

Original Article

Nurses' Knowledge About Bedside Shift Reports In Critical Care Units In
Governmental Hospitals– Khartoum State

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Abstract

Background: The bedside shift report is a standardized procedure to facilitate the successful transfer of information between nurses using the SBAR tool for communication. This study aimed to assess nurses' knowledge about bedside shift reports in critical care units in governmental hospitals.

Methods: This was a cross-sectional hospital-based study. The sample was collected from 179 nurses as total coverage from Omdurman Teaching Hospital, Ahmed Gasim Hospital, and Ibrahim Malik Teaching Hospital. A structured interview questionnaire was used as a tool for collecting data from the participants. The collected data were analyzed using the Statistical Package for Social Sciences (SPSS, version 20), and the results were displayed as tables and charts.

Results: Most participants held a Bachelor's degree (79%). A significant portion of nurses had less than 2 years of experience (80%). Only 13% of nurses had attended training related to

bedside shift reports. The findings highlighted significant gaps in overall knowledge of bedside shift reports among participants, with the majority having a fair (64%) level of knowledge. The study found a significant association between both educational qualifications and years of experience with knowledge of bedside shift reports (p-value 0.050 and p-value 0.020, respectively).

However, no significant association was found between attendance at training courses and knowledge levels (p-value 0.318). Conclusion: The study underscores significant gaps in nurses' knowledge regarding bedside shift reports, highlighting the urgent need for improved training. Addressing these deficiencies is essential for enhancing communication, ensuring patient safety, and improving the quality of care during shift transitions.

Keywords: Bedside - Critical - Knowledge - Nurse – Report – Shift.

Introduction

Bedside shift reporting has been described as a process of exchanging vital patient information, responsibility, and accountability between the off-going and oncoming nurses to ensure safe continuity of care and the delivery of best clinical practices ⁽¹⁾. It is a crucial component of nursing practice, particularly in critical care units, where accurate and efficient communication between nurses is essential for ensuring patient safety and continuity of care. Despite its importance, inconsistencies in how nurses perform bedside shift reports have been observed, which may lead to communication gaps, incomplete patient information transfer, and ultimately, negative impacts on patient outcomes ⁽²⁾. The Agency for Healthcare Research & Quality (AHRQ) identifies the bedside shift report process as a significant cause and contributor of adverse events, especially in the acute care and critical care areas. Considered the leading cause of deaths due to preventable errors in the US, the impact of poor communication leads to approximately 1,000 deaths per day and results in \$2.9 billion spent each year nationally ⁽³⁾. Medical errors, safety risks, and quality of care are all problems that

have been imposed by a lack of communication between nurses. Each year, millions of deaths worldwide are caused by medication errors in hospitals ⁽⁴⁾. Inadequate hand-off communication can lead to medication errors, delays in treatment, falls, and wrong-site surgery (Joint Commission, 2017) ⁽⁵⁾. Nursing shift-to-shift reports happened at nursing stations and not at the bedside; reports at nursing stations can be interrupted, drawn out, and inaccurate ⁽⁶⁾. Bedside shift report is the real-time transfer and acceptance of patient care to ensure continuity of care and improve patient safety, outcomes, and satisfaction ^(7, 8)

The WHO advocates several strategies for bedside shift reports, focusing on four key areas:

- 1) Standardizing communication through the SBAR (Situation, Background, Assessment, and Recommendation) technique, allowing enough time for comprehensive information exchange without interruptions. Essential information includes patient condition, medications, treatment plans, and any changes in the patient's status.

2) Ensuring patients are discharged with all necessary information for their continued care, including diagnosis, treatment plans, medications, and test results.

3) Providing ongoing training for effective communication during shift changes.

4) Promoting communication between healthcare organizations and care providers

⁽⁹⁾. Bedside shift reports are precise reporting and an opportunity for nurses to allow patients, with their families, to participate in their treatment plans⁽¹⁰⁾. It is an evidence-based practice utilized by nurses to communicate patient information and plan of care. ⁽⁷⁾. Research suggests that using the SBAR framework improves team communication and safety culture. ⁽¹¹⁾.

SBAR is a standardized communication strategy that promotes the effective transmission of information. SBAR is defined as S: Situation: the main concern of the problem, B: Background: pertinent and brief information related to the situation, A: Assessment: analysis of what is going on or what has happened, R: Recommendation: a suggestion or request of what needs to be done ⁽¹²⁾.

Many nurses lack comprehensive training on the protocols and importance of bedside shift reports, leading to inconsistent practices across hospitals. Factors such as outdated nursing curricula, limited professional development opportunities, and the absence of standardized guidelines contribute to this knowledge gap.

As a result, nurses may not fully understand the essential components of an effective bedside shift report. This deficiency in knowledge increases the risk of miscommunication, omitted critical information, and adverse patient outcomes, especially in high-stakes environments like critical care units ^(2, 13). Identifying and addressing this knowledge gap is essential to improving nursing practices and ensuring better patient outcomes in Sudanese governmental hospitals.

Methods

A cross-sectional hospital-based study design was conducted to assess nurses' knowledge regarding bedside shift reports in the critical care units in governmental hospitals at Khartoum State from (2022 – 2024). The study was carried out on critical care units in three selected hospitals which include: Omdurman Teaching Hospital, Ahmed Grasim Hospital, and Ibrahim Malik

Teaching Hospital. These hospitals are highly popular and located in the most populated areas of Khartoum state, these hospitals have teaching and referral centers for all other states of Sudan, and their location facilitates reaching them for everyone. The sample was collected from all nurses in the critical care unit of the study area 179 nurses who fulfilled the inclusion and exclusion criteria (total coverage), the distribution of nurses in the study area as follows (36%) from Omdurman Teaching Hospital, (38%) from Ahmed Grasim Hospital and (26%) from Ibrahim Malik Hospital.

A structured interview questionnaire was used as a tool for collecting data from participants. The questionnaire was a structured, face-to-face interview questionnaire constructed by the researcher and accepted for content validity by a panel of experts composed of six medical and surgical doctors and professionally qualified nurses. The questionnaire consisted of multiple-choice questions based on the literature review that includes two parts: background and personal demographic characteristics of participants (9 questions)

and knowledge about bedside shift reports and the SBAR tool (15 questions). The researcher was assisted by the data collector (research team) after explaining and training them about the research objectives, the tool for collecting data, and how to collect data. The data were collected at the rest time of the participant. The researcher used the interval scale for the knowledge measurement as follows: 0- 49 denote poor, 50-59=fair, 60-69= good, 70-79= very good, and 80-100= excellent. The collected data were analyzed using the computer program Statistical Package for Social Science (SPSS, version 20), and the results were displayed as tables and charts. The significance test was done using Pearson Chi-square for the association of the study variables with the demographic data and it was accepted when the P-value is 0.05 or less. Ethical approval was obtained from the Institutional Review Board at Al Neelain University, the Khartoum State Ministry of Health, and the hospital managers where the study was conducted. A consent form was obtained from each participant before interviewing after explaining the research purpose and objectives in clear simple words.

Results

Table (1): The demographic data (characteristic) of participants

Demographic data		Frequency	Percent
Gender	Male	44	25%
	Female	135	75%
At which shift does the nurse work	Morning	84	47%
	Afternoon	95	53%
	Other	0	0%
Qualification	Diploma	34	19%
	BSc	142	79%
	MSC	3	2%
	PHD	0	0%
Years of experience	Less than 2 years	143	80%
	2-4 years	25	14%
	4-6 Years	1	1%
	More than 6	10	6%

In Table (1) 75% of participants were female, 80% had less than 2 years of experience, 53% worked the afternoon shift, 47% worked the morning shift and 79% held a Bachelor's degree.

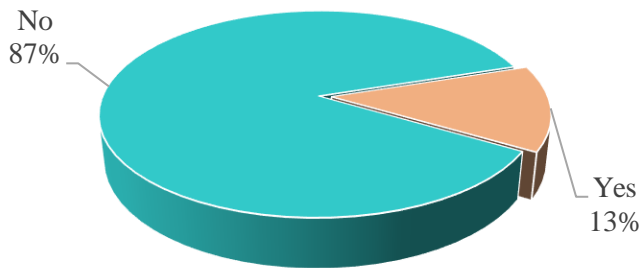


Figure (I) shows the attendance of the participant's training course related to bedside shift report (N=179) 13% of the nurses had attended any related training.

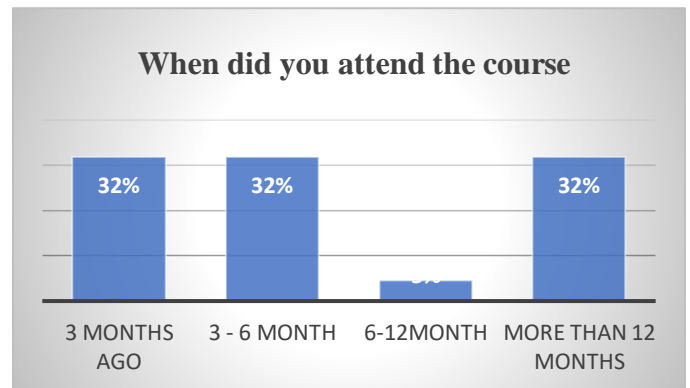


Figure (II) shows the time of training courses that the participants attended (N=22) only 5% of participants attended training courses for 6-12 months.

Table (2): the participants who know the bedside shift report will improve the workflow (N:179)

The participants	Frequency	Percent%
Yes	175	97.8%
No	4	2.2%
Total	179	100%

97.8% of the participants had confirmed the bedside shift report would improve the workflow

Table (3): The distribution of knowledge among participants about bedside shift reports (N=179):

Knowledge Questions	Poor		Fair		Good		V. Good		Excellent	
	N	%	N	%	N	%	N	%	N	%
What is the definition of a bedside shift report	146	82%	0	0%	17	9%	0	0%	16	9%
What is the importance of bedside shift report	115	64%	29	16%	0	0%	8	4%	27	15%
Who is involved in bedside shift report	0	0%	146	82%	0	0%	0	0%	33	18%
what does the SBAR tool mean	167	93%	12	7%	0	0%	0	0%	0	0%
points should be considered before using the SBAR tool	175	98%	1	1%	0	0%	0	0%	3	2%
What are the contents of the SBAR tool	173	97%	2	1%	0	0%	0	0%	4	2%
What are the nurses do in a situation (S) at the SBAR tool	176	98%	2	1%	0	0%	0	0%	1	1%
What are the nurses do in Background (B) at the SBAR tool	173	97%	5	3%	0	0%	0	0%	1	1%
What are the nurses do in Assessment (A) at the SBAR tool	175	98%	1	1%	1	1%	0	0%	2	1%
What are the nurses do in Recommendation (R) at SBAR tool	175	98%	2	1%	0	0%	0	0%	2	1%
What are the benefits of bedside shift report	118	66%	24	13%	18	10%	1	1%	18	10%
challenges that may face nurses when practicing	154	86%	4	2%	2	1%	11	6%	8	4%

In this table, the result of 82% of participants shows poor knowledge about bedside shift report definition which needs attention.

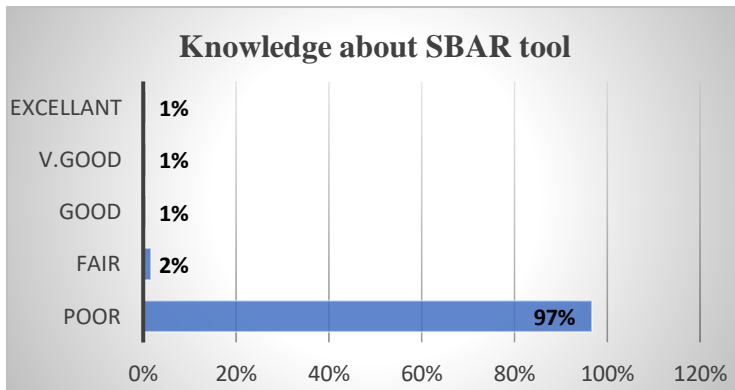


Figure (III): shows the distribution of participants' knowledge about the SBAR tool for communication (N=179) 97% of them had poor knowledge about the SBAR tool for communication which needs to draw our attention to this issue.

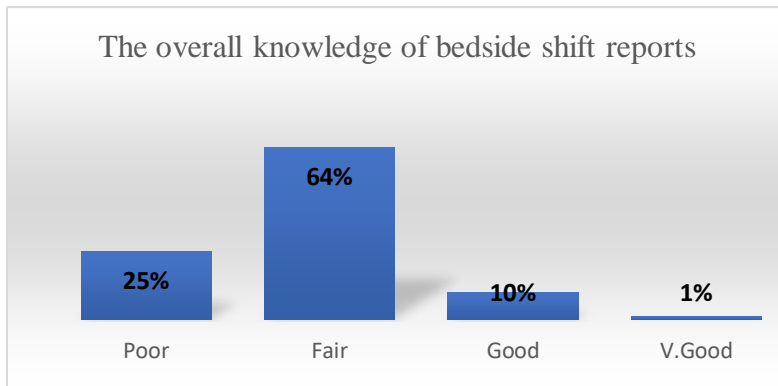


Figure (IV): the overall knowledge of participants regarding bedside shift reports.

64% of participants had fair knowledge about bedside shift reports which needs crucial improvement in this situation.

Table (4): Association between Knowledge of bedside shift report & Demographic data:

Demographic data		Knowledge of bedside shift report					Chi-Square Tests P-value
		Poor	Fair	Good	V.Good	Excellent	
Gender	Male	11	29	3	1	0	0.717
	Female	34	85	15	1	0	
At which shift does the nurse work	Morning	19	58	6	1	0	0.483
	Afternoon	26	56	12	1	0	
	Other	0	0	0	0	0	
Qualification	Diploma	8	21	4	1	0	0.050
	BSc	37	92	12	1	0	
	MSC	0	1	2	0	0	
	PHD	0	0	0	0	0	
Years of experience	Less than 2 years	35	93	14	1	0	0.020
	2-4 years	7	17	1	0	0	
	4-6 Years	0	0	1	0	0	
	More than 6	3	4	2	1	0	
Attendance of training course related to bedside shift report	Yes	8	13	2	1	0	0.318
	No	37	101	16	1	0	
What was the nature of the training	Theoretical	6	6	1	0	0	0.336
	Competency-based	2	6	0	1	0	

Pearson Chi-Square revealed a significant P-value less than 0.05, which reflects the association between Knowledge & Qualification and as well as between knowledge and years of experience, with a 95% confidence level.

Discussion

According to the demographic data, the results show the majority of participants were female (75%). This distribution mirrors findings in similar studies, such as Sand-Jecklin & Sherman's (2014), which also reported a majority of female nurses involved in bedside shift report implementation⁽¹⁴⁾. The study did not find a significant association between gender and knowledge (p-value 0.717) related to bedside shift reports, suggesting that gender does not play a crucial role in influencing competence in this area. Regarding educational Qualifications, most participants held a Bachelor's degree (79%), with a smaller percentage possessing diplomas (19%) and Master's degrees (2%).

The study found a significant association between educational qualifications and knowledge of bedside shift reports (p-value 0.050). Nurses with higher educational qualifications demonstrated better knowledge. This finding is consistent with previous research indicating that higher education levels correlate with improved clinical competencies and patient care outcomes⁽¹⁵⁾. About years of experience, a significant portion of nurses had less than 2

years of experience (80%). The study revealed a significant association between years of experience and knowledge of bedside shift reports (p-value 0.020).

This is consistent with a study conducted by McAllen, E. R, et al (2018) found that more experienced nurses tend to have better knowledge regarding bedside shift reports⁽¹⁶⁾. Concerning the participants' training, only 13% of nurses had attended training related to bedside shift reports. This study did not find a significant association between attendance of training courses and knowledge levels (p-value 0.318), suggesting that the quality and content of training may not be adequate to improve knowledge significantly. This highlights the need for more comprehensive programs focused on bedside shift report implementation. The findings of this study highlight significant gaps in overall knowledge of bedside shift reports among participants who majority of them had fair knowledge about bedside shift reports. as nearly three-quarters of them (89%) were at the poor and fair average level. A similar study conducted by McAllen, E.R., et al (2018) found that many nurses have poor

knowledge regarding the implementation and importance of Bedside Shift Reports, the study highlighted that this lack of understanding can lead to ineffective communication and compromised patient care ⁽¹⁶⁾.

The researcher found that 97% had poor knowledge regarding the SBAR tool components and usage, this agreed with a study conducted by Shahid, S., & Thomas, S (2018) highlighted that poor knowledge regarding the SBAR (Situation-Background-Assessment-Recommendation) tool still prevalent among healthcare providers, including nurses ⁽¹⁷⁾.

This finding disagrees with a study conducted by Abdalrhman UAA, Abdallah HMA, and Omer A (2020) which revealed that most (90%) of the study group had good knowledge about the element of bedside shift reports. Bedside shift reports and the SBAR tools ensure effective communication and enhance patient safety, deficiencies in nurses' knowledge of these tools, which are essential for maintaining continuity of care and preventing communication breakdowns that could lead to adverse patient outcomes ⁽¹⁷⁾.

The lack of knowledge may stem from insufficient training and educational emphasis on these practices during nursing education and ongoing professional development programs. The results show that a large proportion of the participants had poor knowledge of the importance and benefits of bedside shift reports.

Specifically, 64% of nurses had poor knowledge about the importance of bedside shift reports, while 66% had poor knowledge about its benefits. These findings are consistent with previous studies conducted by McAllen, E.R., et al (2018) showing that a significant proportion of nurses lacked knowledge about the importance and benefits of Bedside Shift Reports ⁽¹⁶⁾. Moreover, the study revealed that 86% of the participants had poor knowledge about the challenges that may arise during the practice of bedside shift reports.

This lack of awareness can hinder the effective implementation of bedside shift reports, as nurses may be unprepared to address potential obstacles ⁽¹⁸⁾. Nurses need to be adequately trained not only in the procedures of bedside shift reports but also in anticipating and managing challenges that could disrupt the process ⁽¹⁹⁾. The

deficiencies in knowledge regarding bedside shift reports and the SBAR tool identified in this study can adversely affect patient safety and care quality. Effective communication during shift changes is vital to ensure continuity of care, prevent information loss, and reduce medical errors⁽²⁰⁾.

Conclusion

Based on the result concluded that: the study revealed significant gaps in nurses' knowledge regarding bedside shift reports and the SBAR tool. Also, the study found a significant association between both educational qualifications and years of experience with knowledge of bedside shift reports. However, no significant association was found between attendance at training courses and knowledge levels. The nurses need urgent and continuous training and educational courses on bedside shift reports and implementation of SBAR tools to improve their knowledge. Addressing these deficiencies is essential for enhancing communication, ensuring patient safety, ensuring high-quality care during shift transitions, and improving overall healthcare quality.

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Conflict of interest

The authors declare no conflicts of interest to the authorship and/or publication of this manuscript.

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