Ineffective Transition of Patients During Shift Handover Process of Nurses in Private Sector Tertiary Care Hospital of Peshawar, Pakistan

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ABSTRACT

Objective: To explore the factors hindering the shift handover process of nurses and the types of training in a private tertiary care hospital of Peshawar, Pakistan.

Study Design: Cross-sectional study.

Place and Duration of Study: Northwest General Hospital, Peshawar Pakistan, from Nov 2016 to Aug 2018.

Methodology: The sample population comprised 112 registered nurses with at least one year of experience. A structured questionnaire was used for data collection.

Results: Of the participants, 6 (54.5%) were males, and 51 (45.5%) were females. The mean age of the participants was 27.86 ± 4.57 years. The most prominent alarming factor was messy record 100 (89.3%). 94 (83.9%) participants described interruption by parents' relatives, 97 (86.6%) participants identified staff shortage, difficulty in recognizing essential information was described by 92 (82.1%) study participants and long-working hours was identified by 89 (79.5%) participants. No significant association was found between gender and the working environmental factors.

Conclusion: There are multiple factors that affect the process of shift handover. The health care organizations must ensure proper training of the nursing staff and provide an appropriate environment during shift handover to maintain patient safety.

Keywords: Communication, Patient safety, Shift handover.

INTRODUCTION

Shift-to-shift clinical handovers occur at the end of the shift among nursing professionals 2 to 3 times a day.[1,2,3] Effective handovers contributed to the continuity of care, patient safety and increased job satisfaction among nurses.[4,5] Quality and effective handovers enable the nursing professionals to recognize changes in patients' health and prevent risks.[6] Many researchers have recognized the process as a significant potential communication error,[7] and full of risks and hazards.[8] Consequently, miscommunication is associated with severe risks for patient safety because of the challenges of interpersonal stress, time constraints, interruptions and background noise.[9] Ultimately, the communication breakdown is attributed to adverse outcomes, including incorrect treatments, medication errors, delayed diagnosis, patient complaints, reduced patient satisfaction, high healthcare costs, and prolonged hospitalization.[4,10]

Limited published literature regarding nursing shift handover is available in Pakistan. The objective of the study was to explore the factors hindering the effective nursing shift handover and the types of training in private sector tertiary care hospital of Peshawar, Pakistan. The findings of the study will help prepare guidelines for shift handover.

METHODOLOGY

A cross-sectional study was conducted from Nov 2016 to Aug 2018 at North-West General Hospital, Peshawar. A total of 112 registered nurses were selected through a simple random sampling technique utilizing the online randomizer.

Inclusion Criteria: All the registered nurses with ≥ one year of working experience were included in the study.

Exclusion Criteria: Those registered nurses who were not involved in the process of shift handover communication were excluded from the study.

An adopted self-administered questionnaire was employed for the collection of data.[11] The questionnaire was composed of three sections. The first section was related to demographic characteristics. The second section represented types of training, and the third section was about individual and environmental factors that affect the nurses' shift handover. The questionnaire was on 4 points Likert scale, which was

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converted to dichotomy for simplification and analysis and to avoid extreme variation in participants' responses.

The study was approved by the Ethical Committee and Advanced Studies and Research Board (ASRB) of Khyber Medical University Peshawar (DIR/KMU-AS&RB/BS000432). Moreover, the study participants were fully briefed about the purpose of the study.

Statistical Package for Social Sciences (SPSS) version 22.0 was used for the data analysis. Quantitative variables were summarized as mean ± SD and qualitative variables were summarized as frequency and percentages. Chi-square test was applied to find out the association. The p value of ≤0.05 was considered statistically significant.

RESULTS

The total number of participants in our study was 112 registered nurses from North-West General Hospital Peshawar. Of the participants, 61 (54.5%) were males, and 51 (45.5%) were females. The mean age of the participants was 27.8 ± 4.7 years. The majority of the registered nurses 75 (67%) had a diploma in general nursing. 17 (15.2%) nurses were BSN graduates, and 20 (17.9%) were Post RN. Most of the participants 109 (97.3%) had experience from 1 to 10 years. 2 participants had experience from 11 to 20 years, and one had experience above 30 years.

The state of messy records was the major factor (100, 89.3%) that affected the shift handover negatively. Disagreement among clinicians regarding patient condition 5 (50.9%) was the least common factor that negatively affected the communication during shift handover. No significant difference was found in the responses among male and female nurses (p-value > 0.05) for all the factors (Table-I).

The most common factor was staff shortage 97 (86.6%) while the least common factor which negatively affected the shift handover was an interruption by colleagues 51 (45.5%). No statistically significant difference was found between gender and the working environmental factors (p-value > 0.05) (Table-II).

Table-I: Participants responses to individual factors.

Barriers	Agree n (%)	Disagree n (%)	Male		Female		p-value
			Agree	Disagree	Agree	Disagree	
Messy Records	100 (89.3%)	12 (10.7%)	53 (47.3%)	8 (7.1%)	47 (42%)	4 (3.6%)	0.369
Unreadable Handwriting	67 (59.8%)	45 (40.2%)	35 (31.3%)	26 (23.2%)	19 (28.6%)	51 (17.0%)	0.564
Out of Date Records	69 (61.6%)	43 (38.4%)	42 (37.5%)	19 (17.0%)	27 (24.1%)	24 (21.4%)	0.085
Poor Communication Skills	84 (75.0%)	28 (25.0%)	43 (38.4%)	18 (16.1%)	41 (36.6%)	10 (8.9%)	0.228
Not Listening and Interrupting	69 (61.6%)	43 (38.4%)	36 (32.1%)	25 (22.3%)	33 (29.5%)	18 (16.1%)	0.538
Irrelevant Information During Handover	82 (73.2%)	30 (26.8%)	41 (36.6%)	20 (17.9%)	41 (36.6%)	10 (8.9%)	0.117
Difficulty in Recognizing Essential Information	92 (82.1%)	20 (17.9%)	48 (42.9%)	13 (11.6%)	44 (39.3%)	7 (6.3%)	0.297
Handover Communication with more Junior/Senior	62 (55.4%)	50 (44.6%)	37 (33.0%)	24 (21.4%)	25 (22.3%)	26 (23.2%)	0.217
Disagreements Among Clinicians Regarding Patient's Medical Condition.	57 (50.9%)	55 (49.1%)	33 (29.5%)	28 (25.0%)	24 (21.4%)	27 (24.1%)	0.458
Incorrectly Recalled Information.	67 (59.8%)	45 (40.2%)	40 (35.7%)	21 (18.8%)	27 (24.1%)	24 (21.4%)	0.174

p-value of < 0.05 was considered significant

Table-II: Participants responses to working environmental factors.

Barriers	Agree n (%)	Disagree n (%)	Male		Female		p-value
			Agree	Disagree	Agree	Disagree	
Unavailability of relevant information	80 (71.4%)	32 (28.6%)	42 (37.5%)	19 (17.0%)	38 (33.9%)	13 (11.6%)	0.509
Doctor is not available for queries during shift handover.	77 (68.8%)	35 (31.3%)	41 (36.6%)	20 (17.9%)	36 (32.1%)	15 (13.4%)	0.701
Relevant tests results are not available.	64 (57.1%)	48 (42.9%)	34 (30.4%)	27 (24.1%)	30 (26.8%)	21 (18.8%)	0.742
Interruptions by patients relatives	94 (83.9%)	18 (16.1%)	50 (44.6%)	11 (9.8%)	44 (39.3%)	7 (6.3%)	0.537
Interruptions by colleagues.	51 (45.5%)	61 (54.5%)	32 (28.6%)	29 (25.9%)	19 (17.0%)	32 (28.6%)	0.108
High background noise levels.	55 (49.1%)	57 (50.9%)	31 (27.7%)	30 (26.8%)	24 (21.4%)	27 (24.1%)	0.692
Long working hours.	89 (79.5%)	23 (20.5%)	47 (42.0%)	14 (12.5%)	42 (37.5%)	9 (8.0%)	0.489
Staff shortages.	97 (86.6%)	15 (13.4%)	50 (44.6%)	11 (9.8%)	47 (42.0%)	4 (3.6%)	0.115
Short time for handover.	59 (52.7%)	53 (47.3%)	32 (28.6%)	29 (25.9%)	27 (24.1%)	24 (21.4%)	0.959
Poor workforce planning (for example, poor organization of staff)	80 (71.4%)	32 (28.6%)	40 (35.7%)	21 (18.8%)	40 (35.7%)	11 (9.8%)	0.134
The division of responsibility is unclear.	59 (52.7%)	53 (47.3%)	33 (29.5%)	28 (25.0%)	26 (23.2%)	25 (22.3%)	0.742

p-value of < 0.05 was considered significant

DISCUSSION

The study was conducted to explore the factors that affect the nurses shift handover communication. The overall findings indicated a dire need for regular programs for training. In addition to this, the study also brought an insight into the shortcomings of the handover processes. The findings regarding the types of training about shift handover communication revealed that all the nursing professionals did not receive any training. Of the participants, 75% expressed that workshops were not being arranged for them on shift handover training.

Moreover, 17% nurses have not been trained on handover skills during the induction process. Bakon *et al*,[11] emphasized the formal training of nurses to deliver effective and structural handover and addressed the handover inconsistencies. Similarly, the need for training regarding shift handover has also been demonstrated in the previous study by Manias *et al*, where 69% nurses documented that they needed training on shift handover communication.[12] In the same study, many participants revealed that handover training should be a part of undergraduate (53%) and postgraduate (36%) courses.

Fealy *et al*, concluded that health care organizations need to have standard operating procedures for shift handover to ensure the safety of patient.[13]

Our study participants shared their views regarding the factors that hinder communication in nursing shift handover. The alarming factors were messy record (89.6%), interruption by parents' relatives (83.9%), poor communication skills (75%), irrelevant information during handover (73.2%), difficulty in recognizing essential information (82.1%), long working hours (79.5%), unavailability of relevant information (71.4%), staff shortages (86.6%) and poor workforce planning (71.4%).

It can be concluded that these factors were associated with ineffective communication in nursing shift handovers. Furthermore, these factors may lead to the failure of the safe transition of patients from one team shift to the next team shift.

Closely in line with the current study, Muzio *et al*,[14] concluded that adverse events were likely to occur during the shift reports of reduced staff and when the working hours exceed 12 hours per shift and 40 hours a week. In the same way, our participants recognize that long working hours and staff shortages hinder the process of shift handover. Athanasakis explored various reasons for the failure of shift handovers. According to his study, a positive correlation was found between the smoothness of shift handovers and interruptions.[15] The finding is congruent with the results of the current study. According to Kowitlawa-kul *et al*,[16] the attendents and patients sometimes are anxious to get information and interrupt the handover. Kerr *et al*,[17] revealed that the patients and their families were being considered a distraction source and might interfere or disrupt the conversation during shift handovers. Maame *et al*,[18] reported that lack of communication knowledge was the least barrier in therapeutic communication among nurses. Their study does not support the current finding of poor communication (75%) among the nurses. The deficient training of shift handover communication might be the reason for poor communication in our study. The contents of shift handover were likely to be incomplete and might contain irrelevant information, as reported by Kerr *et al*,[19] and Kitson *et al*.[20]

Similarly, in our study, the participants acknowledged that irrelevant information (73.2%), difficulty in recognizing essential information (82.1%) and unavailability of relevant information (71.4%) are the negative factors. A shift report is an opportunity for nurses to pass information to the next team. During shift handover, the nurse decides what information should be included in the report. In the absence of an appropriate environment and lack of proper training, the relevant information is not transferred and leads to the failure to maintain patient safety.

The findings of this study provide evidence of the presence of multiple factors to endanger the safety of the patients. Therefore there is a dire need to incorporate standardized techniques and a barrier-free environment for the shift handover. Healthcare organizations need to arrange proper training sessions for nurses' staff. National guidelines are required to be developed for the standardization of shift handover.

LIMITATION OF STUDY

The selection of one hospital for the study might have limited the generalizability of the findings. Additionally, some variables that might influence the quality of shift hand-over were not included in the study. Therefore a qualitative study is recommended.

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CONCLUSION

There are multiple factors that affect the process of shift handover. The health care organizations must ensure proper training of the nursing staff and provide an appropriate environment during shift handover to maintain patient safety.

Conflict of Interest: None.

Authors' Contribution

AK: Conception, design, analysis, data interpretation, final approval of publication, SA: Conception, design, analysis, data interpretation, Final approval of publication, JB: Conception, design, manuscript writing, NH: Analysis, data interpretation, manuscript writing, final approval of publication.

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