# A Descriptive Study to Assess the Knowledge Related to Practices of Infection Control Standards among Staff Nurses in Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab

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## **ABSTRACT**

**Introduction:** Infection is the invasion of tissues by pathogens, their multiplication and reactions of host tissues to the infectious agents and toxins they produce. Infection control refers to policies and procedure implemented to control and minimizes the dissemination of infections in hospitals and other health care settings with the purpose of reducing infection rates and improving patient's progress outcome through these standards. Infection control standards include, hand hygiene, use of PPE equipment's, aseptic technique, respiratory hygiene, cleaning and disinfection, needle sticks injury prevention and waste disposal. Nurse's knowledge and practices related to adherence to these protocols play crucial role in health care workers safety and reduce the hospital acquired infections incidences in patients.

**Material and methods:** A quantitative approach with descriptive research design was adopted for 60 study subjects in Guru Gobind Singh Medical Hospital, Faridkot by convenient sampling techniques. A self-structured knowledge questionnaire was selected to assess the knowledge related to practices of infection control standards of study subjects.

**Results:** The study result revealed that 07(11.67%) staff nurses had very good knowledge and 45(75%) staff nurses had good knowledge related to practices of infection control standards. Results showed that statically non-significant association with socio demographic variables.

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**KEYWORDS:** Infection, infection control standards

#### INTRODUCTION

Infection is the one of the leading cause of the preventable death in hospitals every year. The center of disease control and prevention estimated that there are approximately 2 million preventable infections in the hospital every year, leading to 90000 unnecessary deaths. An infection occurs when a disease causing organism enters the body and starts to multiply when they come in contact with favorable environment. Infections are caused by microorganism such as viruses, bacteria, parasites and fungi etc.

Infection control measures practiced by health care personnel to prevent spread, transmission& acquisition of infection between clients, from health care providers to clients and from clients to health

care provider. Infection control standards precautions used to prevent transmission of diseases that can be acquired by contact with blood, body fluids, non intact skin and mucus membrane. Infection control standards include hand washing, PPE, sterilization, decontamination, cleaning and waste disposal.

Infection prevention and control measures are everyone's responsibility. The role of health care providers especially staff nurses is crucial and cornerstone to ensure safe and effective infection prevention and control practices are upheld, evidence-based best practices guidelines are implemented, and continued competency in institutional policies are maintained. Main role of staff nurses is very

important to educate and support patients, as well as their visitors about these protocols, which plays effective contribution to reduce the spread of infection, role- model positive health promotion and reduce health challenges encounter related to infection prevention and control.

# MATERIAL AND METHODS Design

A Quantitative research approach with descriptive design was used to assess the knowledge related to practices of infection control standards among staff nurses working in Guru Gobind Singh Medical Hospital, Faridkot, Punjab.

#### Sample

Convenient sampling technique was used to select 60 staff nurses. Data was collected by using self structured knowledge questionnaire on infection control standards.

Inclusion criteria include staff nurses who were present at the time of data collection, willing to participate and understand English.

Exclusion criteria include staff nurses who were not present at the time of data collection and other health care workers.

### **INSTRUMENTATION**

Development of questionnaire tool-the self structured knowledge questionnaire was constructed to assess the knowledge related to practices of infection control standards among staff nurses.

**PART A-** This part consists of socio-demographic variables: Age, Gender, Educational Status, Residence, marital status, years of experience, area of practice, religion, in-service education programme CNE.

**PART B**- Self- structured Questionnaire to assess knowledge related to practices of infection control standards among staff nurses.

The study was conducted at Guru Gobind Singh Medical Hospital, Faridkot.

**Table 1: Distribution of Questions** 

Sr. No.	Items	No. of	Questions	
D111101		Questions		
1.	Questions related to Hand washing &PPE Scientific	11	1-11	
2.	Questions related to respiratory etiquettes, sharp safety& safe injection practices	11	12-22	
3.	Questions related to appropriate handling of patient care equipments, BMW& Blood and its products, environmental cleaning.	18	23-40	

#### **CRITERIAN MEASURE**

Data was collected by self-structured knowledge questionnaire to assess the knowledge related to practices of infection control standards among staff nurses. Total 40 items were included. Correct answer awarded with 1 mark and 0 for incorrect.

#### ETHICAL CONSIDERATION

Written permission was obtained from the principal and research committee of the university college of nursing, Faridkot, Punjab and Medical Superintendent of Guru Gobind Singh Medical hospital, Faridkot. Informed written consent was obtained for each study subject for participation in study.

Data was analyzed by using both inferential and descriptive statistics frequency and percentage, mean and standard deviation, chi- square.

#### **RESULTS**

The socio demographic profile of 60 staff nurses who were enrolled in study is summarized in table number 1 below. The data was described with the help of percentage.

Table-2: Frequency and percentage distribution of staff nurses according to their socio-demographic variable. (N=60)

S.NO	DEMOGRAPHIC VARIABLES	FREQUENCY (N)	PERCENTAGE (%)
1	AGE (in years) 21-30 31-40 41-50	37 17 06	61.6% 28.3% 10%

	GENDER				
2	MALE	12	20%		
	FEMALE	48	80%		
	EDUCATIONAL STATUS				
3	GNM	16	26.6%		
	B.Sc.(N)	18	30%		
	P.B.B.Sc.(N)	26	43.3%		
	M.Sc.(N)	00	00%		
	RESIDENC				
4	URBAN	41	68.3%		
	RURAL	19	31.6%		
	EDUCATIONAL INSTITUTE				
5	Government	32	53.3%		
	Private	28	46.67%		
	MARITAL STATUS				
6	Married	33	55%		
	Unmarried	27	45%		
	YEAR OF EXPERIENCE				
	1-5	33	55%		
7	6-10	17	28.3%		
	11-15	08	13.3%		
	16-20 Scientific	02	3.3%		
	AREA OF PRACTICE	V)			
	Medicine 8	15	25%		
	Surgery 8  IJI SRD	% V11	18.3%		
8	ICU International Journal	20	33.3%		
	Emergency of Trend in Scientific	01	1.67%		
	Specialty	01 09	15%		
	Others Research and	04	6.67%		
	Have you attended CNE regarding Infection control				
9	YES () SSN: 2456-6470	36	60%		
	NO	24	40%		
	How many times attended CNE?	8			
10	1-2	29	80.5%		
10	3-4	04	11.1%		
	>5	03	8.3%		
	Religion				
	Hindu	11	18.3%		
11	Sikh	47	78.3%		
	Muslim	00	00%		
	Christian	02	3.3%		

It shows that majority of study subjects (61.6%) were in age group of 21-30, and (80%) were females, maximum (43.3%) were graduate, (33.3%) were practice in ICU followed by (28.3%) had6-10 years of experience. Most of (60%) attended CNE.

Table -3: Frequency and percentage distribution of knowledge scores of staff nurses. N=60

Level of knowledge	Criteria measure	Frequency	Percentage
Very Good	31-40	07	11.67%
Good	21-30	45	75%
Average	20 or less	08	13.34%

Study findings depicted that 75% of staff nurses having Good knowledge and 13.34% were fall under average knowledge scores and 11.67% have very good knowledge scores related to practices regarding infection control standards.

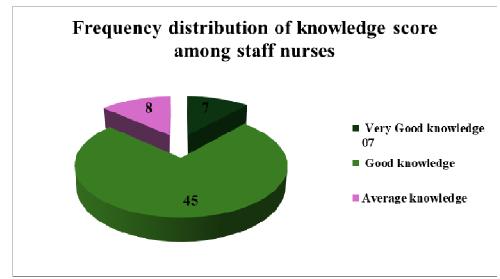


Figure 1: Frequency distribution of knowledge scores among staff nurses knowledge related to practices regarding infection control standards.

Table4: Knowledge related to practices of infection control among staff nurses of GGSMCH, Faridkot (N=60)

Knowledge items	Maximum possible score	Maximum Obtained score	Minimum Obtained score	Mean	S.D
40 items	40	36	10	25.16	5.45

Study findings shown that, total mean knowledge score of study subjects was 25.16 and Standard deviation is 5.45.

Which proved the assumptions that, staff nurses 75% having good knowledge regarding infection control standards. The association between knowledge scores and their socio demographic variables shown that, Statistical non significant was calculated with chi square test.

The association between knowledge score and their socio demographic variables shown that, staff nurses who were female had good knowledge regarding infection control standards. Statistical significance was calculated with chi square test.

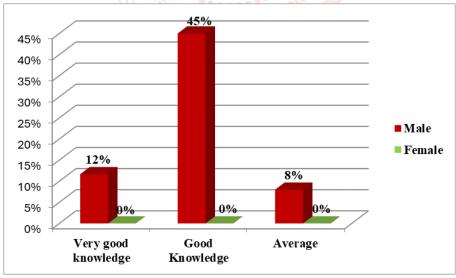


Figure 2: Association between knowledge score with Gender

# DISCUSSION

Findings of present study revealed that, maximum of study subjects (11.67%) had very good knowledge, 75% had good knowledge and 13.34% had average knowledge regarding infection control standards.

It was supported by study conducted by **Sodhi K**, which showed 5% staff nurses having very good knowledge, 37% had good and 40% had average and 18%below average knowledge scores.<sup>3</sup>

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