



# Study on Nurses Knowledge Regarding Nursing Administration in Bangladesh

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## ABSTRACT

Nursing administration is the strategic management of nursing personnel, patient care, and facility resources through the support of regulating policies. Nurse administrators are responsible for ensuring that hospitals or other healthcare facilities operate in a safe and cost-effective manner. They achieve this through the management of financial and human resources, and through the supervision of nurses and other allied healthcare team members. In today's ever-changing health care environment the role of nurse administrators are challenged by number of factors such as multi-generational workforce, the business of health care, ethics, competition for health care professionals, nursing turnover, nursing shortage, staff absenteeism etc. The study was conducted to find out the status of nurses knowledge about administrative management, to identify the problems of nurses knowledge about administrative management. The study was conducted at Dhaka district in Bangladesh. It was a cross-sectional descriptive type study. Purposive sampling method was used for the study. Total 400 registered nurses were selected from nursing colleges, institutes and hospitals for the study. Data were collected from primary and secondary sources. Primary data were collected from the respondents of the study area. Secondary data were collected from books, research reports, journals, annual reports, Website of Ministry of Health and family planning internet etc. Questionnaire was developed use as data collection instrument. Data were collected by face-to-face interview by the investigator. All the data were checked, cleaned and edited after collection. Then those cleaned data were analyzed by computer program Microsoft Excel. The study revealed that nurses have average knowledge, practice, and negative attitude toward medication administration, which needs to be corrected. In some cases communication, unclear medication orders, workload and medication pancakes were the main factors associate with nurses' knowledge regarding nursing administration. Nurses' experiences and age also found to be inversely related to nurses' knowledge regarding nursing administration. Nurses also reported that they do not receive enough in-service training and education related to nursing administration medication, administration and new medication in the field.

**Keywords:** *Nurse, Knowledge, Administration, Skill, Attitude, Management, Training, Education, Medication, Duty, Job, Experiences.*

## INTRODUCTION

Health is fundamental to the national progress in any sphere. In terms of resources for economic development, nothing can be considered of higher importance than the health of the people which is measure of their energy and capacity as well as of the potential manpower for productive work in relation to the total number of persons maintained by the nation for the efficiency of the industry and of agriculture, the health of the worker is an essential consideration. Health is viewed differently by different people all over the world. The World Health Organization defined Health as "a state of complete, physical, mental and social well being and not merely an absence of disease or infirmity. We have already defined the term 'Health'. Now Administration is at the centre of all human affairs. Its principle aspects are formulation of policy and its implementation for the attainment in an optimum manner of stated ends in the shape of service or products. Health Administration is that branch of Public Administration which deals with matters relating to the promotion of health, preventive services, medical care rehabilitation, the delivery of health services, the development of health manpower, and the medical education and training. The purpose of Public Health Administration is to provide total health service to the people with economy and efficiency.

Healthcare centers have a variety of managers depending on the number of staff and patients. There are facility managers, clinic managers, office managers, health information managers, information technology managers, human resource managers, and more. Many clinics, hospitals, and long term care centers choose to have a specialized manager oversee nursing staff and patient care. This is the work of nurse

administrators. Nursing administration is a leadership role in a given healthcare settings. This strategic management of staff, patients, and facilities is done by implementing policies written by the nurse administrator or more senior staff. Nurse administrators may not be involved with the day-to-day care of patients but rather are occupied with scheduling, managing budgets, overseeing nurses, writing reports, and ensuring a high quality of patient care.

The work nurses perform is very specialized, which is why nursing administration is critical to a smooth-running healthcare center. The best person to supervise nurses is another nurse who has specialized training in leadership and management. A nursing administrator's main tasks are to assess both patients and staff; identify issues, problems, and trends; identify outcomes; develop a plan to reach desired outcomes; and implement the plan. According to the American Nursing Association, an outstanding nursing administration department will enhance the quality and performance of the nursing practice at their facility. The nursing administration department will also participate in and provide continuing education opportunities, collaborate with other departments, use ethics to inform decision making, and base care for patients off of peer-reviewed research.

Nurses who wish to move into nursing administration can do so through a combination of education and on the job training. Most nurse administrators have completed at least a master's degree. Assuming leadership roles while working as a registered nurse can help prepare prospective nurse administrators prepare for this line of work. Working as a charge nurse, volunteering on work committees, or participating in leadership opportunities outside of work signal to employers that a nurse is seeking advancement. Additionally, earning certifications such as the nurse executive certification through the American Nurses Credential Center (ANCC) is an excellent way to demonstrate the necessary skills to become a nurse administrator.

## OBJECTIVES OF THE STUDY

The Objectives of the Study are as follows:

1. To find out the status of Nurses Knowledge about Administrative Management.
2. To identify the problems of Nurses Knowledge about Administrative Management.
3. To provide policy recommendations.

## METHODOLOGY OF THE STUDY

**Study Area:** The study area was at Dhaka District in Bangladesh.

**Study Design:** It was a Cross-Sectional descriptive type study.

**Study Place:** Selected different Nursing colleges, Institutes and Hospitals in Dhaka District.

**Study Population:** All year registered nurses of Nursing colleges, Institutes and Hospitals were the sample population of the study.

**Sampling Method:** Purposive sampling method was used for the study.

**Sample Size:** Total 400 registered nurses were selected from Nursing colleges, Institutes and Hospitals for the Study.

**Sources of Data:** Data were collected from primary and secondary sources.

**Sources of Primary:** Primary data were collected from the respondents of the study area.

**Sources of Secondary Data:** Secondary data were collected from books, research reports, journals, annual reports, Website of Ministry of Health and family planning internet etc.

**Sample Size:** Due to time and financial Constraints the sample size of the study was limited to 400 (200 respondents from each Nursing College)

## Selection Criteria

**Inclusion Criteria:** All registered Nursing were included from Nursing colleges, Institutes and Hospitals in Dhaka District.

**Exclusion criteria:** Those were not interested to participate in the study.

**Tool of Data Collection:** The tool was prepared by keeping the objectives of the study as the framework that reflect the study variables. A pre-designed semi-structured questionnaire was developed use as data collection instrument.

**Procedure of Data Collection:** Prior to the interview, the purposes of data collection were explained to the respondents and verbal consent was obtained. Data were collected by face-to-face interview by the investigator.

**Data Processing and Analysis:** All the data were checked, cleaned and edited after collection. Then those cleaned data were analyzed by computer program Microsoft Excel/ SPSS.

## RESULTS AND DISCUSSION

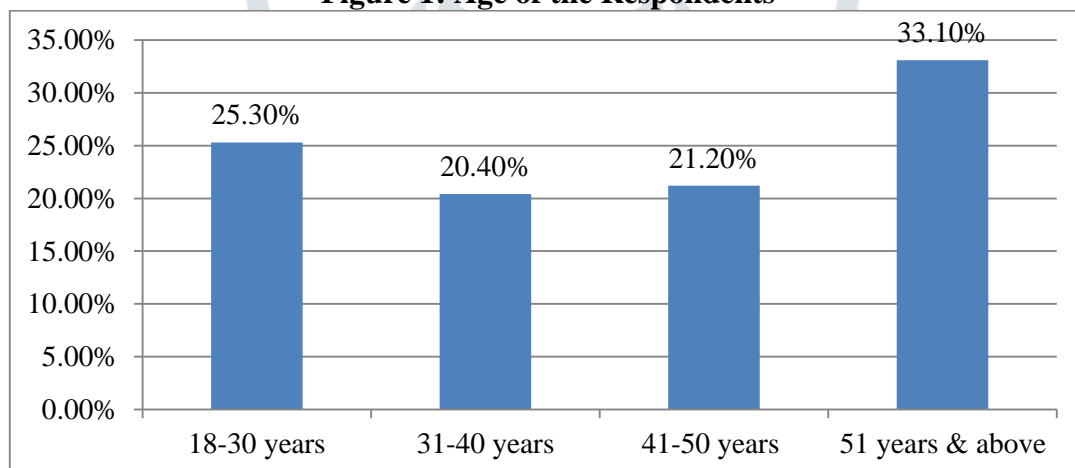
### Part I: Socio-demographic characteristics of the studied nurses.

Distribution of the nurses according to their socio-demographic characteristics

**Table 1: Age of the Respondents**

Age (Years)	Percentage
18-30 years	25.30%
31-40 years	20.40%
41-50 years	21.20%
51 years & above	33.10%

**Figure 1: Age of the Respondents**

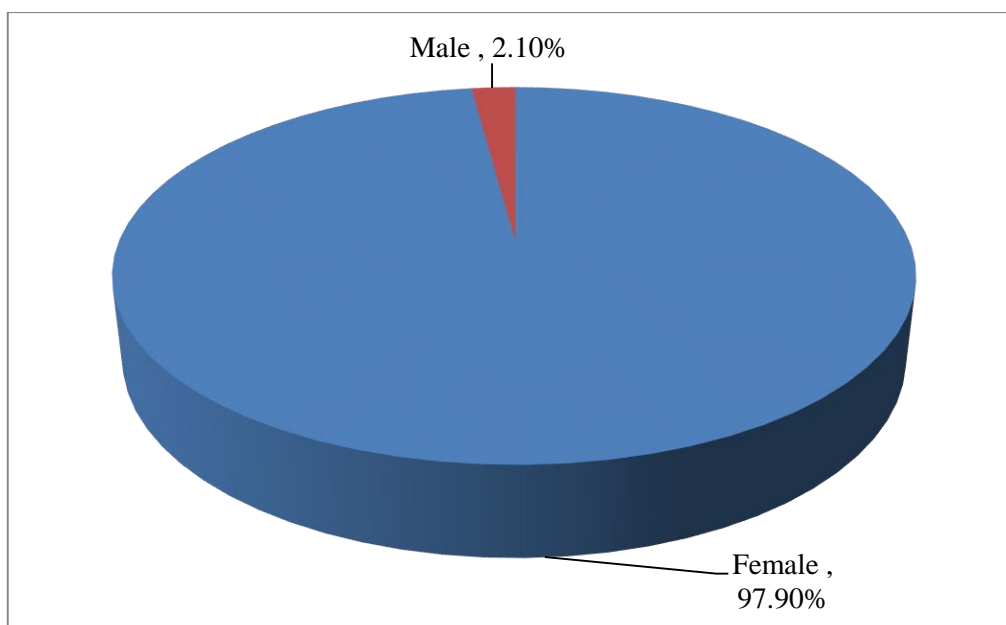


Age of the Respondents has shown in the above table and graph. From the result it was found that 25.30% respondents were age group 18-30 years, 20.40% respondents were age group 31-40 years, 21.20% respondents were age group 41-50 years and 33.10% respondents were age group 51 years & above.

**Table 2: Gender the Respondents**

Sex	Percentage
Female	97.90%
Male	2.10%

**Figure 2: Gender the Respondents**

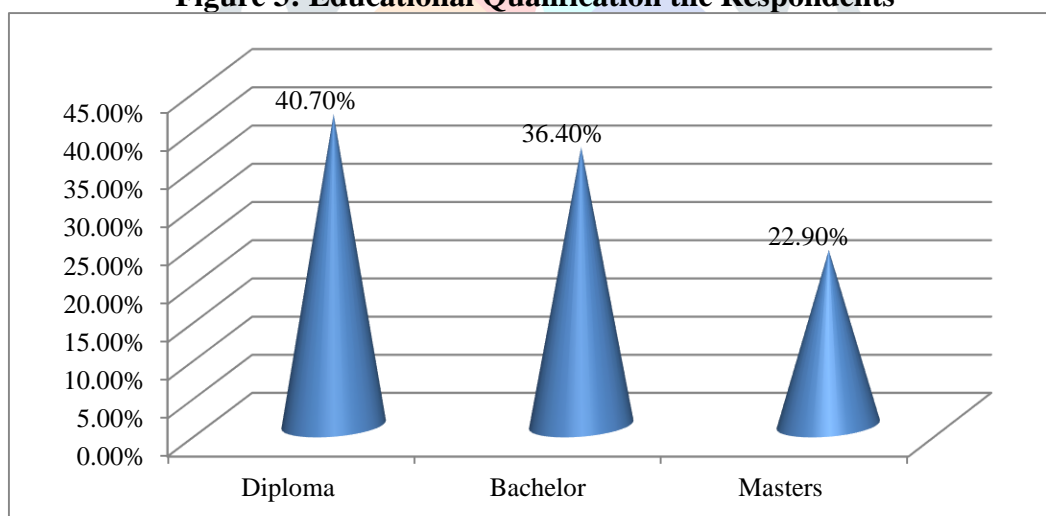


Gender the Respondents has shown in the above table and graph. From the result it was found that most of the respondents (97.90%) were female and very few respondents were male (2.10%).

**Table 3: Educational Qualification the Respondents**

Qualifications	Percentage (%)
Diploma	40.70%
Bachelor	36.40%
Masters	22.90%

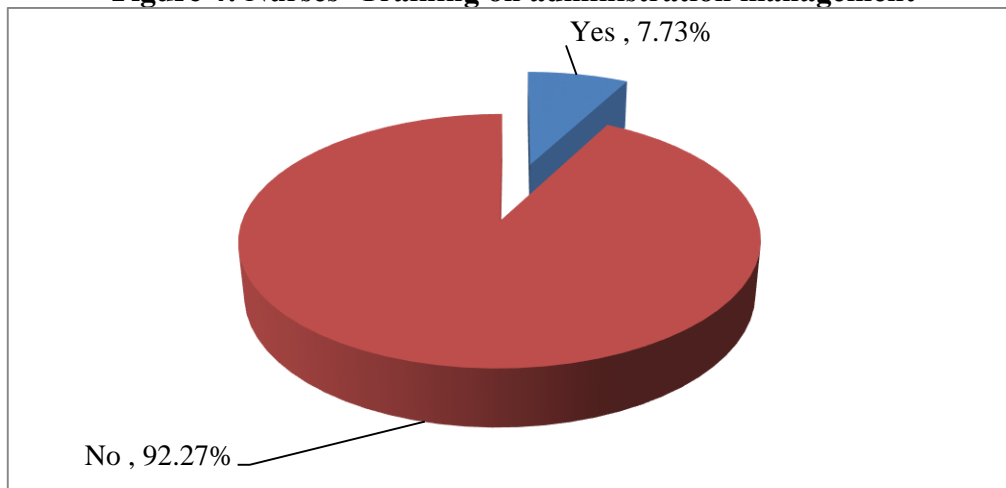
**Figure 3: Educational Qualification the Respondents**



Educational Qualification the Respondents has shown in the above table and graph. From the result it was found that 40.70% respondents had Diploma degree, 36.40% respondents had Bachelor degree and 22.90% respondents had Masters Degree.

**Table 4: Nurses' Training on administration management**

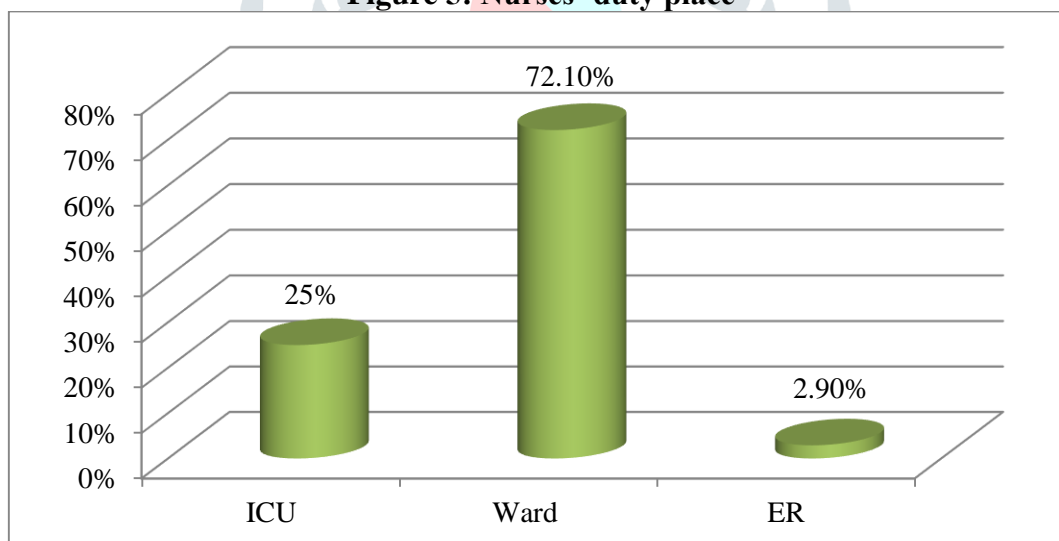
Training	Percentage (%)
Yes	7.73%
No	92.27%

**Figure 4: Nurses' Training on administration management**

Nurses' Training on administration management has shown in the above table and graph. From the result it was found that only 7.73% nurses had training on administration management but most of the nurses had no training on administration management.

**Table 5: Nurses' Duty Place**

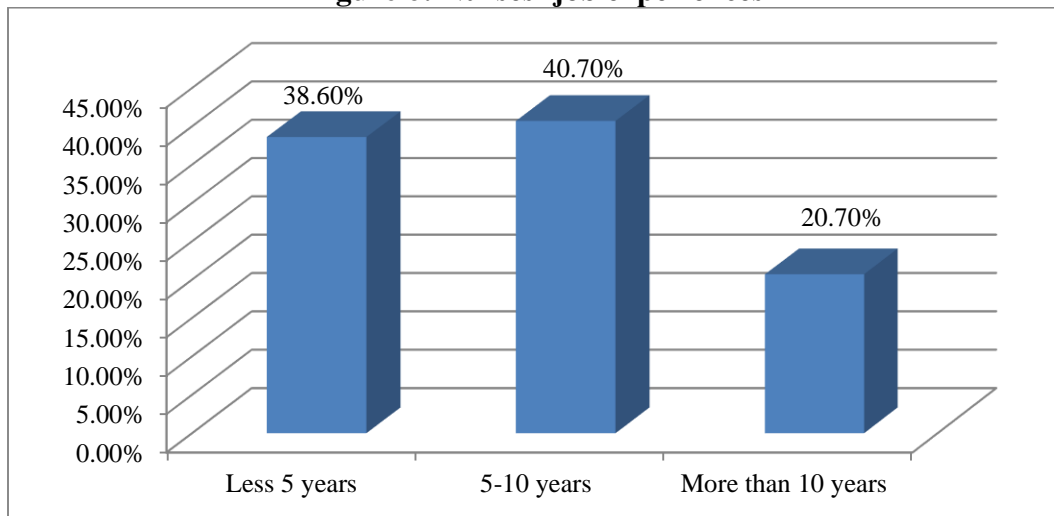
Unit	Percentage (%)
ICU	25.0%
Ward	72.10%
ER	2.90%

**Figure 5: Nurses' duty place**

Nurses' duty place has shown in the above table and graph. From the result it was found that most of the Nurses (72.10%) had experiences in ward duty, 25% Nurses had experience on ICU duty and only 2.90% Nurses had experiences on ER duty.

**Table 6: Nurses' job experiences**

Experience (Years)	Percentage (%)
Less 5 years	38.60%
5-10 years	40.70%
More than 10 years	20.70%

**Figure 6: Nurses' job experiences**

Nurses' job experiences have shown in the above table and graph. From the result it was found that 40.70% Nurses had 5-10 years job experiences which was maximum but only 20.70% % Nurses had more than 10 years job experiences which was minimum. On the other hand 38.60% % Nurses had less than 5 years job experiences.

## Part II: Nurses' knowledge regarding medication administration

**Table 7: Distribution of nurses according to their mean knowledge domain score regarding medication administration**

Nurses' knowledge domains	Mean $\pm$ SD
Basic knowledge regarding medication administration	44.92 $\pm$ 1.92
Nurses knowledge regarding medication preparation	36.58 $\pm$ 2.37
Nurses knowledge regarding medication administration	7.82 $\pm$ 1.026
Nurses knowledge regarding charting of medications	6.50 $\pm$ 0.605
Nurses knowledge regarding PRN Medications	5.45 $\pm$ 0.4999
Nurses knowledge regarding floor-stock, medications & supplies	16.335 1.083
Nurses knowledge regarding verification of physicians orders	19.964 $\pm$ 2.07
Total nurses knowledge score	102.72 $\pm$ 35.38

Table 7 shows the distribution of nurses according to their mean knowledge domain score regarding medication administration. Nurses basic knowledge, knowledge regarding medication preparation, medication administration and verification of physician orders reflect higher mean score (44.92 $\pm$ 1.92, 36.58 $\pm$  2.37, 7.82  $\pm$ 1.026, and 19.964  $\pm$  2.07 respectively). Whereas, mean score of nurses knowledge regarding charting of medication, PRN medication, and floor- stock medication represent the lower mean score (6.50 $\pm$ 0.605, 5.45 $\pm$  0.4999, and 16.335  $\pm$ 1.083 respectively). Finally, mean score of nurses total knowledge regarding medication administration is 102.72  $\pm$  35.38.

**Table 8: Distribution of the nurses according to their total knowledge score regarding medication administration**

Nurses' Knowledge	Poor	Fair	Good
	%	%	%
Knowledge regarding drug Policy	37.1	22.9	40



Knowledge about drug Preparation	39.3	15.7	45
Knowledge about drug Administration	77.9	16.4	5.7
Total knowledge score	62.9	20.7	16.4

Table 8 Presents distribution of the nurses according to their total knowledge score regarding medication administration. The table shows that, around two fifth of the nurses have poor knowledge score regarding drug policy, and drug preparation (37.1%, and 39.3% respectively). Additionally, more than three quarters (77.9%) of the nurses reported poor knowledge score in relation to their knowledge regarding drug administration. Finally, slightly less than two thirds (62.9%) of nurses have poor total knowledge score regarding medication administration.

### Part III: Nurses' attitude regarding medication administration

**Table 9: Distribution of the nurses according to their attitude regarding medication administration**

Nurses' Attitude	Percentage
Positive attitude ( $\geq$ Median % score)	51.4
Negative attitude ( $<$ Median % score)	48.6

Table 9 shows distribution of the nurses according to their attitudes regarding medication administration. The table presents that, slightly more than half (51.4%) of the nurses have positive attitude regarding medication administration, while more than two fifths (48.6%) have negative attitude regarding medication administration.

**Table 10: Distribution of the nurses according to mean and standard deviation of their attitude score regarding medication administration**

nurses' Attitude	Mean $\pm$ SD
Positive attitude (12 question / 36 Point)	27.53 $\pm$ 1.92
Negative attitude (8 question / 24 Point)	12.5 $\pm$ 1.68
Total attitude score (20 question / 60 Point)	40.04 $\pm$ 2.21

Table 10 Presents distribution of the nurses according to mean and standard deviation of their attitude score regarding medication administration. This table shows that, the mean and standard deviation of the nurses' positive attitude regarding medication administration is 27.53 $\pm$ 1.92, while the mean and standard deviation of the nurse's negative attitude regarding medication administration is 12.5 $\pm$ 1.68. In relation to the nurse's total attitude score regarding medication administration is noticed from the table that the mean and standard deviation is 40.04 $\pm$ 2.21.

**Table 11: Distribution of the nurses according to their total practice score regarding medication administration**

Nurses' practice	Poor	Fair	Good
Preparation	75.7	24.3	0.00
Administration	60.7	26.4	12.9
Post administration	39.3	45	15.7
Total practice score	46.4	30	23.6

Table 11 Presents distribution of the nurses according to their total practice score regarding medication administration. This table shows that more than three quarters (75.7%) of the nurses have poor practice score regarding drug preparation, followed by slightly more than three fifths (60.7%) of them reported poor practice score regarding drug administration too. Furthermore, slightly less than two fifths (39.3%) of the nurses have poor practice post administering medication. Lastly, around half (46.4%) of the nurses have poor total practice score.

**Table 12 Distribution of the nurses according to mean and standard deviation of their practice score regarding medication administration**

Nurses' practice	Mean $\pm$ SD
Preparation	50.66 $\pm$ 11.85
Administration	122.19 $\pm$ 14.65

Post administration	44.17±14.76
Total practice score	267.05±29.62

Table 12 Presents distribution of the nurses according to mean and standard deviation of their practice score regarding medication administration. This table shows that, the mean and standard deviation of the nurse's preparation for medication is 50.66±11.85, while the mean and standard deviation of the nurse's medication administration is 122.19±14.65. Regarding nurses' practices post medication administration mean and standard deviation is 44.17±14.76. In relation to the nurses' total practice score regarding medication administration it noticed from the table that the mean and standard deviation is 267.05±29.62.

**Table 13: Relationship between nurses' knowledge, practice, and attitude regarding medication administration**

Variables	Test of significance	
	R	P
Nurses' knowledge & practice	0.195	0.021*
Nurses' knowledge & attitude	0.149	0.022*
Nurses' practice & attitude	0.050	0.002*

Table 13 According to regression analysis this table shows that there is a statistically significant relation between nurses' knowledge and their practice and attitude regarding medication administration where  $P=0.021$ ,  $0.022$  respectively. Moreover, this table also shows a statistically significant relation between nurses' practices for medication administration and their attitude regarding medication administration where  $P=0.002$ .

## CONCLUSION

Nurses have average knowledge, practice, and negative attitude toward medication administration, which needs to be corrected. In some cases communication, unclear medication orders, workload and medication packages were the main factors associated with nurses' knowledge regarding nursing administration. Nurses' experiences and age also found to be inversely related to nurses' knowledge regarding nursing administration. Nurses also reported that they do not receive enough in-service training and education related to nursing administration medication, administration and new medication in the field. The study also emphasized the role of workload and following medication guideline to prevent errors and improve patients' safety healthcare services. It is undisputable that medication administration errors occur. Solutions and strategies cannot be drawn out without recognizing and considering the underlying reasons behind the problems of medication administration, nurses' knowledge regarding nursing administration. This issue will continue to persist and the safety of patients will continue to be jeopardized unless effective interventions carried out. The findings in this study provide evidence that communication with physicians, staffing and not receiving appropriate education about new medication are significant factors that contribute to medication administration errors in health care settings. While, factors related to administration and medication package had minor roles in medication errors. This infers that nurse's information and knowledge about administration, the medication, and the ability to comprehend and follow the guidelines for medication administration considered a cornerstone for medication administration safety. Quality of care and policy maker officers needs to adopt effective interventions and develop programs to enhance nursing administration, medication administration accuracy and overcome factors that contribute to medication errors. Such efforts should target communication pattern among the hospital staff (nurses, physicians and pharmacy personnel), and enhancing nurses' knowledge and competency in nursing administration and medication administration.

## RECOMMENDATION

Based upon findings of the present study, the following suggestions are recommended:

1. Simple handouts as booklets and brochures about nursing administration management, medication administration essential instruction and medication errors should be developed and distributed at all nursing care settings.
2. Evidence-based nursing administration, medication administration guidelines should be integrated in pharmacology courses curriculum for nursing students.
3. Using a standardized assessment sheet to assess knowledge, attitude and practices regarding nursing management, medication administration quality is recommended.



4. Set a policy that enhances nursing management, medication errors reporting without punishment.
5. Training and educational session should be applied as a part of in-service training program.
6. Updated and modern training should be provided for better nursing management.
7. There should have a provision for visit or tour for better nursing management in country and abroad.
8. A follow-up studies that include in-depth interviews across the organization should be conducted to find out other underlying factors of nursing knowledge regarding nursing administration management.

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