

Research article

Factors Influencing the Implementation of SISBAR Communication for Nurse and Doctor Handovers in a West Java Hospital

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Abstract.

Communication is essential in performing nursing care and in improving patient safety. Communication problems can cause incidents leading to disability or death. In Indonesia, Salam Introduction Situation Background Assessment and Recommendation (SISBAR) communication is carried out, but in practice, nurses often forget to greet and introduce themselves. Therefore, communication needs to be improved to accommodate the SISBAR method. The objective of this study was to determine whether the implementation of efforts to improve nurse and doctor handover communication has a relationship with the characteristics of gender, age, and length of work at Santosa Hospital in Bandung Central. This study collected data through a survey and observations, and participants included 32 nurses who worked in the medical-surgical nursing wards. Univariate and bivariate analyses were carried out. The majority of the respondents were female, were graduates with diploma three, and had work experience of more than five years. Work experience was significantly associated with effective communication (p -value = 0.006), while no correlation was found between gender or education level and effective communication (p -value > 0.05). Effective communication using SISBAR was related to work experience. This communication method can be appropriately applied if a template is used and the institution creates a policy in the form of communication rules or standard operating procedures. It is recommended that researchers of future studies examine more respondents from different types of wards and various hospitals.

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1. Introduction

Patient safety has become a global issue that needs attention for health care systems [1]. In 2000 the Institute of Medicine (IOM) in the United States published a report conducted in hospitals in Utah and Colorado found Unexpected Events of 2.9% and 6.6% of them died, while in hospitals in New York 3.7% of adverse events were found and 13.6% of them died [1]. The death rate due to adverse events in hospitalized patients throughout the United States, amounting to 33.6 million per year, ranging from 44,000 to 98,000 are reported to die each year, and medical errors are the eighth cause of death in the United States. In the United States, over 250,000 patients who receive

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medical care each year will experience an adverse event [2]. Even worse, over 100,000 patients will die from the care that they received [3]. Many vulnerable patients are more at risk for adverse events [4, 5]. Globally, it is estimated that approximately ten percent of patients have been affected by at least one adverse event.

In Indonesia, data on unexpected events, especially near-injury circumstances (KNC), are rarely reported. However, on the other hand, there is an increase in allegations of "malpractice", which are not necessarily following the definitive evidence. The patient safety goals include the accuracy of patient identification, increasing effective communication, improving drug safety that needs to be watched out for, ensuring the right location, proper procedure, correct patient operation, reducing the risk of infection related to health services, and reducing the risk of falling patients. Of the six patient safety goals, the main element of patient care services is effective communication [6]. Effective communication may be by the characteristics of the individual, including age, gender, and length of work.

Communication of various information about patient development between health professions in hospitals is a fundamental component of patient care [6]. Alvarado, et al [7], revealed that inaccurate information could have a severe impact on patients, almost 70% of sentinel events are events that result in death or severe injury in hospitals due to poor communication.

The statement above is in line with Aldrich's report [7, 8], which revealed that based on data on adverse events, near misses, and sentinel events in hospitals, the problem that became the leading cause were communication. Effective communication is the main element of patient safety goals because communication is the first cause of patient safety problems. Effective communication that is timely, accurate, complete, precise, and understood by the recipient reduces errors and improves patient safety. Therefore, communication must be built by clarity, accuracy, appropriateness to the context of both language and information, systematic flow, and culture.

Ineffective communication will pose a risk of errors in providing nursing care, such as errors in administering drugs to patients and mistakes in carrying out treatment procedures. Nurses must carry patient safety goals to prevent the risk of errors in providing nursing care, namely effective communication. For this reason, a systematic approach is required to improve communication, one of which is the SISBAR communication technique (Greetings, Introduction, Situation, Background, Assessment, Recommendations).

The results of a survey of 330 surveys and interviews conducted by Aldrich [8] on medical and non-medical health care providers, patients, staff and people transferring

patients said that the ISBAR element was the best, namely simple, easy to remember, and easy to carry. In addition, the team are more confident in giving and receiving handovers, and medical record audits indicate an increase in the quality of the information available. And this ISBAR has been implemented in the Hunter New England Health Areas in the NSW Territory of the Health Service, Australia. Then it was strengthened by the results of the latest research conducted by Ramasubbu in 2017. The results of Ramasubbu et al. [9] said that the introduction of standardized handover ISBAR templates (Introduction, Situation, Background, Assessment, Recommendations) has improved the quality and safety of patients from handover between doctors in the ICU and the ED.

There is some gap from previous research in regarding the effective communication SBAR. The gap is about identification especially introduce their self. The other thing is gap between SBAR and ISBAR communication in regards Salam, which is the Indonesian culture greeting others before say something. There is limited research about SBAR and ISBAR in Indonesia. Therefore, It is hard to find out about this communication effectively and also there is limitations from previous study in regards SISBAR communications. Moreover, It is important to study about communication effectively by using SISBAR (Situation, Introduction, Situation, Background, Assessments and Recommendations) for handing over nurses and doctors. The aims of this study is to find out is whether the implementation of nurse and doctor handover communication has a relationship with the characteristics of gender, age, and length of work at SHBC (Santosa Hospital Bandung Central)

2. Methods

2.1. Study design

This study design is survey method with a cross-sectional approach from Medical Surgical Wards (West Ruby and East Ruby) in July 2021.

2.2. Sample

The sample size in this study was the entire nurse in charge (who did handovers with doctors) who worked in 2 medical-surgical wards. The inclusion and exclusion criteria in this study are:

2.3. Inclusion criteria

- 1) Permanent nurse at SHBC West Ruby Room and East Ruby
- 2) Nurses who have worked at least > 1 year
- 3) Nurse with minimum D3 Nursing education
- 4) Head of Team/ Shift in Charge
- 5) Nurses who are willing to be respondents and sign the informed consent.

2.4. Exclusion criteria

1. Nurses who have worked least than 1 years
2. Nurses who have not yet as shift in Charge

Instruments

The instrument that has been used and development from form of ISBAR. The instrument includes Name, gender, long of working, wards, education level. The instruments as well is including items Salam/ Greeting, Introduction, Situation, Background, Assessments and Recommendations.

2.5. Data collection procedure

The ethical approval is obtained by ethical approval form Faculty health and Technology Sciences, the University of Jenderal Achmad Yani Cimahi. Afterward, the permission is obtained from Santosa Hospital Bandung Central. Discussion has been done, and finally the wards that has been chosen 2 wards; West Ruby and East Ruby. Informed consent is available on hard papers, therefore, the respondents can be part of research or withdrawal from this research. The understanding of how-to observation and fill it the form by facilitators. Then, after 2 weeks collection and observation form is collected by researchers.

2.6. Data Analysis

Univariate analysis using the frequency distribution of gender, education level, and length of work to describe the use of SISBAR communication used.

This study uses a correlation test chi Square because the variables are categorical. It used to know the correlation between gender, age, and work experience with the application of SISBAR communication in handover between nurses and doctors.

3. Results

3.1. Characteristic respondents

TABLE 1

VARIABLE		FREQUENCY	PERCENT
Gender	Man	7	21.9
	Woman	25	78.1
Education	Nurse	12	37,5
	D3 Nursing	20	62,5
Length of Work	< 2 Years	12	37,5
	2-5 Years	3	9,4
	> 5 Years	17	53,1
Total Responden		32	100

Based on the table above, it was found that the respondents were male as many as 7 people (21.9%) and the female sex was 25 people (78.1%).

Also, it is found that there are 12 nurses educated respondents (37.5%), and 20 people with D3 nursing education (62.5%).

Length of Work

Length of work found that respondents who have worked for < 2 years are 12 (37.5%), 3 people have worked 2-5 years (9.4%), and 17 have worked > 5 years. people (53.1%).

3.2. Relationship between gender, education level and length of work

The relationship between gender and the implementation of SISBAR communication are found that respondents who are male and carry out effective SISBAR communication are 71.4% and respondents who are female and carry out effective SISBAR communication are 64%. Based on the results of statistical tests, it can be concluded that there is no relationship between gender and the implementation of SISBAR communication.

The relationship between education level and the implementation of SISBAR communication are found that respondents who have a D3 nursing education and implement effective SISBAR communication are 65% and respondents who are educated nurses

TABLE 2: The relationship between gender, education, length work and the implementation of SISBAR communication.

VARIABLE		SISBAR				TOTAL		P Value
		Ineffective (< 16)		Effective (=16)		n	%	
		n	%	n	%			
Gender	Man	2	28,6	5	71,4	7	100	1.000
	Woman	9	36	16	64	25	100	
Education	D3 Nursing	7	35	13	65	21	100	1.000
	Nurse	4	33,3	8	66,7	12	100	
Length of Work	< 2 Years	0	0	12	100	12	100	0.006
	2-5 Years	2	66,7	1	33,3	3	100	
	> 5 Years	9	52,9	8	47,1	17	100	

and carry out effective SISBAR communication are 66.7%. Based on the results of statistical tests, it can be concluded that there is no relationship between education and the implementation of SISBAR communication.

The relationship between length of work and the implementation of SISBAR communication were found that respondents who had worked for 2-5 years and carried out effective SISBAR communication were 33.3% and respondents who had worked for <2 years and carried out effective SISBAR communication were 100% and respondents who had work durations >5 years and implement effective SISBAR communication by 47.1%. Based on the results of statistical tests obtained p value of 0.006 it can be concluded that there is a relationship between length of work and the implementation of SISBAR communication.

4. Discussion

4.1. The relationship between gender and the implementation of SISBAR communication

Based on the table above, it is found that male respondents and carry out effective SISBAR communication are 71.4%, and female respondents carry out effective SISBAR communication are 64%. Based on the results of statistical tests, it can be concluded that there is no relationship between gender and the implementation of SISBAR communication. In this case, it can be seen that men mostly do the distribution of SISBAR communication because the respondents are actually investigating less. Statistical results show that there is no relationship between gender and the implementation of SISBAR communication at SHBC.

This also shows that both men and women are not guaranteed good communication with the use of SISBAR. Previous study [6] found that ISBAR (Introduction, Situation, Background, Assessments and Recommendations) communication more effective than SBAR (Situation, Background, Assessments and Recommendations) in terms of mentioning the names in the aspects of Introduction. Therefore, it is supported that for good communication for handover can be used term that easily to remember such as ISBAR or SISBAR. The research [7] find out that Using system with ISBAR design, nurses can enhance their communication effectiveness and further increase their individual benefits at hand-off. Using a non-ISBAR hand-off system, communication effectiveness depends solely on the nurses' individual cognitive and expressive ability.

Moreover, [7] System with ISBAR design can ensure effective information transmission among nurses for care continuity and prevention of adverse events.

SISBAR can be used well by both women and men if it is carried out procedurally from the hospital or clear policies are carried out. Although SISBAR communication was developed from the effective communication of SBAR and ISBAR, and in composition, it is not much different from SBAR. This is confirmed by a study conducted by Handayani [10] that there is no relationship between SBAR communication compliance with age and gender. Previous research showed significant relationship between perception, knowledge, attitude, motivation, and the application of the SBAR method [9].

4.2. The relationship between education level and the implementation of SISBAR communication

Based on the table above, it is found that respondents who have a D3 nursing education and implement effective SISBAR communication are 65% and respondents who have educated nurses and carry out effective SISBAR communication are 66.7%. Based on the results of statistical tests, it can be concluded that there is no relationship between education and the implementation of SISBAR communication.

The level of education also does not make nurses good in SISBAR communication. This shows that even though higher education is not a guarantee in the use of good communication, especially SISBAR communication. This may be because SISBAR communication has just been developed in Indonesia. Previous research in Cibabat Hospital Bandung [11] found that there is related for enhancing communication skill especially handover with doctors by using education for nurses, form the observation wards found that there is related significantly in introduction $P = 0,00$ ($P \text{ value} < 0.005$). Therefore, it can be conclude that not level education of nurses for enhancing good communication

but continuous education specifically with term of SISBAR. In addition, the results of research related to compliance with SBAR communication in hospitals that there is no effect of education level and work status in SBAR communication compliance [8]. Many hospitals in Indonesia use SBAR communication (situation Background Assessment and Recommendation) even though the content of SISBAR is the development of SBAR and ISBAR. So it can be understood that SISBAR is not well known among nurses in Indonesia. So the result is that there is no relationship between education level and SISBAR communication. **The relationship between length of work and the implementation of SISBAR communication**

Based on the table above, it was found that respondents who had worked for 2-5 years and carried out effective SISBAR communication were 33.3% and respondents who had worked for <2 years and carried out effective SISBAR communication were 100% and respondents who had work durations >5 years and implement effective SISBAR communication by 47.1%. Based on the results of statistical tests obtained p value of 0.006 it can be concluded that there is a relationship between length of work and the implementation of SISBAR communication

There is a relationship between length of work and the implementation of SISBAR communication. It can be seen that long working hours are synonymous with changes in good SISBAR communication. This may be caused by the length of work affecting the way of speaking as well as reports and consultations with doctors or other professions. It was found that there was a relationship between length of work and effective use in SISBAR communication. In addition, it turns out that communication compliance can be strengthened with a strong motivational influence [10]. This study shows the value of utilizing educational programs for nursing in handoff communication settings. Such standard training programs must be considered to train nurses to communicate effectively at handoff [12].

SISBAR communication is a development that can be applied in the procedures for reporting effective communication in hospitals. With this development, it is hoped that things that were previously missed in item S, situations related to greetings and introducing oneself can be adopted in SISBAR communication. Research conducted by Badrujamaludin, examining SBAR communication found that nurses often forget to mention the name and origin of the calling room. So the research concludes to add I, introduction so that nurses remember what to say before calling a doctor or consulting a doctor.

Then another research was carried out by Badrujamaludin [13], added Salam, greetings were taken related to culture, that culture in Indonesia, greetings are essential

things in the context of communication between professions in establishing inter-professional trust. Therefore, the SISBAR communication was developed. This is also supported by research related to SBAR compared to SISBAR communication in terms of handover or nurse and doctor consultation. This study indicates that SISBAR communication is more effective than SBAR communication with a p-Value of 0.002 (< 0.05).

In addition, Handayani's research [10] found that a strong motivation in compliance with communication with SBAR can be strengthened by the consistency of the incharge nurse who obeys the communication method according to the SOP. Then supported by research Badrujamaludin [13] encouraged to use SISBAR rather than SBAR to be applied in handovers between nurses and doctors in hospitals. Maximum efforts can be made by direct training to nurses related to the use of SISBAR communication, so another alternative besides using standardized SOPs in hospitals [14]. The study concluded that the instruction program had a positive effect on nurses' knowledge concerning communication strategy (SBAR) [15].

5. Study Limitation

There is limitation of this study that focus on Medical Surgical Nursing ward not to focus to others and the limitation of respondents.

6. Conclusions

Gender and education level do not affect the effectiveness of SISBAR communication. This is because this SISBAR communication is a communication carried out in the development stage. It has not been widely known in Indonesia. However, there is a significant relationship between the length of work and the effectiveness of SISBAR communication in hospitals. This can be understood that with long working hours, knowledge and skills increase, especially skills in SISBAR communication. The items that nurses often repeat make them accustomed to SBAR communication. SISBAR communication is an effective alternative communication that can be used in hospitals and can also be developed with more comprehensive research to see its effectiveness so that the results can be generalized to become standard communication in Indonesia. Recommendation for the future study is to study with various wards not only Medical Surgical wards but also others ward. It is better to study more respondents with various hospitals.

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