progress; 4=established

Table (1): Shows that all nurses are females, more than two third of nurses was having Diploma of Technical Institute of Nursing (68%). Most of the them were married (72%), Also the table illustrates that more than half of them (60%) aged 30 years or less. Regarding the unit they works in, most of the

nurses works in tumor units (74%), while (26%) of them works in surgical units.

Table (2): Identifies of nurses' total knowledge elements of SBAR shift report throughout study phases. There are statistically significant improvements of nurses′ knowledge elements of SBAR shift report regarding all knowledge elements in the immediate post with slight decline in follow up phase ($p \leq .0.05$).

Table (3): Shows nurses' practice of SBAR shift report preparation before handover throughout study phases. As indicates in the table, there are statistically significant improvement of nurses′ practices of SBAR shift report preparation before handover in the immediate post-program and follow up phases compared to the pre-program phase. However, there are slight declines in the follow up phase compared to the immediate post-program phase, (100% to 80%).

As regarding to nurses' practice of SBAR shift report handover process throughout study phases. As indicated in the table, there are statistically significant improvements in all elements at the pre - post-program phase and follow up phase. However, there were declines in the follow up phase compared to the immediate post-program (100% to 76%)

Shows nurses' practice of SBAR shift report exchange (situation and background) throughout study phases, As regards to situation there are statistically significant improvement in nurses′ practice and declines in follow up phases (98.0% to 76.0%). As regards to background there are statistically significant improvement in nurses′ practice in post program phase, with slight decline in follow up program phase (100.0% to 78.0%) ($P \leq 0.05$).

Shows nurses' practice of SBAR shift report exchange as regard assessment throughout study phases, as indicated in the table there are statistically significant improvement in immediate post program phase with slight decline in follow up phases (100.0% to 80.0%) ($P \leq .0.05$).

Shows the nurses' practice of SBAR shift report (recommendations) throughout study phases. As simplified from the table, there are statistically significant improvement between immediate post program phase with slight decline in follow up, (100.0% to 80.0%), and finally nurses' total practice of SBAR shift report handover throughout study phases. As simplified from the table, there are statistically significant improvements in nurse's total practice of SBAR report regarding all items in immediate post-program phase and follow up phase in the study ($p \leq .0.05$).

Table (4): Reveals the audit of patients' safety goals achievement pre and post program implementation. As simplified from the table, there are positive improvements of patients' safety goals achievement pre and post program implementation, from no activity to established activity. Total score activity level pre (25) no activity and post program implementation total score activity level (65) are established and slight decline in follow up phase activity level (61).

Discussion

Documentation is a legal record or it considered as a basic files that can be used as legal evidence later on. Documentation that nurse made very useful for patient benefits. Nurses and health care provider perform health care services then document complete, concise, accurate, and written documentation all the previous action is considerable a basic responsibilities that must be done. Accurate documentation prevent distorting fact, prevent information losses, also can be used in educating medical and nursing student, as well as educating patient **(Herisiyanto et al., 2020).**

Continuous care of patient can be achieved by accurate, clear transfer of patient's information from one to another health care provider during handover. Continuous effective communication is a major factor in perform safe care manner. Communication distortion can leads to a major medical and nursing care errors. Effective communication requires awareness of patient's condition. SBAR shift report is a validated and reliable communication tool that can be used by health provider to reduce undesirable events in health care setting, also can made communication more effective so, patient safety can be improved. **(Shahid &Thomas, 2018).**

World Health Organization (WHO, 2016) defined Patient's safety as reduction and prevention of patients harm, prevention of medical error, and adverse events. Meanwhile, the Institute of Medicine IOM(2000) defined safety as "freedom from accidental injury" and patient's safety as a discipline or field of inquiry and action hasn't been fully defined to date in the major consensus, patients safety can be measured by observing patient in the unit or by auditing patients record **(Abdel-latif, 2018).**

The present study aimed at improving nurse's handover and measuring its effect on patient's safety through measuring patient's safety, train nurses about SBAR shift report, evaluate the effect of SBAR shift report on patient's safety at Sohag Cancer Center.

The present study findings depicted that all nurses were females, most of them were married and more than two third of them have diploma of Technical Institute of Nursing (100.0%, 72.0%, and 68%) respectively. The highest percentage of nurses works at tumor adult department. Meanwhile, the lowest percentage works at surgical departments **(table 1).** All nurses were female this might be due to in the past

the nursing profession accept only female students, the highest percentage were works at tumor department, because of work overload in tumor adult departments more than surgical department, also tumor department contains (46) beds meanwhile surgical department contains (n=30 beds).These results goes in the same line with the study done by **Abdel-latif, (2018),** who found that the highest percentage of studied nurses were graduated from Technical Institute of Nursing.

The current study findings revealed that nurses' total knowledge element of SBAR shift report throughout the study phases, there were statistically significant improvement in nurses′ knowledge regarding all element of SBAR shift report in the immediate post program phase with slight decline in follow up phase **(table 2)**. This result may be due to the success of the training program by using cooperative learning strategies also the encouragement of nurses involvement during training, they become active participant not passive recipient, nurses readiness level which was very high during conduction of training program which become obvious through nurses passion , and persistence to be active during training program, also training hall which organized in a manner that promote acquiring and acquisition of knowledge learned, the methods and procedures used in the program as role playing, case scenarios, modeling, reinforcement and reorganization of knowledge, discussion, and feedback, all of the previous elements participate in the success of training program to attain its objectives. This finding goes in the same line with **Surbakti, (2019)** who found that the nurses' knowledge had statistically significantly improvement after attending the SBAR communication training program.

The current study revealed that there are statistically significant improvements of nurses′ practices of SBAR shift report preparation of the report before handover in the immediate post-program and slight decline in the follow up phase **(table 3).** This might be due to nurses well be prepared psychologically to hear and learn about this topic as they didn't have any information about it before. SBAR shift report is standardized format not need a lot of time in filling it up than other method which nurses used in the past so, they have positive attitude regarding follow new format which require less time and effort to fill it.

These findings was agreed with the study done by **Abdelwahid, 2020)** as they conduct a study to evaluate the effect of SBAR shift report in improving the clinical practice preparation and communication competency of senior nursing students. The present study was incongruent with the study done by **Said, (2014)** who found that more than half of the nurses write the report, review, completeness or make sure that all data is presented before carrying out the training program**.**

Finding of the present study revealed that handover process were generally not present before program implementation and there are statistically significant improvement of nurses′ practices of SBAR shift report handover process in the immediate post-program with slight decline in follow up phases **(table 4).** Nurses not conduct oral report on time and not exchange the report bedside patient bed. From the researcher point of view this result may be due to many reasons as oncoming nurses not attend on time, and not make oral report with the night shift, nurses due to unsafe road and overcrowded make nurses come late also poor time management play major role and lack of supervision, the nurses did not use authorized abbreviation before program implementation also training nurses about SBAR shift report giving nurses chance to arrange ideas and patients data meanwhile before the program implementation nurses not exchange patient data by any scientific format .

The result of the present study goes in the same line with the study done by **Harvey, (2014)** as they found that nurses not exchange the handover report bedside the patient's bed before program implementation but this attitude changes considerably after program implementation. This result inconsistent with **Thaeter, et al., (2018)** as they reported that nurses` handover knowledge and performance improved communication between health care team and performing oral and written handovers process, as well as using standardized communication tools.

As regard utilize authorized abbreviation the present study demonstrated that throughout the three phases of the program, there are statistically significant improvement in nurses in the immediate post program and slight decline in follow up phase **(Table 4).**This result could be attributed to the training program consists of planned learning experiences which are designed to promote the development of knowledge and skills for enhancement of nurse practice that lead to positive effect on nurses practice. On the other hand findings were reported by **Ali, (2013) & Saad, (2014)** noted that there was statistically significant improvement after implementation of training program for using correct and authorized abbreviation.

As regard to utilize it very to easy, in understandable words, and exchange the report with clear voice tone **(table 4),** there were statistical significant improvement between nurses performance in the immediate post program implementation with slight decline in follow up phase. From the researcher point of view this result may be due to training nurses about SBAR shift report giving nurses chance to arrange

ideas and patients data. Similar findings were reported by **Lee SY**, **(2016)** as she found that after conducting training program nurses exchange consistent, clear, and concise patients data to make sure that all of the team members have a good understanding of the patient's clinical information.

Regarding situation component of SBAR shift report exchange, the present study results showed that all nurses not exchange all items related to situation including patient name, age, sex, room number and physician name before program implementation. While there was statistically significant improvement in immediate post program and slightly decline in follow up phase **(table 5).**

From the researcher point of view this is because nurses think that exchange this information will take spend more of their time so, they exchange the patient by saying the case number ,…or only patient name and most important patients data not exchanged between them nurses exchange patient information in nurses notes either complete or absent . These results of the present study were incongruent with **Said (2014),** who found that the adequacy of dealing with patient demographic data was observed among staff nurses before any intervention. In this respect **Saunderman, (2012)** emphasized that verbal report content tends to be consistent for certain types of information including patient name and age.

Result of the present study showed that nurses not exchanged all items of background contents in SBAR shift report exchange as allergies, date of admission, diagnosis and past medical history before implementing the program while there was statistical significant improvement in the immediate post program phase with slight decline in follow up phase.

Also **Said, (2014)** support the present study findings as they found that after program implementation nurses begin to document date of admission for every patient diagnosis, past medical history and allergies which have significant importance in formulating plan of care. This might be because nurses not understand the significant importance in documenting data of admission, diagnosis, past medical history, allergy in formulating plan of care before the program implementation.

From the findings of the current study, concerning nurses' practice of SBAR shift report related to assessment as indicate in table showed that the all of nurses not exchange all items of assessment components including vital signs, assessment of body organ, intravenous fluid, current pains score, what has been done to treat the pain, safety need, fall risk and skin risk, before program implementation. While there was statistically significant improvement in the immediate post program and slight decline in follow up phase **table 6.**

From the researcher point of view these results of the study may be due to actually there is no SBAR shift report format in the hospitals before implementation of the program, they have only narrative nurses notes that can covered that purposes, also the nurses appear careless to exchange patients' data this consider a dangerous on patient's safety also nursing process are disturbed because it mainly depend on assessment phase which neglected by nurses in Sohag Cancer Center. The present study agree with study done by **Safan, (2007)** as he found that content review related to medication , fluid balance have statistically significant improvement as a result of application the self-learning package, compared to pre-intervention phase .

Similar finding was reported by **Leonard & Kyriacos, (2015)** they found that documentation particularly of vital signs and fluid balance in pre intervention period moderate and there is statistically significant improvement as a result of application of the training program compared to pre-intervention phase. Finding of the present study goes in the same line with **Abd El-Sattar, 2018** who found that there were statistically significant improvements in staff nurses practice regarding documentation of vital signs during post program and follow up phase. **Daniel et al., (2017)** were inconsistent with the present study finding as they reported that vital signs were have acceptable level of nurses documentation in pre intervention phase .

Lastly recommendation components of nurse practice of SBAR shift report exchange. Noticed that all nurses not exchange all items of (Recommendation) including diet, medication, discharge planning, consultation, needed lap x-ray, calls out to doctor while there are statistically significant improvement in the immediate post program phase and slight decline in follow up phase **(table 7).**

From the researcher point of view these results of the study may be due to actually nurses don't care before the program to document important patient data due to lack of supervision and failure to organize work time and this result might be attributed to the positive effect of training program for improving nurse's practice. This is congruent with **Saad, (2014) & Nilson, (2017)** they found that the majority of staff nurses were done completely at immediate post program phase (medication &patient investigation) also, there were statistical significant improvement in studied staff nurses' practice.

The result of the present study incongruent with studies done by, **Said (2014),** who found that all studied nurses exchanged doctors orders adequately pre program implementation.

The current study revealed that there were positive effect of patient's safety goals achievement, total

score activity level before application were (25) minimal and after in the immediate post intervention increase total score activity level to (65) established with slight decline in follow up phase to (61) **(table 9)**.

This might be when nurse's document complete patient clinical data leads to formulate nursing care plan effective, and efficient to meet need of individual patient and make nurses more focused in achievement patient's safety goal. These findings was agreed with the studies done by **Cornell et al., (2014),** as all the previous author found that patient's safety goals achievement were improved and there are positive effect of SBAR shift report format application on patient's safety, leading to better results in the realm of patient's safety.

Conclusion

In the light of the present study findings, the following conclusions can be drawn as:

- All nurses were females, more than two thirds of them have diploma of Technical Institute of Nursing. Most of them were married, more than half of them aged 30 years or less, and most of nurse's works in tumor units.
- There are statistically significant improvements of nurses′ knowledge elements of SBAR shift report regarding all knowledge elements in the immediate post with slight decline in follow up phase.
- There are statistically significant improvement of nurses′ practices of SBAR shift report preparation, handover process, report exchange including (situation, background, assessment, and recommendations) in the immediate post-program and follow up phases compared to the pre-program phase. However, there are slight declines in the follow up phase compared to the immediate post-program phase
- There are positive improvements of patients' safety goals achievement pre and post program implementation, from no activity to established activity.

Based on study findings the following recommendations are drawn

1. Support the application of SBAR shift report format by hospitals administrator.
2. Supervise the application of SBAR shift report format accurately, until application of SBAR shift reports stabilize and become habits.
3. Further researches about SBAR, cost, productivity and quality.
4. Reward nurses who committed to SBAR shift report application
5. Add SBAR shift report format to Nursing Administration course as important type of documentation format.

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