



Knowledge and Practice of Nurses Regarding Standard Precautions in Public Tertiary Care Hospital Peshawar, KP, Pakistan

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Received: 📅 April 27, 2020

Published: 📅 May 11, 2020

Abstract

Objective: The aim of this study was to know about knowledge and practices of nurses regarding standard precautions in tertiary care hospital, Peshawar, KP.

Methodology: A descriptive cross-sectional study was conducted among nurses in a tertiary care hospital Peshawar. Participants were selected from different units by using random sampling technique. Data was collected by using adopted and modified questionnaire.

Results: The participants of study were 94 in which 13.8% were male and 86.2% were female. The overall knowledge and practices of participants were calculated in percentages. 50% participants were had average practice while 39.4% participants had poor knowledge. For identifying association of different variables chi square test were applied. Association between knowledge and gender was significant $p=0.044$ with the $SD=0.347$.

Conclusion: The current study which was conducted in tertiary care hospital, focused on knowledge and practice of nurses regarding standard precautions. Results significantly appeared to show that nurses had poor knowledge of standard precautions as compared to practices. The study also recommended the proper sessions for in service educations for nurses.

Background

Hospitals associated infections or nosocomial infections are the major issue of health care work setting. The issue of health care associated infections has always been one of the most important public health problems in many countries throughout the world contributing to morbidity, mortality, and additional cost [1]. A study conducted by [2] showed that half (50%) of the respondents reported no knowledge of universal precautions; more than one third (37%) had average knowledge of universal precautions while 13% had good knowledge. Knowledge of universal precautions was highest among women than men, and among nurses (85.5%) compared with other health workers. Another study conducted by [3] stated that the large percentages of correct responses to the items about knowledge of standard precautions (range for individual items, 83.9%-99.2%), whereas the percentages of those about knowledge of isolation precautions were seen much smaller.

Only 10.8% and 17.8% of respondents had correct answers about the use of N95 mask and the safe distance from patients with droplet spread disease. The findings of another study showed that most nurses had a poor knowledge (43%), an average practice (42%), and a moderate attitude (37%) about hospital associated infections control. No statistically significant association was observed between knowledge and practice [4].

Chandak [1] conducted a study at New Delhi showed that the knowledge of nurses of standard precautions in prevention of HAI was quite low. Knowledge of the participants in prevention of hospital acquired infections improved significantly after three days training session. Pre-test only 8.9% had responded correctly. Post-test correct response rate for standard precautions increased to 70%. A study conducted by [2] highlighted that knowledge and attitude scores toward standard precautions were above 90%, but

practice score was 50.8%.The majority of the Health Care Workers (HCW) had poor knowledge of injection safety and complained of inadequate resources to practice standard precautions. House officers, laboratory scientists and junior cadres of nurses had lower knowledge and compliance with standard precautions than more experienced doctors and nurses. The study also showed that there was some association of knowledge and practice with experience. The more experience, the greater the knowledge and highest level of its practice in clinical setting. The purpose of this study was to identify and explore knowledge and practice of nurses regarding use of standard precautions in tertiary care hospital Peshawar.

Study questions were

- a. What do nurses know regarding standard precautions.
- b. Do nurses practice standard precautions in clinical area.

Methodology

Research design

Quantitative descriptive cross-sectional study was used in this research project. It was conducted through the April-May 2018 in public tertiary care hospital Peshawar.

Population

Population for this study was registered nurses, working in tertiary care hospital Peshawar.

Sampling technique

Simple random sampling technique was used for sample selection in this research project to access to nurses of the hospital.

Sample size

Sample size was calculated by Rao soft software, population size was 285 with the margin of error 5% and non-responsive rate 10% and calculated sample size is 94.

Data collection tool

An adopted and modified questionnaire was used for data collection. The questionnaire included demographic characteristics of nurses. The questionnaire consists of two parts. Part A regarding assessing the knowledge and part B about assessing the practice of nurses regarding standard precautions Figure 1. Part A (knowledge) contains total of twelve questions while part B (practice) consists total of 14 questions. Both knowledge and practice categories questions have three possible answers of “Yes” “No”, and “don’t know”. The respondents were divided into categories Table 1.

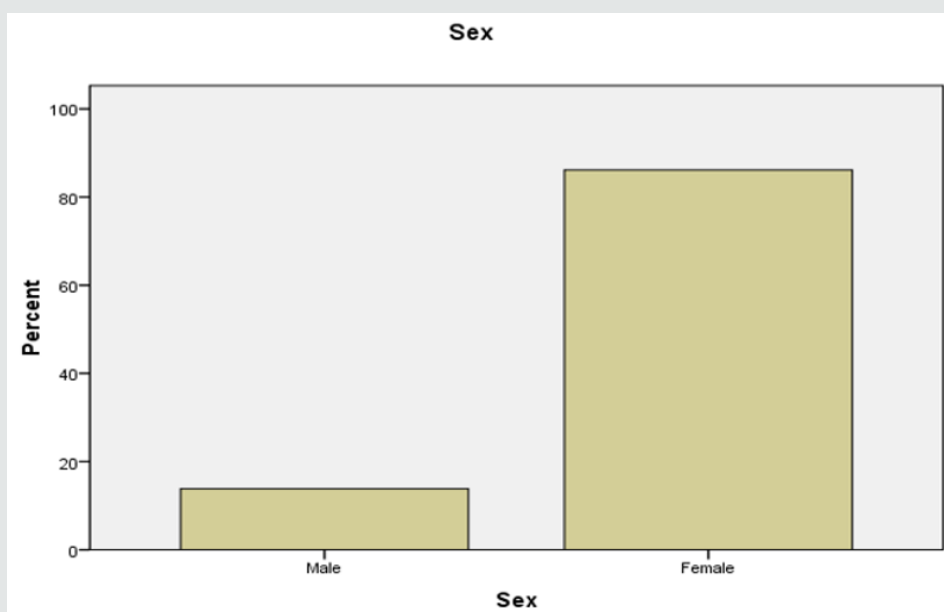


Figure 1: Total participants were 94, response rate was 100%. All participants were registered nurses among which 13(13.8%) were male and 81 (86.2%) were female, highlighted in Figure 1.

Table 1: Participants who scored >76=good/excellent, 61-75=Average, below 60=poor.

Knowledge and Practice Score	
<60	Poor knowledge and practice
61-75	Average knowledge and practice
>76	Good/excellent

- i. Setting: This research project was conducted in tertiary care hospital Peshawar, KP as a large public hospital and true

representative of this province.

- ii. Ethical Consideration: Written permission was obtained from Nursing Director of the hospital. Informed consent was distributed among participants of this research project and confidentiality was maintained throughout the study.

- iii. Inclusion Criteria: All registered nurses who were directly involved in patient care

iv. Data Analysis: Statistical Package for Social Sciences (SPSS) version 21 used for data analysis. In descriptive statistics percentages and frequencies were calculated for ordinal and nominal data. Chi Square test was applied to see association among different variables Table 2.

Table 2: Among participants of this study 66(70.2%) were general nursing diploma holder, 23 (24.5%) were BSN, 1 was (1.1%) MSN and 4(4.3%) were having different specialties.

Participants Qualification		
Qualification	Frequency	Percent
Diploma	66	70.2
BSN	23	24.5
MSN	1	1.1
Others	4	4.3
Total	94	100

v. Results: To identify association between knowledge about standard precaution and sex of the participants Chi-square statistical test was applied which was significant with P-value of 0.044, no association was noted among other demographic variables with knowledge Table 3.

Table 3: In knowledge category 39.4% participants have poor knowledge 38.3% have average knowledge and 22.3% have good knowledge about standard precautions.

Frequency and Percentage of Participants Knowledge		
	Frequency	Percent
Poor	37	39.4
Average	36	38.3
Good	21	22.3
Total	94	100

Discussion

The results of current study showed that 39.4% participants of this study have poor knowledge, 38.3% have average and 22.3% have good knowledge. While in practice 26.6% have poor, 50% have average and 23.4% participant have good practice of standard precautions. No significant association was observed between knowledge and practice Figure 2. Similar results were found in a study conducted by [4]. The findings of study showed that most nurses had a poor knowledge 43%, an average practice 42% and a moderate attitude 37% about hospital associated infections control Table 4. No statistically significant association was observed between knowledge and practice. Results of the current study identified the association between gender and knowledge that men has highest knowledge than women with the mean 1.86 SD 0.347 and P-value 0.044, which is inconsistent with the results of the study conducted by [5] which showed that women has highest knowledge about standard precaution than men. Current study showed that there is no association of knowledge and practice with experience. However, in contrast a study conducted by [2], there was some association of knowledge and practice with experience. The more experience the greater the knowledge and highest level of its practice in clinical setting Figure 3.

Table 4: In practice category results showed that 26.6% have poor practice, 50% have average practice and 23.4% good practice of standard precautions.

Frequency and Percentage of Participants Practice		
	Frequency	Percent
Poor	25	26.6
Average	47	50
Good	22	23.4
Total	94	100

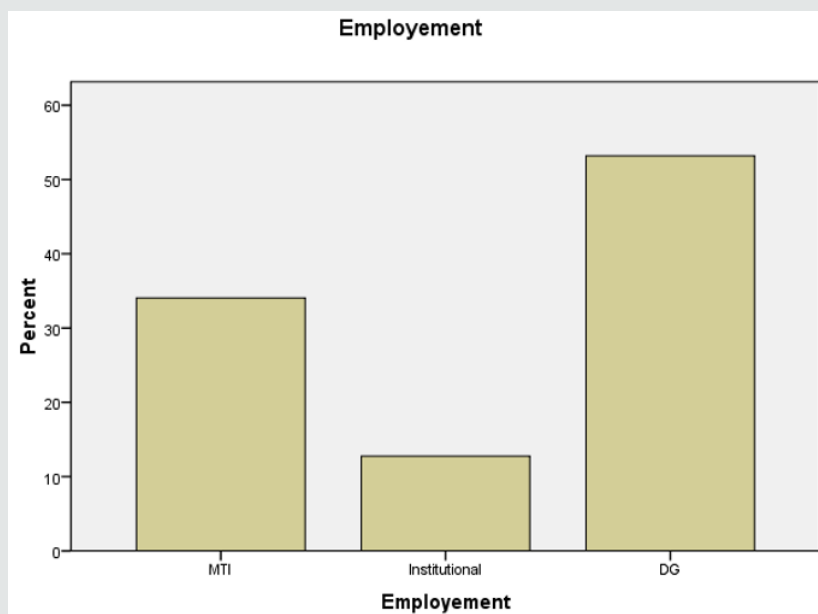


Figure 2: 32(34%) were Medical Teaching Institute (MTI) employees, 12 (12.8%) were institutional employees and 50 (53.2%) were Director General (DG) employees as shown in Figure 2.

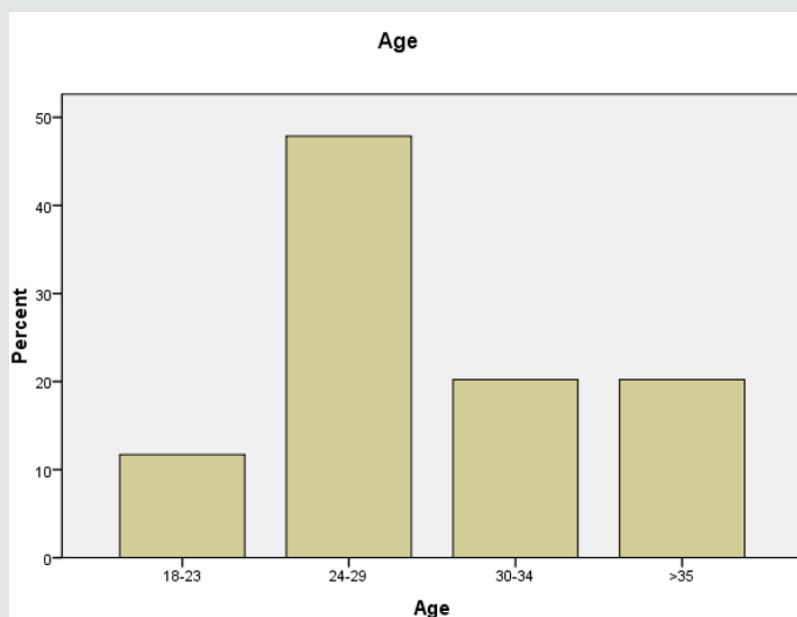


Figure 3: Age of participants were categorized in four classes, 18-23 years participants were 11 (11.7%), 24-29 years participants were 45 (47.7%), 30-34 years were 19 (20.2%) and >35 years participants were 19 (20.2%). Given in Figure 3.

In current study in knowledge category only 22.3% have good knowledge about standard precautions. While in practice category results showed that 23.4% nurses have good practice of standard precautions, which suggests some needed recommendation in certain areas including:

- i. To conduct certified workshops on nurse's awareness regarding blood born infections because of blood transfusions.
- ii. To conduct workshops on contact body fluids precautions that is the proper use of gloves, gowns, and masks.
- iii. To bring awareness in nurses regarding proper sharps disposals, its importance, and correct techniques of used syringes disposals.

Conclusion

This study was conducted in one of public hospital of KP to assess knowledge and practice of nurses regarding standard precautions. Written permission for conducting study was obtained from nursing director of the hospital. Informed consent was distributed, and data was collected from a sample of 94 nurses which was calculated by Rao Soft software. After data collection data was analyzed by SPSS, percentages, frequencies were calculated. Association of different variables was checked by applying statistical test. Association was

identified between knowledge and gender. In service education and continuous training was recommended for improvement of knowledge and practice of nurses regarding standard precautions.

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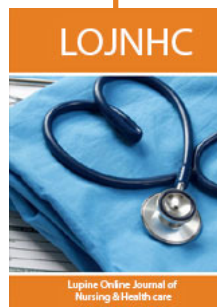
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DOI: [10.32474/LOJNHC.2020.02.000150](https://doi.org/10.32474/LOJNHC.2020.02.000150)



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