

Assess the Knowledge, Practice and Attitude Regarding Nosocomial Infections and their Preventive among Health Care Staff

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Abstract

Nosocomial infections are diseases acquired within 48 hours or more of hospital admission or within 30 days of discharge. The objectives of the study were to assess the knowledge, attitude and practice regarding nosocomial infection and their prevention among health care workers. To determine the relationship between knowledge, attitude and practice regarding nosocomial infection and their prevention among health care workers. To find out association between the knowledge, attitude and practice regarding nosocomial infection and their prevention among health care workers. The research design selected for the study was descriptive research design and a total 100 health care staff were selected as study sample tool was used for data collection. Self-introduction was given and purpose of gathering the information and nature of study was explained before taking information through non probability convenient sampling technique. A self-structured questionnaire, consent was signed by participants. The result revealed that the most of the health care staff 76(76%) had excellent knowledge regarding nosocomial infection and their prevention less than half, 43(43%) had positive attitude regarding nosocomial infection and their prevention. On the contrary, 74(74%) had excellent practice regarding nosocomial infection and their prevention. On applying the spearman correlation test, relationship between knowledge and attitude was found to be significant at $p < 0.05$. Hence, researchers concluded that the present study was undertaken to identify the level of knowledge, attitude and practice regarding nosocomial infection and prevention among health care staff in selected hospitals of Punjab. The finding showed that majority of the participants had excellent knowledge and practice. There were gaps in relationship between knowledge and practice and attitude which is found to be not significant at $p < 0.05$.

Keywords: Knowledge, Infection, Practice, Nosocomial.

Introduction

Hospital acquired infections which are acquired or caught by a patient in a special location i.e. hospital and acquired after 48 hrs. On patient admission, 3 days of discharge and 30 days after surgery.¹⁻² Hospital-associated infections also include occupational

infections due to occupational hazard in health care workers.³⁻⁶ There is various sort of transmissions of these microorganisms and virus acquired through direct contact between patient and doctor as well from patient to nurses and vice versa associated with nursing infected surface, through air such as droplets, aerosols etc. and also commonly through by common vehicles as food and water.⁷⁻⁹ Nosocomial infections go beyond their effects on morbidity and mortality in every country and have so many economic implications. Infection management should be a part of implementations for all health care workers, not only for their health purpose but also to decrease the prevalence of nosocomial

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infections and thus improve patient safety and risks of acquiring infections.¹⁰ Hand washing process leads to complete hand hygiene by healthcare staff has essential importance in the control of infections.¹¹ Nosocomial infections increase the morbidity, mortality and duration of patients who stay at hospital prices. It is estimated that Nosocomial infections comprise more than 2 million patients per year. Negative outcomes of nosocomial infections differ by type of infection and their related costs.¹² During the 1950s, programs for the surveillance, prevention and control of nosocomial infections were created. However, questions regarding the efficiency and cost-effectiveness of these programs still exist.¹³ That is why, this shows that knowledge regarding the effectiveness of nosocomial infection surveillance, prevention, and control is must emphasise on public health: screening, preventing and managing nosocomial infections.

Materials and Method

Research approach for the study was a quantitative research approach, as it allows the investigator to collect and cover data. In this analysis, the Descriptive research design was used, and a non-experimental research design was used to determine the knowledge, practice and attitude regarding nosocomial infections among health care workers in selected Hospitals of Punjab. A total 100 health care staff were selected as study sample tool was used for data collection. Self-introduction was given and purpose of gathering the information and nature of study was explained before taking information through non probability convenient sampling technique. A self- structured questionnaire, consent was signed by participants. In Inclusion Criteria all the health care worker i.e. Doctors, Nurses, Physiotherapist, OT Technician, Lab Technician, Radiologists who are in direct contact with the patient was selected for this study and in exclusion criteria health care staff that were not willing to participate was excluded. Using Non-Probability Convenient sampling technique was selected to select a group of 100 healthcare staff who will be representative of the population being studied.

Results

The study revealed that present research was selected to assess the knowledge, practice and attitude of nosocomial infections and prevention for their health care staff in hospitals. The descriptive research design was selected. Non-Convenient sampling technique was selected for the study. The data was obtained from 100

health care workers who were analysed. The finding of the study for the showed that out of 100 subjects 76(76%) had excellent knowledge regarding nosocomial infection and their prevention and also 74 (74%) had excellent practice regarding nosocomial infection and their prevention. So, this concludes that majority of the participants had excellent knowledge and practice and less than half had positive attitude. The second objective of the study findings revealed that relationship between the knowledge, practice and attitude of health care staff regarding nosocomial infection. In current study, on applying spearman's correlation test, relationship between knowledge and attitude was found to be significant at $p < 0.05$. The relationship between knowledge and practice and attitude was found to be not significant at $p < 0.05$. The findings of the study showed that there was a linear correlation between knowledge and attitude at $p < 0.05$. Overall, there was no correlation between attitude and practice scores of individuals with regard to nosocomial infection prevention and control. The third objective findings revealed that the chi-square value showed that there was a significant association between knowledge and highest educational qualification. No significant association with the selected demographic variables was noted between attitude and practice. The results showed that nurses with a master's degree showed higher mean scores of knowledge than the other two groups.¹⁴ An important statistical difference in mean information scores was found at $p < 0.05$.

Discussion

Discussion deals with the results of the study. In the discussion, the investigator ties tighter all the loose ends of the study. The results and the discussion of the study are investigators opportunity to examine the logic of theoretical framework, the method and analysis. The present study was selected to assess the knowledge, practice and attitude regarding nosocomial infection and their prevention among health care staff in selected hospitals. Descriptive research method was selected and data was collected by self-reported paper and pencil. Data was collected from 100 health care staff that were analysed and interpreted. The relationship between knowledge and practice and relationship between attitude and practice was not significant at $p < 0.05$. Chi square value revealed that there was a significant association between knowledge and highest educational qualification. No significant association was seen between attitude and practice with their selected demographic variables.

Table 1: Percentage and Frequency distribution of Knowledge, Attitude and Practice score of healthcare staff regarding nosocomial infections and their prevention N=100

Level of Knowledge Score	Percentage	Frequency	Mean	S.D.
Excellent knowledge (9-12)	76%	76	9.64	1.77
Good knowledge (4-8)	24%	24		
Inadequate knowledge (<4)	0%	0		
Maximum Score = 12 Minimum Score = 0				
Level of Attitude Score	Percentage	Frequency	Mean	S.D.
Positive Attitude (9-12)	43%	43	7.71	1.79
Neutral Attitude (4-8)	51%	51		
Negative Attitude (<4)	6%	6		
Maximum Score = 12 Minimum Score = 0				
Level of Practice Score	Percentage	Frequency	Mean	S.D.
Excellent Practice (9-12)	74%	74	10.01	2.06
Good Practice (4-8)	25%	25		
Poor Practice (<4)	1%	1		
Maximum Score=12 Minimum Score=0				

Table 2: Relationship between the knowledge, attitude and practice regarding nosocomial infections and their prevention among healthcare staff N=100

Relationship Between	Mean	S.D.	Correlation	P value	Results
Knowledge	9.64	1.77	0.418*	0.000	Significant
Attitude	7.71	1.79			
Knowledge	9.64	1.77	0.139	0.167	Not significant
Practice	10.01	2.06			
Attitude	7.71	1.79	0.025	0.802	Not significant
Practice	10.01	2.06			

*Significant, ^{NS} Not Significant**Table 3: Association between knowledge of healthcare staff regarding nosocomial infections and their prevention and selected socio demographic variables. N=100**

Variable Opts	Level of Knowledge			Chi Test	P Value	df	Table Value
	Poor Knowledge	Good Knowledge	Excellent Knowledge				
Age							
21-25 years	0	10	39	0.809	0.847 ^{NS}	3	7.815
26-30 years	0	8	23				
31-35 years	0	4	9				
36-40 years	0	2	5				
Gender							
Male	0	12	49	1.606	0.205 ^{NS}	1	3.841
Female	0	12	27				

Variable Opts	Level of Knowledge			Chi Test	P Value	df	Table Value
	Poor Knowledge	Good Knowledge	Excellent Knowledge				
Highest Educational Qualification				9.904	0.019*	3	7.815
Master	0	15	25				
Graduate	0	4	39				
Diploma	0	3	5				
Others	0	2	7				
Numbers of years in Healthcare practice				1.890	0.595 ^{NS}	3	7.815
≤ 1 year	0	4	22				
1-5 years	0	12	34				
6-10 years	0	5	10				
More than 10 years	0	3	10				
Have You Ever Received Occupational Recently Any Training on Universal Precautions?				0.805	0.370 ^{NS}	1	3.841
Yes	0	19	53				
No	0	5	23				
Maximum Score = 12 Minimum Score = 0				*Significant ^{NS} Not Significant			

Table 4: Association between Attitude of healthcare staff regarding nosocomial infections and their prevention and selected socio demographic variables. N=100

Variable	Level of Attitude			Chi Test	P Value	df	Table Value
	Negative Attitude	Neutral Attitude	Positive Attitude				
Age				6.880	0.332 ^{NS}	6	12.592
21-25 years	3	25	21				
26-30 years	2	19	10				
31-35 years	1	6	6				
36-40 years	0	1	6				
Gender				2.863	0.239 ^{NS}	2	5.991
Male	4	27	30				
Female	2	24	13				
Highest Educational Qualification				9.851	0.131 ^{NS}	6	12.592
Master	5	21	14				
Graduate	0	22	21				
Diploma	1	2	5				
Others	0	6	3				
Numbers of years in Healthcare practice				6.321	0.388 ^{NS}	6	12.592
≤ 1 year	1	16	9				
1-5 years	4	22	20				
6-10 years	1	9	5				
More than 10 years	0	4	9				

Variable	Level of Attitude			Chi Test	P Value	df	Table Value
	Negative Attitude	Neutral Attitude	Positive Attitude				
Have You Ever Received Occupational Recently any Training on Universal Precautions?				0.350	0.839 ^{NS}	2	5.991
Yes	4	38	30				
No	2	13	13				
Maximum Score = 12 Minimum Score = 0				*Significant ^{NS} Not Significant			

Table 5: Association between Practice of healthcare staff regarding nosocomial infections and their prevention and selected socio demographic variables. N=100

Variable	Level of Practice			Chi Test	P Value	df	Table Value
	Poor practice	Good practice	Excellent practice				
Age				4.150	0.656 ^{NS}	6	12.592
21-25 years	0	10	39				
26-30 years	1	8	22				
31-35 years	0	5	8				
36-40 years	0	2	5				
Gender				1.617	0.446 ^{NS}	2	5.991
Male	0	15	46				
Female	1	10	28				
Highest Educational Qualification				9.218	0.162 ^{NS}	6	12.592
Master	1	5	34				
Graduate	0	12	31				
Diploma	0	4	4				
Others	0	4	5				
Numbers of years in Healthcare practice				7.065	0.315 ^{NS}	6	12.592
≤ 1 year	0	6	20				
1-5 years	0	13	33				
6-10 years	1	2	12				
More than 10 years	0	4	9				
Have You Ever Received Occupational Recently Any Training on Universal Precautions?				4.791	0.091 ^{NS}	2	5.991
Yes	1	22	49				
No	0	3	25				
Maximum Score = 12 Minimum Score = 0				*Significant ^{NS} Not Significant			

Conclusion

The study concluded that 76 (76%) of the healthcare staff had excellent knowledge and prevention of nosocomial infection Less than half, 43(43%) had

positive attitude regarding nosocomial infection and their prevention. On the contrary, 74(74%) had excellent practice regarding nosocomial infection and their prevention. On applying Spearman’s Correlation test,

relationship between Knowledge and Attitude was found to be significant at $p < 0.05$. The relationship between Knowledge and Practice and the relationship between Attitude and Practice was found to be not significant at $p < 0.05$. The Chi-square value showed that there was a significant association between Knowledge and Highest Educational Qualification.

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