

HEALTHCARE WORKERS' SATISFACTION ON SBAR TOOL FOR HANDOVER IN A PRIVATE HOSPITAL

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ABSTRACT

Nursing handover is indispensable and functions as information exchange, care continuity, and fundamental to safe and quality patient care. Healthcare workers conduct shift handover in a background of chaotic, frequent interruptions, within limited timeframe. Healthcare workers' satisfaction on shift handover directly and indirectly affects the patient's safety and standards of care. Aims: To explore satisfaction on the SBAR tool for handover among healthcare workers in a private hospital. Design: A descriptive cross-sectional study. Setting: A private, multi-specialty hospital (84-bed capacity). Population and Sample: Purposive sample ($n = 89$) of nurses and PCAs working in all the departments participated with voluntary participation and anonymity ensured, at 72% response rate. Data Collection: Anonymous self-administered questionnaire (Handover Evaluation Scale) with 14-item of 7-point Likert-type scale were returned within a one-week timeframe. Data Analysis: Descriptive statistics on demographics with frequency, percentage, mean and standard deviations. Statistical (inferential) analyses were run on HES responses and correlation with demographic variables. Narrative comments to open-ended questions were analysed qualitatively by summarising key themes. Results: Healthcare workers are found to be satisfied with SBAR for handover, with total score of 71.64 ($SD = 8.81$) in the range of 14-98. Associations are discovered between certain demographics and respondents' satisfaction. Key strengths and limitations of SBAR, and suggestions for improvements are collected and all the above discussed pertaining to implications. Conclusion: Healthcare workers are satisfied with the use of SBAR for handover. There are associations between demographics with SBAR satisfaction. Key strengths, limitations, and suggestions for improvement in relation to SBAR are discussed.

Keywords: *Healthcare Worker, (shift) Handover, SBAR, Satisfaction*

INTRODUCTION

Documentation represents a crucial and indispensable part of nursing (healthcare workers), especially in clinical practice. It serves as an essential indicator that reflects the quality and standards of care provided to patients (Lindo et al., 2016). Braaf, Riley, and Manias (2015) highlighted in their qualitative study on poor practice of documentation in the perioperative setting, lack of verbal handover, in which could compromise the safety and quality of care patients received. It is highlighted that opportunities for

clinical errors arise amidst the handover process for transfer of care responsibility, if not conducted in a way that share and transfer important information as efficiently (Smeulers, Lucas, & Vermeulen, 2014). Since nurses provide direct bedside or point-of-care, they are in the position to identify and rectify any subtle changes (Collins et al., 2013). It is even stated that nurses might decline to attend patients, not until they receive a formal shift handover, thus reflecting the significance and perceived importance towards handover (Scovell, 2010).

Likewise, Collins et al. (2013) posited from their retrospective study of data mining that nurses' documentation can be associated with the mortality risk prediction as the pattern of records with higher frequency in comments and vital parameters suggesting clinical deterioration of patient's condition. By such means of documentation and followed by handover of patient's condition, it is related to patient's safety as well as staff satisfaction (Nagammal, Nashwan, Nair, & Susmitha, 2017).

A contemporary literature review on documentations by healthcare professional had reported from their review on 59 papers that patient safety is compromised as a result of communication failure, due to disruption in the transfer of information among nurses (Braaf, Manias, & Riley, 2011). This is due to communication breakdown, along with relevant and pertinent clinical information not shared timely (Kear, 2016), which results in adverse incidents, delays for diagnosis and subsequent treatment, inappropriate nursing actions, and even care omission (Smeulers et al., 2014).

In the nursing context, the safety and quality of care patients received is directly associated with the accuracy and comprehensiveness of information transfer at inter-shift handover (Dufault et al., 2010). Hence, it illustrates the crucial role and accountability of nurses in handing over safely regardless of their unit specialty (Kear et al., 2016), especially within a hospital setting.

Objectives

The general objective of this study is to explore the satisfaction level in using SBAR tool for shift handover among healthcare workers of nurses and PCAs (the nursing team) in a private hospital.

Specific Objectives

There are three specific objectives focus on this study as listed below:

1. To examine the satisfaction level in using SBAR tool for shift handover among nurses and PCAs.
2. To determine any associations between demographic variables and nurses/PCAs' satisfactions.
3. To explore the suggestions for improvement on shift handover from nurses and PCAs.

Research Questions and Hypotheses

For the purpose of this study, the following research questions were identified:

1. How satisfied are nurses and PCAs in using SBAR tool for shift handover?
2. Are there any associations between demographic variables and nurses/PCAs' satisfaction?
3. What are the suggestions from nurses and PCAs on the improvement in shift handover?

Based upon the study objectives and research questions, the following null hypotheses were proposed:

1. The nurses and PCAs are NOT satisfied with the use of SBAR tool for shift handover.
2. There is NO significant difference(s) between demographic variables and nurses/PCAs' satisfaction.

LITERATURE REVIEW

Literature highlighted that the use of SBAR is commonly applied between physician and nurses (Staggers & Blaz, 2013), yet the use of SBAR in nurse-to-nurse shift report is scarce and warrant further investigation as to their satisfaction of using the tool in shift handover in view of the significances as reported earlier. Moreover, lack of studies on verbal handover supported by printed forms such as clinical notes were lacking, in which only been reported in one nursing trial, and no single method of handover is superior to one another due to the individual unit differences in context, its nurses' expertise, and patient's conditions (O'Connell & Penney, 2001). Thus, there is no one-size-fits-all handover tool that suits all clinical settings (Anderson, Malone, Shanahan, & Manning, 2014). Such process of handover is said to be enabling opportunity to detect if any errors, and challenged flawed assumptions because of face-to-face instant clarification (Staggers and Blaz, 2013). The instant feedback and reciprocal interactions will allow rapid detection of any errors or issues and solution discussed on-the-spot (Eggins, & Slade 2015). However, this depends on individual unit's culture as some might detect any questioning at all (Scovell, 2010), possibly due to time constraints and workload.

This means lacks of standardized or structured documentation and handover pose a significant barrier towards care planning and delivery. Despite a handful quantity of more than 200 publications in 2010, there are still confusions and struggle towards unanimous safe practice of handover (Girard, 2014), with one reason attribute to standardized handover tool or method due to diverse aspect from one to another (only exchange of information, with other aspects such as unit atmosphere, interruptions, training, and equipment's unaccounted). In addition, Kear and Ulrich (2015) suggest future research in the clinical setting to investigate handover and its related productivity, working environment, and staffing level, which is potentially linked to satisfaction level of nurses.

Theoretical Framework

The theoretical framework underpinning this research undertaking refers to Mania's Communication Model (MCM) (Manias, 2010). Specific for communication, and particular to the healthcare context, this framework enables nonverbal communication through documents and documentation to be explored by way of three interactive dimensions: the socio-cultural and environmental influences, attributes of communication encounter and outcomes of communication (Table 2.1). The model is validated as a middle-range theory with regard to alliance to empirical findings, level of abstract, and its scope (Braaf et al., 2015).

Table 2.1: Mania's Communication Model (MCM) (Manias, 2010)

SOCIOCULTURAL and ENVIRONMENTAL influences	ATTRIBUTES of the communication encounter	OUTCOMES of communication encounter (at handover)
<p><u>Sociocultural and environmental influences</u> on nonverbal communication may include time restrictions, productivity objectives, the type of document or documentation used, or a nurse's area of employment.</p> <p>Number of patients handed over diluted amount of information transferred.</p>	<p>The <u>attributes</u> of nonverbal communication encounters are explored such as timing, accuracy, and completeness of information conveyed are explored.</p> <p>Questioning or clarification during handover.</p>	<p>The <u>outcomes</u> of communication through documents or documentation are considered, such as communication failure, successes and gaps.</p> <p>Ability to transfer correct information between nurses after conduct of handover.</p>

Research Design

In order to meet the research objectives and purpose of this study, the design of descriptive, quantitative cross-sectional survey by means of questionnaire method is deemed as appropriate. Despite quantitative data, which refers to amounts or quantities being advocated as more efficient (Ingham-Broomfield, 2014), as to the hypotheses testing, there is still a risk where contextual details might be overlooked (McCusker & Gunaydin, 2015). Hence, the researcher reinforced this issue with open-ended questions and comment.

The study setting is a private, multi-disciplinary hospital located at the outskirt of Kuala Lumpur, serving the community of Cheras population. It has the capacity of 84-bed occupancy, with multidisciplines services. Hence, the nursing team of nurses and PCAs working under these departments and unit wards comprise the sample population.

The instrument utilized in this study is a self-administered questionnaire with 7-point Likert-type scale known as 14-item Handover Evaluation Scale (HES, O'Connell, Ockerby, & Hawkins, 2014). The permission to use and modification as per local context had been sought after from the original researcher.

FINDINGS

Research Question 1:

How satisfied are nurses and PCAs in using SBAR tool for shift handover?

Null hypothesis, H_0 :

The nurses and PCAs are NOT satisfied with the use of SBAR tool for shift handover.

From the descriptive analysis of results, overall the satisfaction level of health care workers (nurses and PCAs) are found to be positive and moderately satisfied on using SBAR for handover, with a total mean score of $5.12 \pm$ standard deviations (SD 0.63) on a scale on Likert ranging of 1 to 7 (minimum 3 and maximum mean score 6). In addition, total score of satisfaction on SBAR (HES tool) ranges from minimum 40 to maximum 88 (range of 14-98 total score). The mean total score of satisfaction (HES tool) is 71.64 (\pm SD 8.81), thus indicating a high degree (moderate to strong level) of satisfaction on the SBAR tool for handover. Hence the null hypothesis is rejected; therefore, the nurses and PCAs are generally satisfied with the use of SBAR.

Table 4.1: Mean (SD) and Percentages of 14-item HES Questionnaire

Item	Statement		Dis-satisfaction	Neutral	Satisfaction
			Mean (SD)	%	%
10.	I have the opportunity to discuss difficult clinical situations I have experienced.	5.54 (1.11)	9.0	3.4	87.6
11.	I am provided with sufficient information about patients.	5.63 (0.92)	4.5	1.1	94.4
12.	I have the opportunity to debrief with other colleagues when I have had a difficult shift.	5.37 (1.10)	11.2	3.4	85.4
13.	I have the opportunity to discuss workload issues.	5.26 (1.25)	16.9	0	83.1
14.	I am often given information during handover that is not relevant to patient care.	3.46 (1.57)	61.8	9.0	29.2
15.	The way in which information is provided to me is easy to follow.	5.56 (1.03)	6.7	1.1	92.1
16.	I am able to clarify information that has been provided to me.	5.65 (0.93)	5.6	1.1	93.3
17.	Patient information is provided in a timely fashion.	5.46 (0.87)	5.6	2.2	92.1
18.	I have the opportunity to ask questions about things I do not understand.	5.67 (0.96)	4.5	3.4	92.1
19.	I find handover takes too much time.	3.39 (1.68)	67.4	4.5	28.1
20.	The information that I receive is up to date.	5.49 (1.00)	7.9	2.2	89.9
21.	I am able to keep my mind focused on the information being given to me.	5.56 (0.94)	6.7	1.1	92.1
22.	I am educated about different aspects of nursing care.	5.57 (0.88)	2.2	6.7	91.0
23.	I feel that important information is not always given to me.	4.01 (1.59)	46.1	14.6	39.3

Research Question 2:

Are there any associations between demographic variables and nurse/PCAs satisfaction?

Null hypothesis, H_0 :

There is NO significant difference(s) between demographic variables and nurse/PCAs satisfaction.

(A) t-test / one-way ANOVA

Table 4.2: Respondents' Total Mean Score of Satisfaction on SBAR with Demographic Data (n = 89)

Variables	SBAR Mean Score (Satisfaction)	Mean ± SD	t	P
Gender (<i>t-test</i>)	Female	5.11 ± 0.63	-0.788	0.433
	Male	5.46 ± 0.56		
Age (years)	21-30	5.05 ± 0.59	0.791	0.456
	31-40	5.17 ± 0.67		
	41-50	5.31 ± 0.71		
Working Experience (Years)	Less than 1 year	5.10 ± 0.37	1.847	0.127
	1-3 years	4.94 ± 0.51		
	3-5 years	5.15 ± 0.65		
	5-10 years	5.05 ± 0.76		
	More than 10 years	5.46 ± 0.57		
Years of Employment (current workplace, CAH-C)	Less than 1 year	5.27 ± 0.58	1.627	0.175
	1-3 years	4.92 ± 0.72		
	3-5 years	5.08 ± 0.63		
	5-10 years	5.25 ± 0.49		
	More than 10 years	5.46 ± 0.37		
Position	Charge Nurse @ Nursing Admin.	5.60 ± 0.37	3.707	0.015*
	Senior Staff Nurse (SSN)	5.57 ± 0.24		
	Staff Nurse (SN)	4.96 ± 0.74		
	Patient Care Assistants (PCA)	5.20 ± 0.28		
Ethnicity	Malay	5.09 ± 0.61	0.551	0.649
	Chinese	5.44 ± 0.50		
	Indian	5.08 ± 0.82		
	Bumiputra	5.20 ± 0.44		
Highest Qualification Level	Certificate	5.23 ± 0.27	1.640	0.186
	Diploma	5.04 ± 0.72		
	Degree	5.27 ± 0.42		
	Master	6.14 ± N/A		

*Statistically significant $p < 0.05$ (between group, NS within group)

This section reports the association between demographic variables and nurse/PCAs' satisfaction level with regard to using SBAR for handover. The demographics include gender, age, working experience, years of employment, position, ethnicity, and highest qualification level (Table 4.2). Additional two remaining variables examine the average duration of time spent on general documentation (individual) and time consumption per shift for handover (team) (Table 4.3).

Table 4.3: Respondents' Total Mean Score of Satisfaction on SBAR with Average Time Spent Per Shift (Individual and Team) (n = 89)

Variables	SBAR Mean Score (Satisfaction)	Mean ± SD	ANOVA (F)	P
Average time (mins) spent per shift on general documentation	Individual (per shift for general documentation)	48.99 45.13	± 1.898	0.048*
Average time (mins) consumption per team per shift handover	Team (per shift for handover)	38.57 30.56	± 1.124	0.355

Referring to Table 4.3, with regard to the SBAR mean score of satisfaction; the first category of average time spent per shift on general documentation as per individual had the mean time of 48.99 minutes (\pm SD 45.13) ($F = 1.898$, $p = 0.048$), which is statistically significant at alpha level of 0.05. For the team handover per shift, the mean time consumption is 38.57 minutes (\pm 30.56) ($F = 1.124$, $p = 0.36$), however, is not statistically significant.

(B) Correlation

Four correlations are discovered with statistical significance and reported below as summarized in Table 4.4. The first correlation was found between "years of working experience" with that of "total mean score of satisfaction on HES (SBAR)", with Pearson correlation, $r = 0.211$ in positive direction, and a 2-tailed significance of $p = 0.047$ (<0.05), which is statistically significant.

Second correlation was found between "average time (in minutes) spent per shift on general documentation" and "total mean score of satisfaction on HES (SBAR)", with Pearson correlation, $r = -0.247$ in negative direction, and a 2-tailed significance of $p = 0.019$ (<0.05), which is statistically significant.

The next correlation was found between the individual item of HES questionnaire, Q19 "I found handover takes too much time" with that of "years of working experience". The Pearson correlation, $r = 0.263$ in a positive direction, and 2-tailed significance at $p = 0.013$ (<0.05), which is statistically significant. Last and the fourth correlation found again between individual item of Q23 "I feel that important information is not always given to me" with that of "years of working experience", with Pearson correlation, $r = 0.241$ at 2-tailed significance level of $p = 0.023$ (<0.05), which is statistically significant. Hence, these illustrate two items within the HES questionnaire are correlated with years of working experience. Therefore, the null hypothesis is rejected, with the findings demonstrated that there are (statistically) significance between certain demographics and nurses/PCAs satisfaction in using SBAR tool for shift handover.

Table 4.4: Summary of Correlations

Item(s)	Pearson Correlation, r	2-tailed Significance, p
'Years of working experience' and 'total mean score of satisfaction'	0.211	0.047
'Average time spent per shift on general documentation (individual)' and 'total mean score of satisfaction'	-0.247	0.019
'Years of working experience' and Q19 'handover takes too much time'	0.263	0.013
'Years of working experience' and Q23 'important information not always given'	0.241	0.023

Research Question 3:

These are consolidated and collated into summary below by going through their anecdotes and excerpts (for recurring responses, with n = total respondents indicated in bracket). The findings of this study were aligned with the major themes discovered in the literature.

Key Strengths (of SBAR for Handover)	Key Suggestions for Improvement
<ul style="list-style-type: none"> • Improved communication (n = 17); • Enhanced patient safety (by error reduction) and reduced number of incident reports (sentinel event, near misses) (n = 5); • Guide and referral to patient's updates (conditions, treatment, and care) (n = 7); • Comprehensive and complete handover, with clarity and accuracy (n = 10); • Prevent important and pertinent information from missing out or overlooked with SBAR use, given relevant information (n = 7); • Shorter handover time or save time (n = 5); • Organized, systematic and easy approach (n = 8); and • Reduced likelihood of passing over unrelated or irrelevant information (n = 1). 	<ul style="list-style-type: none"> • Need more practice and exposure to increase self-confidence (training and strict practice) (n = 11); • Need monitoring or regular interval audit (compliance) (n = 3); • Give importance to patient care (summary and focus) (n = 2); • Proper documentation and assessment form required (n = 1); • To assess patient properly prior to handover (n = 1); • Teamwork and cooperation (i.e. all nurses and PCAs must work together in documentation to facilitate staff in handover report) (n = 2); and • To handover to the assigned/allocated nurse taking direct care of patients (n = 2).

DISCUSSION

The findings of this study were aligned with the major themes discovered in the literature. First research question and hypothesis was answered by discovering generally high satisfaction towards using SBAR for handover, consistent with those results of Chung et al. (2011); Edberhardt (2014); Sand-Jecklin and Sherman, (2013), in which their findings reported improvement of nursing satisfaction via means of SBAR format. The final evaluation revealed as high as 71.7% of participants reported satisfaction over SBAR use (as their message was understood and acknowledged), 52.1% respondents commented communication flow had improved, along with positive perceptions that SBAR had potential for error reduction (66.2%) and the same tool is beneficial to facilitate communication with other colleagues (70%).

Conversely, the findings of this study found that despite being relatively satisfied, there are contradictory result to that of Chung et al. (2011) and Cornell et al. (2014), which discovered that SBAR's efficiency contributing to lower nursing time consumption on handover. This was reflected in this study's findings that average time spent per team on handover was not statistically significant at mean time of 38.57 minutes (SD = 30.56). Moreover, individual item in the questionnaire also demonstrate high dissatisfaction of respondents that handover taking too much time, given irrelevant information, and important information not always received. Perhaps this can be possibly explicated by the key limitations and suggestions as reported that: "time-consuming despite having a structured SBAR tool", "if at times handover patient in too detailed approach", "need more practice and training, strict monitoring and regular audit on SBAR practice", as well as "low awareness especially among fresh nurses", to name a few anecdotes from respondents.

With regard to the correlation of longer years of experience and higher dissatisfaction over important information not always given, as indicating those experienced demand pertinent information at times not received, was found consistent with that reported by Holly and Poletick (2013). The authors asserted that inconsistency over the information handed over, despite being guided by structured tool such as SBAR. This is not surprising given the fact that not all nurses were formally trained in nursing school syllabus and current workplace, but rather on-job training (and yet not all being chosen and sent for) with self-observation to develop the skill. In agreement on handover communication as overlooked in educational curriculum, the formulation of appropriate education program at institution level or nursing school is believed to be significantly contributed to the improvement of the process (Banihashemi et al., 2015).

Yet, another correlation of seniors reporting handover being too time consuming also directs us to the findings of Bruton et al. (2016), stating that nurses at times (if not frequently) stayed back undeterred by the need of overtime in order to complete their handover, serving as 'gatekeeper' to safeguard the continuity of care (Holly & Poletick, 2013), therefore time-consuming due to finishing handover beyond duty time. Dean (2012) also voiced the concern that extended handover could engrave the nursing care time and standards of care patients received.

In relation to the theoretical framework of Mania Communication Model (MCM) (Manias, 2010), the open-ended comments were found associated with the MCM framework and Donabedian's model of best practice in terms of 'structure, process, and outcome'. The main findings from this study can be attributable to both time constraint and enabling effect of using SBAR in handover. The 'structure' of handover and SBAR as a guide for all level of nurses in each respective unit facilitate their working culture, in congruent of that from Kear et al. (2016).

DIRECTIONS FOR FUTURE RESEARCH

The findings revealed an overall satisfactory level of satisfaction from nurses in the use of SBAR for handover. In addition, associations were identified with regard to position, average of individual time spent on general documentation, and numbers of correlation in terms of years of working experience and individual items of HES questionnaire. Open-ended questions also generated valuable feedbacks for all stakeholders to improve current handover practice using SBAR. Discussion was done around the congruent and contradictory findings with previous evidence and contemporary literature. Undeniably, there are some limitations inherent from this study, and directions for future research are recommended.

CONCLUSION

The findings revealed an overall satisfactory level of satisfaction from nurses in the use of SBAR for handover. In addition, associations were identified with regard to position, average of individual time spent on general documentation, and numbers of correlation in terms of years of working experience and individual items of HES questionnaire. Open-ended questions also generated valuable feedbacks for all stakeholders to improve current handover practice using SBAR. Discussion was done around the congruent and contradictory findings with previous evidence and contemporary literature. Undeniably, there are some limitations inherent from this study, and directions for future research are recommended.

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