

Nurse Interns' Performance about Shift report Exchange

¹Rasha Ali Abd Elhamed, ²Prof. Dr. Fatma Hamdy Hassan, ³Prof. Dr. Samah Faisal Fakhry

¹Assistant Lecturer Nursing Administration Department– Faculty of Nursing, Ain Shams University – Egypt

²Professor, Nursing Administration Department, Faculty of Nursing /Ain Shams University, Egypt

³Professor, Nursing Administration Department, Faculty of Nursing /Ain Shams University, Egypt

Abstract: Miscommunication has been identified as the leading cause of human errors in intensive care units. Thus preparing nursing students for giving reliable information are important efforts. The aim of the study: this study was aimed assess nurse interns' performance about shift report exchange. Research design: using a descriptive study. Setting: this study was conducted in all critical units' affiliated to–Ain Shams University hospitals. Subjects: All available nurse interns who started their internship in year 2017 and their total number were 89. Tools: Data collections were used in this study namely a shift report knowledge questionnaire and observation checklist for nurse interns' performance of shift report. Result: none of nurse interns had satisfactory total knowledge and none of them had adequate performance about shift report exchange. Conclusion: none of the studied interns nurse had satisfactory knowledge and performance about shift report exchange. Recommendations: Develop clinical training and continuing education programs for nurse interns to be acquainted with knowledge and necessary skills related to shift report exchange.

Keywords: Nurse Interns - Shift Report Exchange.

1. INTRODUCTION

The change of shift report is one of the most vital times during a nurse's work. Also, it is a crucial component of care in the critical care environment (*Mukhopadhyay et al., 2015*). In healthcare, a change-of-shift report is a meeting between healthcare providers at the change of shift in which vital information about and responsibility for the patient is provided from the off-going provider to the on-coming provider. Other names for change-of-shift report include handoff, shift report, handover, bedside shift report or sign-out. Change-of-shift report is the key to inpatient care because healthcare providers (nurses, physicians, nursing assistants etc.) are essential to providing around the clock care (*Groves, Manges, Scott-Cawiezell, 2016*).

Ensuring effective communication during shift report is particularly important in high stress, dynamic and ever changing health care environment of the critical unit, a nurse is responsible for ensuring that acutely and critically ill patient and their families receive optimal care, transition of that care across the continuum requires collaboration and communication within the team. In other word, demands efficiency during handoff that may compromise information exchange. Nursing interns (NIs) should be prepared for and learn the process of effective communication that promotes patient safety. The knowledge and skill to carry out a hand-off report may be briefly addressed in the classroom or simulation laboratory setting but is mastered from the observation of mentors and peers. *American association of critical care nurse (AACCN, 2016)*. Moreover, one's efficiency and effectiveness in communication can be improved through training, evaluation and interview.

Significance of the study:

Ensuring effective communication during shift report is particularly important in high stress, dynamic and ever changing health care environment of the critical unit, a nurse is responsible for ensuring that acutely and critically ill patient and

their families receive optimal care, transition of that care across the continuum requires collaboration and communication within the team thus nurse interns must master shift report exchange.

2. AIM OF THE STUDY

This Study aimed at:

The study was aimed to assess nurse interns' performance about shift report exchange.

Research question

What is the performance of nurse interns' about shift report exchange?

3. SUBJECTS AND METHODS

Research design

A **Descriptive** study design was utilized in this study.

Setting

The study was conducted in all critical units, at Ain Shams University Hospitals. Includes "17" units divided as follows; Ain Shams University Hospital (7units), Pediatric Hospital (5units), Cardiovascular Hospital (4 units) and El demerdash hospital (1 unit).

Subjects

All available nurse interns who started their internship in year 2017, had their training in the predetermined setting and their total number was 89.

Data collection tools

Three tools were used for data collection.

1-Shift report Knowledge questionnaire : This tool was developed by the researcher based on related literature review (*Khalaaf, 2015; Basavanthappa, 2014 and Shazly, 2003*)

Part (1): This part aimed at collecting personal characteristics of the nurse interns such as age, gender, and pre university education.

Part (2): This part includes knowledge questionnaire comprises a total number of 52 multiple choice questions (MCQs) covering two main domains namely shift report and communication. Shift report domain consists of (9) sections and communication domain includes (4), and each section includes "4" MCQs sections.

Scoring: for each knowledge question, a score "1" was given for a correct answer and "0" for incorrect one (*Khalaaf, 2015*). The total knowledge score was calculated by summing-up the score of 52 questions for a maximum score of 52. This sum total was converted into a percent total score of knowledge. The nurse interns' knowledge was considered satisfactory if the percent score was 60% or higher and unsatisfactory if less than 60%.

2-Observation checklist for nurse interns' performance of oral shift report :

This tool was modified by the researcher based on literature review (*Gilbert, 2017; Khalaaf, 2015; Basavanthappa, 2014; Douglas et al., 2012; Shazly, 2003*), the aim of this tool was to observe the actual performance of the nurse interns during shift report procedure, and included two parts:

Part (1): this includes identification data such as code number, name of the unit, time of observation and observation number.

Part (2): Nurse interns observation checklist. This observation checklist divided into two main domains as the following:
Domain I: oral shift report categorized into (6) sections covering (67) items.

3- Audit for written shift report

Audit for written shift report divided into (14) sections covering (62) items. The tools were classified as follows:

Scoring for each item or step observed to be done was scored "1" and "0" if not done (*Khalaaf, 2015*). The total score for each area and for the total performance were calculated by summing-up the score attained. These were converted into percent scores. The nurse interns' performance was considered adequate if the percent score was 80% or higher and inadequate if less than 80%. This cutoff point was based on calculations of median and first quartile with a correction factor calculated from the discrimination index and internal reliability (*Barua, 2013*).

Operational Design:

The operation design for this study includes the preparatory phase, the pilot study, and the field work.

Preparatory phase:

This phase started from the beginning of July, 2017 to September, 2017 it covered 3 months. During this phase, the researcher reviewed the current, past, national and international related literature, journals, periodical, articles, internet and books concerning the topic of the study, this was helpful in developing shift report knowledge questionnaire and modifying and classifying observation checklist for nurse interns' performance of shift report. Next the researcher started to design performance appraisal interview template and written guidelines form related to shift report to be acquainted with the appraisal interview.

Pilot study:

A pilot study was carried out on 10 % (9) nurse interns of main study sample. The pilot served to test the clarity and applicability of the tools. It assessed feasibility of observation checklist, as well as the clarity of the knowledge questionnaire and determined the time needed for filling in the questionnaire which was 30-35 minutes. The pilot study also served to assess the time needed for the observation was lasted 20-25 minutes for each nurse intern.

Field work:

The actual field work of the study lasted for six months from the beginning of October 2017 to the end of March 2018. The researcher visited each critical unit, explained the aim and nature of the study to nurse interns, this help interns accept to participate in the study. Then shift report knowledge questionnaire was distributed to nurse interns to assess their knowledge. The researcher was present during this process to give necessary instructions. Each nurse intern took approximately 30-35 minutes to answer the questionnaire and handed it back to researcher.

The study nurse interns were then observed individually three times during the morning, afternoon and night shifts before conducting appraisal interview to give feedback. Regarding audit for written shift report performance, all nurse interns were given shift report format and they recorded all updated, then handed it back to the researcher to be revised against audit for written shift report checklist to ensure if they have adequate or inadequate performance regarding written shift report. Oral shift report performance of the nurse interns as outgoing was observed while they report orally.

Administrative Design:

An official permission to carry out the study was obtained from pertinent authorities. The met with hospitals directors and head nurses in all critical units and explained with them the aim of the study and the method of data collection to obtain their permission to conduct the study. Confidentiality of information was ensured, and data collection forms were anonymous.

Ethical consideration:

Prior the study the protocol was approved from the scientific research ethical committee in faculty of nursing at Ain Shams University. The researcher was explained the aim of the study to all officials as well as to all study participants. The participant were reassured that any obtained information would be confidential, and used only for the purpose of research, that subject have right to choose to participate or not in the study, withdraw at any time. The study maneuvers had no actual or potential harm on participant .the study beneficence was clear in the improvement of performance of nurse interns which would reflect positively on their ability to apply it correctly.

Statistical Design:

Data entry and statistical analysis were done using (SPSS) version 20 statistical package for social sciences software. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. Qualitative variables were compared using chi-square test. the expected values in one or more of the cells in a 2x2 tables was less than 5. ANOVA or t-test analysis was used to explore the relation of personal characteristics with variables. Spearman rank correlation was used for assessment of inter-relationships among quantitative variables and ranked ones. Correlation Coefficient (r) test was used to test the closeness of association between two variables. The expected value at P value < 0.05 was considered statistically significant. Bar charts were used to express some important percentages.

4. RESULTS

Table (1): Distribution of studied nurse interns according to hospitals and critical care units:

	Name of hospital	Critical care units	Sample of nurse interns
1	Ain Shams University Hospital	Stoke ICU	6
		CCU	8
		Medicine ICU B	3
		Catheter ICU	4
		Epidemic ICU	5
		Neurologic ICU	5
		Post Catheter ICU	2
2	Pediatric Hospital	Medicine ICU (1)	6
		New Neonatal ICU	5
		Old Neonatal ICU	7
		Medicine ICU (2)	4
		Surgical ICU	3
3	Cardiovascular Hospital	Pediatric ICU	8
		CCU	9
		Chest ICU	6
		Adult ICU	4
4	El demerdash hospital	Mixed ICU	4
	Total		89

Table (2): Personal characteristics of nurse interns in the study sample (n= 89)

Age:	Frequency	Percent
< 25	73	82.0%
>= 25	16	18.0%
Mean±SD	23.40±1.33 years	
Median	23	
Range	22.0- 30.0	
Gender		
Male	29	32.2%
Female	60	67.8%
Pre-university education	68	76.4%
General secondary school	21	23.6%
Technical institute		

Table (2): Data in table 1 showed that, the nurse interns in the study sample were mostly less than 25 years age (82.0 %), around two third of them were female (60%), and the majority of them (76.4%) were graduated from general secondary school.

Table (3): Nurse interns' satisfactory knowledge of communication (n=89)

Satisfactory knowledge: 60+	(n=89)	
	No	%
Definitions	0	0.0%
Types	0	0.0%
Process	0	0.0%
Barriers/ disadvantage	0	0.0%
Total	0	0.0%

As table 3 showed that nurse interns' knowledge regarding communication was generally unsatisfactory. This was evident in all sections (0.0%).

Table (4): Nurse interns satisfactory knowledge of shift report (n=89)

Satisfactory knowledge: 60+	(n=89)	
	No	%
Definitions	0	0.0%
Purpose	0	0.0%
Principles	0	0.0%
Oral shift report	0	0.0%
Written shift report	0	0.0%
Contents	0	0.0%
Process	0	0.0%
Time	0	0.0%
Exchange	0	0.0%
Total	0	0.0%

As table 4 indicates, nurse interns' knowledge regarding shift report was generally unsatisfactory. This was evident in all sections (0.0%).

Part II: Nurse interns' performance of oral shift report:

Table (5): Nurse interns adequacy performance of oral shift report (n=89)

Adequate performance of oral shift report(80%+)	(n=89)	
	No	%
Gathering data for oral SR	0	0.0%
Condition of oral SR	0	0.0%
Criteria of oral SR	0	0.0%
Handoff process	0	0.0%
Criteria of place for oral SR	1	1.1%
General information of the department	43	48.3%
Patient's background information	0	0.0%
Patient's health status	4	4.5%
Nursing diagnosis	0	0.0%
Significant change	0	0.0%
New physician orders	0	0.0%
Diagnostic _lab test /result	4	4.5%
Fluid requirement	0	0.0%
Patient allergies	0	0.0%
Patient's teaching needs	0	0.0%
Patient's safety	1	1.1%

Interns' performance of oral shift report the table 5 indicates low performance in all sections. Thus none of them had adequate performance except for performance regarding general information of the department was (48.3%).

Table (6): Audit of written shift report throughout intervention phases: (n=89)

Adequate performance for audit of written shift report (80%+)	(N=89)	
	N	%
Characteristics of written report	0	0.0%
Write all updated nursing documentation in shift report format	0	0.0%
General information of the department	30	33.7%
Pt. background information	3	3.4%
Pt. health status	4	4.5%
code status	0	0.0%
Nursing diagnosis	0	0.0%
Identification of significant. Changes	0	0.0%
New physician orders	0	0.0%
Diagnostic or lab test /result-	0	0.0%
Fluid requirements	1	1.1%
Patient's teaching	0	0.0%
Patient's safety	1	1.1%
Patient allergies	1	1.1%

(**) Statistical significant at $p < 0.0001$

Table 6 indicates inadequate performance in all sections except for performance regarding general information of the department was (33.7%).

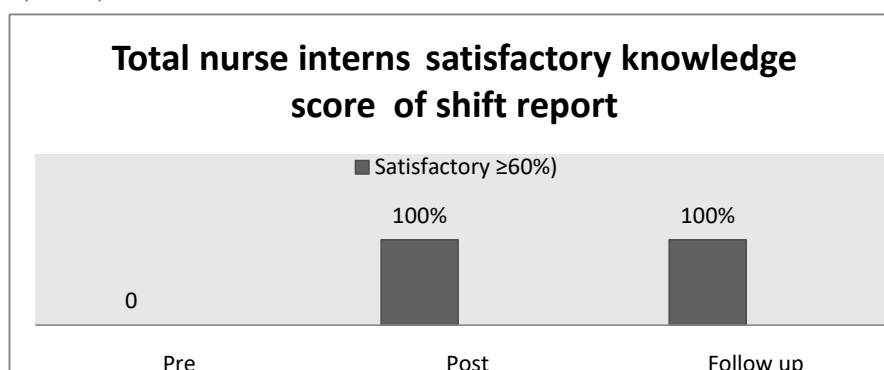


Figure (1): Total nurse interns satisfactory knowledge score of shift report

Figure 1, illustrated that none of nurse interns (0.0%) had satisfactory total knowledge of shift report.

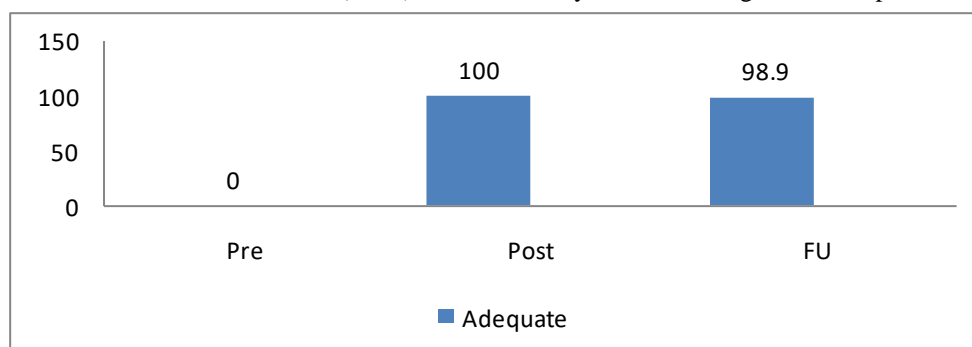


Figure (2): Nurse interns adequacy total performance of shift report

Figure 2, showed that none of nurse interns (0.0%) had adequate total performance of shift report at pre intervention phase.

5. DISCUSSION

The majority of the nurse interns were graduated from general secondary school, which is they haven't level of nursing qualification and performance prior entry the faculty. The most of them were female, less than 25 years age. This result is consistent with (Abouzieud, 2017), and the majority were trained in pediatric and medical intensive care unit. In this regard, Malekzadeh et al. (2013) and Marquis and Huston (2012) emphasized that the nurses holding a baccalaureate degree in nursing are more aware of the managerial and leadership activities required to be equipped for their positions. Thus, they will be the suitable ones to be considered for these jobs.

According to the nurse interns' knowledge regarding communication and shift report. Finding of the current study revealed that, nurse interns' knowledge regarding communication was generally unsatisfactory. This result agreed with Elsayed (2013) who reported that, the majority of nurses had low communication level before applying the program. In the same line, Saad (2014) reported that majority of studied staff nurse had poor communication knowledge. The satisfactory knowledge was related to the definitions of communication and its types. This results is incongruence with, Seada and Bayoumy (2017).

As regards nurse interns' knowledge regarding shift report, the current study findings revealed that, all nurse interns had unsatisfactory total knowledge. This was noticed in all sections tested. This result agreed with khalaf (2015) who reported that, the head nurses had deficient knowledge. This unsatisfactory knowledge might be explained by the low experience and education among nurse interns. A similar to foreign study Birmingham et al. (2016) reported that this could be due to that the university and governmental hospitals generally do not comply with giving shift report at the end of every shift. This is not actually acceptable since its name "shift report" implies that it should be applied in every shift.

Concerning nurse interns' performance of oral shift report, the results of the present study revealed similarly low level as for their related knowledge. Many of the sections were not performed by any of them such as gathering data for oral SR, condition, criteria of oral SR, patient background information, handoff process, nursing diagnosis, significant changes, new orders, fluid requirements, patient allergies and teaching. This could reflect a lack of patient safety concept and culture among these nurse interns. The inadequate performance in these sections may endanger the health status of the patients, and have a negative impact on their outcomes. In congruence with this, Khalaf (2015) emphasized that that bedside shift report improves patient safety by incorporated safety checks into report, such as noting allergy alerts or patient risk for falling or skin ulcer.

Concerning audit of written shift report as written by nurse interns, the results of the present study revealed similarly inadequate level as for their related knowledge and oral shift report. None of them had adequate performance level it was noticeable in sections characteristics of written report, write updated nursing documentation, code status, nursing diagnosis, significant change, new physician orders, diagnostic lab and patient teaching. This could reflect a lack of patient safety concept and culture among these nurse interns. The inadequate performance in these sections may endanger the health status of the patients, and have a negative impact on their outcomes. In congruence with this, Khalaf (2015) emphasized that bedside shift report improves patient safety by incorporated safety checks into report, such as noting allergy alerts or patient risk for falling or skin ulcer.

6. CONCLUSION

The study concluded that all nurse interns in the study setting had unsatisfactory knowledge and inadequate performance of shift report.

Recommendations

- Utilizing appraisal interview by the nurse interns in other units /university hospitals and generalized to similar settings.
- Encourage collaboration between hospital staff and faculty staff to enhances nurse interns shift report exchange performance throughout the internship year.
- Develop clinical training and continuing education programs for nurse interns to be acquainted with knowledge and necessary skills related to shift report exchange.

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