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NURSES' SATISFACTION TOWARDS THE USAGE OF SBAR AS A COMMUNICATION TOOL FOR HANDOFF IN A PRIVATE HOSPITAL PENANG

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ABSTRACT

Background: Handoff is an important communication process involving the exchange of patient information between healthcare workers. Situation, Background, Assessment and Recommendation (SBAR) is a standardised tool that is created to enhance the efficiency of communication thus giving rise to effective collaboration, increases patient satisfaction as well as patient outcome. Although, SBAR was initiated in this private hospital for almost a decade and reinforced in 2017, the overall acceptance and usage of SBAR reflect otherwise. Hence, the purpose of this study is to determine the nurses' satisfaction towards the usage of SBAR as a communication tool and its association with socio-demographic variables. **Methods:** A cross-sectional descriptive study design was conducted with 234 nurses selected using a simple random sampling at a private hospital, Penang. A piloted and validated, Handover Evaluation Scale (HES) was used as the study tool. **Results:** Overall, nurses were satisfied with the use of SBAR (M = 68.9, SD = 11.94) and there was a significant association between gender and satisfaction of nurses towards usage of SBAR (t = 2.130; p < 0.05). **Conclusion:** Although the nurses were satisfied with the use of SBAR, there is a need to investigate the reason for lack of satisfaction with its efficiency of implementation.

Keywords: Nurses; Satisfaction; Communication; SBAR; Handoff

INTRODUCTION

Handoff or handover process is a communication process involved in exchanging of patient's information between all healthcare workers, especially nurses during changing of shift which is the element in ensuring the provision of continuous care and patient safety (Stewart, 2016; Hanley-Gumbs, 2019). Communication errors due to ineffective communication are the common causes of patient injuries in healthcare due to not having a common understanding (Vardaman *et al.*, 2012; Blom *et al.*, 2015). According to the Joint Commission, there are a total of 936 adverse events in the year 2015, whereby communication was the contributing factor to more than 70% of severe medical errors (Shahid & Thomas, 2018). This makes it utmost important that nurses have the ability to communicate effectively as they are the majority in healthcare professionals that provide patient care around the clock. According to Herawati *et al.*, (2018) a successful handover would facilitate in the quality of care provided and allow

reduction of errors.

In the effort to enable effective handoff process, a standardised communication tool known as the Situation, Background, Assessment and Recommendation (SBAR) was proposed to ease the collection, arrangement and exchange of information between healthcare workers, while providing an approach towards the strengthening of teamwork (Blom *et al.*, 2015; Sears *et al.*, 2014). The communication tool started with Situation which emphasises on the main reason of hospitalisation followed by Background that states the history of patient such as past medical or surgical history, any allergies, previous medications and so on. As for the Assessment, it is the part whereby the patient current condition will be mentioned in details while the Recommendation will be developed based on the summary of assessment findings in accordance with patient care planning (Arumugam *et al.*, 2016).

In this era of globalisation, healthcare which focuses

on ensuring the quality of life through the enhancement of health should constantly prioritise all patients in the aspect of their safety as well as the quality of care received. However, the cases of medical errors were seen to be on its rising trend, gaining the attention of many healthcare professionals in which patient safety is now a crucial matter to be concerned of (Herawati *et al.*, 2018). Several studies have shown that insufficient or poor communication among healthcare providers to be one of the causes leading to preventable patient injuries in the healthcare settings (Hunter, 2017; Mulberry, 2018; Campbell & Dontje, 2019). Therefore, a standardised tool such as SBAR was implemented to assist in ensuring effective communication especially among nurses during handover.

Although, SBAR was introduced into this private hospital for more than a decade and was reinforced again in 2017, its implementation was not being widely utilised by many nurses until today. Most of them would only apply the tool if they were being forced or under the supervision of their superior. In addition to that, there is no standard operating procedure (SOP) or a standard form to be used for reporting other than an instruction guide for the nurses to apply. As such, most of the staff nurses were not able to understand the importance of using SBAR due to lack of proper guidelines being provided. Furthermore, no studies were conducted to determine or monitor the outcomes of the implementation of SBAR since it was introduced. This was also the reason for the lack of its utilisation.

Currently, handover of report among nurses in non-critical units are usually carried out as a general report mainly involving patients' progress and nursing care plan, medical diagnosis and treatment rather than focusing on patient as an individual. In comparison, handing over report in the critical units, is very detailed, whereby sometimes the information presented were irrelevant and repetitive. Thus, the overall nursing handover report sessions did not provide an accurate information of the patient but instead prolonged the time spent in the hospital. On the other hand, nurse's ineffective communication with the physicians have also resulted in many delays or errors in carrying out the patients' treatment.

Based on the reasons mentioned above, the researchers felt the need to conduct this study to identify the nurses' satisfaction on the usage of SBAR as a communication tool for handoff in this private hospital in Penang. It is in the hope that the information gathered would allow the enhancement of communication among

healthcare providers especially nurses, prevent errors or delays in carrying out the doctors' orders, reduce the amount of time wasted for handover and most importantly strengthen the delivery of nursing care at all times.

METHODOLOGY

Study Design, Setting and Sample

A cross-sectional descriptive study design was used in this study involving 234 registered nurses, through a simple random sampling technique (Setia, 2016). The estimated minimum sample size was determined using Raosoft sample size calculator, with a target population of 500 registered nurses, 5% margin error, 95% confidence level, 50% distribution rate with 10% attrition rate (Raosoft, 2016).

The inclusion criteria are all the nurses that are using SBAR throughout the wards including those who are not in favour of using SBAR while the exclusion criteria are all the Nurse managers, nursing administrators, assistant nurses, medical assistants, clinic assistants and health care assistants.

Instrument of Study

A 14-item self-administered questionnaire with 7-point Likert-type scale known as the Handover Evaluation Scale (HES) was used with permission from O'Connell, Ockerby & Hawkins (2014). This tool is used to determine whether the nurses are satisfied with the usage of SBAR in this hospital. The questionnaire comprises of two sections. Section A consist of the socio-demographic data of the nurses which include age, gender, ethnicity, working experience (years), highest qualification level and current ward placement. Section B is the 14-item Handover Evaluation Scale (HES) with a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). Handover Evaluation Scale has three subscales: (1) quality of information (six items), (2) interaction and support (five items) and (3) efficiency (three items). The higher the agreement, the more satisfied the nurses are with the usage of SBAR as a communication tool for handoff.

Ethical Considerations

Ethical approval from the International Medical University Joint-Committee of the Research and Ethics Committee (IMU-JC) and Chief Executive Officer of the hospital was obtained before the pilot study and actual study conducted. Permission to use instrument had been granted by previous original author via e-mail. Written consent was obtained from each participant prior to data

collection. Confidentiality of participants was maintained throughout the study and participants are allowed to withdraw from the study if they wish to.

Pilot Study

A pilot study was carried out in August 2020 on 30 registered nurses from a private hospital in Penang, Malaysia. According to Conroy (2018), a pilot test sample size of 30 is enough to measure alpha reliability. Thus, 30 questionnaires were handed out in an equal manner to participants from medical-surgical and critical care settings, respectively, to validate the reliability and consistency of the adopted self-report questionnaires from Wong & Law (2002).

Validity and Reliability Testing

According to Polit & Beck (2018), reliability is defined as the accuracy and consistency of information obtained in a study where the extent to which scores are free from measurement error. Cronbach's alpha, α value of ≥ 0.70, has a higher degree of internal consistency and reliability. In this study, the coefficient value from the pilot study was 0.83, which is above 0.70. Therefore, the instrument adopted for the study is reliable.

The questionnaires were reviewed and validated by a panel of experts which consisted of three Nursing Managers. According to Polit, Beck & Owen (2007), it is suggested that I-CVI of 0.78 or higher for three or more experts is considered good content validity. Based on the pilot study, the I-CVI value obtained was 0.86 and therefore the instrument adopted for the study is valid.

Data Collection Procedure

Data collection was carried out after approval was obtained from the International Medical University (IMU) Ethics and the Research Committee and the Ethical committee of this private hospital in Penang to conduct this study. Data collection was conducted from August to September 2020. All participants who fulfilled the inclusion criteria were briefed on the purpose of the study before consent obtained. Participants were given 10-15 minutes to complete the questionnaire and all completed questionnaire were then placed in an envelope. Data was stored in the PC and was only accessible to the primary investigator and co-researchers using a password.

Data Analysis

The collected data of the study was analysed using IBM SPSS Statistics version 25.0. Descriptive statistics in the form of frequency, percentages mean and standard deviation, was used to analyse the demographic data. Inferential was used to analyse the differences between the demographic and research variables. Normality test was done prior to the selection of inferential test. Tables, graphs and charts format was used to illustrate the findings of the study according to American Psychological Association (APA) format.

RESULTS

Demographic of Sample

A total of 208 participants were females (88.9%) while the remainder 26 participants (11.1%) were males. As for the age, most of the participants (43.6%) were within the age group ranging from 21-25 years. Majority of the participants were Chinese (52.6%), 19.2% Malays, 14.5% other races and 13.7% were Indians.

Majority of participant in this study had work experience between 1-5 years (n = 143, 61.1%), 51 participants (21.8%) had 6-10 years of experience, 17 participants (7.3%) had 11-15 years, 16 participants (6.8%) had more than 15 years while 7 participants (3%) had less than 1 year of working experience. As for the highest Nursing education level, most of the nurses had Diploma qualification (n = 170, 72.6%). Lastly, most of the participants were from the specialised units (n = 100, 42.7%) followed by medical/surgical unit with 97 participants (41.5%).

Table 1: Demographic of Sample (n = 234)

Demographic Data		n (%)	M ± SD
Age	21 – 25	102 (43.6)	
	26 – 30	79 (33.8)	
	31 – 35	26 (11.1)	
	36 – 40	16 (6.8)	28.30 ± 6.89
	> 40	11 (4.7)	
Years of Experience	< 1 year	7 (3)	
	1 – 5 years	143 (61.1)	
	6 – 10 years	51 (21.8)	
	11 – 15 years	17 (7.3)	6.11 ± 6.21
	>15 years	16 (6.8)	
Ethnic	Malay	45 (19.2)	
	Chinese	123 (52.6)	
	Hindu	32 (13.7)	
	Others	34 (14.5)	
Gender	Male	26 (11.1)	
	Female	208 (88.9)	
Highest Qualification	Master	1 (0.4)	
	Degree	14 (6)	
	Advanced Diploma/Post - Basic	49 (20.9)	
	Diploma	170 (72.6)	
Current Ward Placement	Medical/Surgical	97 (41.5)	
	Specialised	100 (42.7)	
	Procedure room	32 (13.7)	
	Day-care	5 (2.1)	

Satisfaction with the usage of Situation, Background, Assessment, and Recommendation (SBAR) as a Communication Tool for Handoff

The satisfaction with the usage of SBAR can be divided into three subscales, Quality of information, interaction and support, and efficiency. Amongst the three subscales, Quality of information subscale was rated the highest (M = 30.97 SD = 5.86) followed by Interaction and support subscale (M = 25.53; SD = 5.95) and Efficiency subscale (M = 12.40; SD = 3.46). Most of the nurses rated two items from quality of information subscale high, namely the information receives was up to date (86.3%) and they were able to clarify information

(88%). However, only 43.6% felt that important information was always given to them. As for Interaction and support subscale, most of the nurses were satisfied with the five items with means ranging from 4.72 to 5.78. However, as for the efficiency of the usage of SBAR, most of the nurses perceived that the handover takes up too much time (58.1%) and information received during handover were not relevant to patient care (50%). Apart from that, the mean overall score of satisfaction (HES tool) is 68.90 (SD = 11.94) which indicates a moderate level of satisfaction towards the usage of SBAR tool for handover. Hence, the null hypothesis is rejected, therefore, the nurses are generally satisfied with the usage of SBAR.

Table 2: Satisfaction with the Usage of Situation, Background, Assessment, and Recommendation (SBAR) as a Communication Tool for Handoff (n = 234)

Items	Disagreed n (%)	Neutral n (%)	Agreed n (%)	M ± SD
Subscale 1: Quality of Information				
1. The information that I receive is up to date	23 (9.9)	9 (3.8)	202 (86.3)	5.59 ± 1.29
2. I am provided with sufficient information about patients	23 (9.8)	10 (4.3)	201 (85.8)	5.48 ± 1.31
3. I am able to clarify information that has been provided to me	19 (8.1)	9 (3.8)	206 (88)	5.58 ± 1.24
4. The way in which information is provided to me is easy to follow	41 (17.5)	31 (13.2)	162 (69.2)	4.96 ± 1.54
5. I feel that important information is not always given to me	102 (43.6)	33 (14.1)	99 (42.3)	4.09 ± 1.77
6. I am able to keep my mind focused on the information being given to me	28 (12)	23 (9.8)	183 (78.2)	5.26 ± 1.35
Mean Total Score Subscale 1				**30.97 ± 5.86**
Subscale 2: Interaction and Support				
7. I have the opportunity to debrief with other colleagues when I have had a difficult shift	41 (17.5)	36 (15.4)	157 (67.1)	5.03 ± 1.46
8. I have the opportunity to discuss workload issues	55 (23.5)	35 (15)	144 (61.5)	4.72 ± 1.61
9. I have the opportunity to discuss difficult clinical situations I have experienced	47 (20.1)	30 (12.8)	157 (67.1)	4.87 ± 1.53
10. I am educated about different aspects of nursing care.	23 (9.8)	24 (10.3)	187 (79.9)	5.29 ± 1.31
11. I have the opportunity to ask questions about things I do not understand	16 (6.8)	17 (7.3)	201 (85.9)	5.62 ± 1.24
Mean Total Score Subscale 2				**25.53 ± 5.95**
Subscale 3: Efficiency				
12. I find handover takes too much time	136 (58.1)	33 (14.1)	65 (27.8)	3.24 ± 1.93
13. I am often given information during handover that is not relevant to patient care	83 (35.5)	34 (14.5)	117 (50.0)	4.28 ± 1.83
14. Patient information is provided in a timely fashion	29 (12.4)	63 (26.9)	142 (60.7)	4.88 ± 1.30
Mean Total Score Subscale 3				**12.40 ± 3.46**
Mean Overall Score				**68.90 ± 11.94**

Association between Demographic Data and Mean Overall Score of Nurses' Satisfactions towards the Usage of SBAR (n = 234)

A significant difference can be seen between male

and female participants in their satisfaction towards the usage of SBAR (t = -2.130; p value = < 0.05). Females seems to have higher scores of satisfactions with the usage of SBAR (M = 69.48; SD = 11.80) as compared

with the males (M = 64.23; SD = 12.26). However, this must be cautiously interpreted in view of the number of males and females in the demographic data. The remaining demographic data revealed that there were no significant differences between the satisfaction scores and age although the highest scores were reported for those above the age of 40 years. Participants from the other ethnics scored the highest (M = 79.76; SD = 12.26) as compared to the remaining ethnicity but these differences are also not significant.

According to the years of experience, participants working less than 1 year has the highest mean scores (M = 74.57; SD = 13.93) followed by more than 15 years (M = 70.94; SD = 10.71) and the lowest were from those working in the range of 11-15 years (M= 64.06; SD = 7.05). Participants with degree qualification had the lowest mean scores (M=65.57; SD=14.08) as compared to those with advanced diploma/post-basic (M = 67.27; SD=10.69) and diploma qualification (M = 69.76; SD = 12.00). Participants working in the daycare unit had the highest mean and standard deviation (M = 74.40; SD = 12.93) among the other units. However, there were no significant differences between age, ethnic, years of experience, highest qualification and ward placement with satisfaction of participants in the usage of SBAR. Therefore, null hypothesis is rejected.

Table 3: Association between Demographic Data and Mean Overall Score of Nurses' Satisfactions towards the Usage of SBAR (n = 234)

SBAR Mean Score (Satisfaction)		M±SD	t / F	p
Gender	Male	64.23±12.26	-2.130	0.034*
	Female	69.48±11.80		
Age (years)	21 – 25 years	70.52±11.89	1.349	0.252
	26 – 30 years	67.37±12.52		
	31 – 35 years	67.19±11.55		
	36 – 40 years	66.44±11.10		
	> 40 years old	72.45±8.88		
Ethnic	Malay	71.31±10.67	1.770	0.154
	Chinese	67.25±11.97		
	Hindu	70.91±12.71		
	Others	79.76±12.26		
Years of experience	<1 year	74.57±13.93	1.289	0.275
	1 – 5 years	69.22±12.23		
	6 – 10 years	68.18±11.61		
	11 – 15 years	64.06±7.05		
	>15 years	70.94±10.71		
Highest qualification	Master	59±N/A	1.910	0.129
	Degree	65.57±14.08		
	Advanced Diploma/Post-Basic	67.27±10.69		
	Diploma	69.76±12.00		
Current Ward Placement	Medical/Surgical	67.82±12.71	0.778	0.507
	Specialised Unit	69.73±12.00		
	Procedure Room	68.69±8.90		
	Day-care	74.40±12.93		

Statistically significant p < 0.05.

DISCUSSION

Demographic Variable

Based on the findings of the study, majority of the participants comprised of females (88.9%, n = 208) whereas, male participants were 11.1% (n = 26). A study conducted by Shalini, Castelino & Latha (2015) also had similar gender distribution where there were more female participants (88.9%) as compared to male participants (11.1%). Similarly, another study done by Chiew *et al.*, (2019) also reported similar finding where female participants were the majority (82.9%) as compared to the male participants (17.1%). Females remain the majority in the Nursing profession.

In terms of age, there were 102 participants from the age group of 21-25 years old with the highest percentage of 43.6% followed by those from the age group of 26-30 years old (33.8%). The average age of this study population was 28.30 years (SD = 6.89) and their ages ranged from 22-62 years old. This indicated that the nurses working in this hospital are young and could be contributed to the fact that they were still fulfilling their years of bond as they were sponsored by this hospital for their training. However, a study done by Nagammal *et al.*, (2017) revealed that most of the participant's age were 36-40 years old with a mean age of 36.2 years (SD = 5.70).

According to the demographic data, out of 234 participants, the majority of nurses had a working

experience of 1-5 years (61.1%) and 6-10 years (21.8%) with a mean of 6.11 (SD = 6.21). Nevertheless, in a study conducted by Chiew et al. (2019) mentioned that most of the participants had a working experience of 11-20 years. The current study reported that 72.6% of participants were Diploma holders followed by 20.9% participants who had Advanced Diploma/Post-Basic qualification. Similarly, Ho, Akina & Thanaletchumi (2017) mentioned in their study, that 84% of the participants were Diploma holders.

Satisfaction with the Usage of Situation, Background, Assessment, and Recommendation (SBAR) as A Communication Tool for Handoff

In the present study, the nurses were generally satisfied with the usage of SBAR whereby an overall mean score of 68.90 (SD = 11.94) was obtained. The satisfaction variable was divided into 3 subscales where the highest mean total score among the subscales was subscale 1 which is the quality of information with a mean total score of 30.97 (SD = 5.86) followed by subscale 2, interaction and support with a mean of 25.53 (SD = 5.95) and lastly, subscale 3, efficiency which had a mean of 12.40 (SD = 3.46).

In terms of subscale 1, the majority of the participants were satisfied with the quality of information being provided to them when utilizing the SBAR tool and this can be seen in a study done by Nguyen (2016) where most of the participants expressed their satisfaction in using SBAR as it was helpful in organizing patient information effectively. In this current study, many perceived that the information provided to them was easy to follow and patients' information provided were sufficient as shown in item 4 (69.2%) and item 2 (85.8%) respectively. This was supported by Campbell & Dontje (2019) which reported that the implementation of SBAR was easy to use and prevented the loss of patient information resulting in the reduction of poor patient outcomes related to incomplete reporting. However, 43.6% of participants in this current study felt that important information was not always given to them and this may be due to different individual's perceived importance of information.

According to the findings in subscale 2, majority of the participants stated that they were able to communicate effectively with the usage of SBAR tool which is indicated in the following 3 items which were "I have the opportunity to debrief with other colleagues when I have had a difficult shift" (M = 5.03; SD =1.46), "I am

educated about different aspects of nursing care" (M =5.29; SD =1.31) and "I have the opportunity to ask questions about things I do not understand" (M = 5.62; SD =1.24). A similar study done by Ho *et al.*, (2017) reported that the respondents' total mean of score was M = 25.63; SD =7.86, which showed that the usage of SBAR had a moderate effect on their communication skills. At the same time, another study conducted by Nagammal *et al.*, (2017) revealed that 84% of participants agreed that SBAR helped them to experience a better interaction and support. In addition to that, the participants' overall satisfaction score in subscale 2 revealed that they had the opportunity to discuss and clarify clinical aspects with their colleagues which could allow the increase of teamwork among nurses. This can be seen in the study done by Inanloo *et al.*, (2017) which demonstrated a similar result as well, whereby the quality of teamwork can be improved with the enhancement of communication skills.

As for subscale 3, most of the participants (60.7%) were satisfied that SBAR was able to provide patient information in a timely fashion corresponding to a research done by Nagammal *et al.*, (2017) that stated 95.1% of nurses acknowledged that SBAR communication technique follow a logical order and provide an organized patient information. However, a total of 58.1% of participants in the current study had agreed that handover using SBAR takes too much time. Nguyen (2016) mentioned that even though SBAR was able to assist in organising the participants' thoughts but they felt that the handoff was actually longer when using SBAR compared to their usual handover as they are not familiar with the tool and had a difficult time remembering the sequence. This contradicted with the findings by Inanloo *et al.*, (2017) that SBAR tool is helpful in decreasing the time spent during handover of shift.

Association between Demographic Data and Mean Overall Score of Nurses' Satisfactions towards The Usage of SBAR

Based on the present study, relationship between the participants' demographic data and their satisfaction towards the usage of SBAR revealed that there was only a significant difference seen between genders in their satisfaction towards SBAR ($t = -2.130$; p value = <0.05). Demographic data such as age, ethnic, years of experience, highest qualification and current ward placement appeared to not have any significant differences with satisfaction of nurses towards SBAR.

The result of this study contradicted with the study conducted by Nagammal *et al.*, (2017) which revealed that there was no statistically significant difference between the overall perception of satisfaction using SBAR score and all the demographic variables among nurses. On the other hand, a study done by Lee *et al*. (2019) showed that there were some socio-demographic data consisting of years of experience and average time spent in documentation which had a statistically significant correlation with nurses' satisfaction towards SBAR. However, our current study indicated that there was a significant difference only between gender and nurses' satisfaction in the usage of SBAR.

Limitation

The limitation of this study was that it only involved registered nurses from one private hospital in Penang. Thus, the result may not be representing the registered nurses from other hospitals as well as be generalised to a larger population. In the field of nursing, the majority of nurses are females as compared to the number of male nurses whereby this may lead to a biasness in the results. This can be seen in the current study which comprises of 88.9% of female participants and only 11.1% of male participants. Therefore, it is seen in many cases that Situation, Background, Assessment, and Recommendation-Guided Huddles improve communication and teamwork in case of emergency situation (Martin & Ciurzynski, 2015).

CONCLUSION

As a conclusion, the nurses who participate in this study have shown that they are moderately satisfied with the usage of SBAR as a communication tool for handover. They believe that with the help of this communication tool, patient information is delivered in a more accurate and systematic way which in turn preserve patient safety. Therefore it is important to have a specific communication tool that could help in maintaining effective communication process so that the unsystematic and ineffective traditional way of handling patient information can be replaced. Training and education on using SBAR communication tool should be recommended by the organization to the nursing college of this private hospital for nursing students so that they have a better understanding and confidence on how to apply critical thinking skill while handling patient information in the near future. This can help to reduce or prevent the risk of miscommunication especially during emergency and hectic situation, which would result in compromising patient safety as well as the hospital reputation.

Conflict of Interests

The authors declare that they have no conflict of interest.

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