

A Pre Experimental Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Infection Control Among The Nursing Students At Selected Colleges Of Punjab.

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ABSTRACT

INTRODUCTION: Nosocomial infections happen around the world, in both developed and underdeveloped countries. There is a significant burden for the patients and general public. These are a significant reason for death as well as expanded morbidity among patients that are hospitalized. It is realized that nursing staff are the wellbeing work force who invest more energy with basic sick patients by being engaged with direct care. Having satisfactory information on infection control and taking measures to counteract them turns out to be very vital to them..

AIM OF THE STUDY:-Aim of the study was to assess the effectiveness of structured teaching programme on knowledge regarding infection control among nursing students.

MATERIALS AND METHODS: -A Quantitative Pre-Experimental One Group Pre Test Post Test Design was used to assess the effectiveness of STP on infection control among nursing students at selected colleges of Punjab. Non Probability convenience sampling technique was used to select 200 study subjects. Structured Knowledge Questionnaire was prepared to assess knowledge of nursing students on infection control.

RESULTS: - In experimental group the pre-test and post-test level of knowledge of nursing students regarding infection control the result reveals that, in pre-test majority 80(40%) had average knowledge, followed by 61(30.5%) had poor knowledge, 49(24.5%) had good knowledge and 10(5%) had excellent knowledge with minimum score was 8 and maximum score was 33 and an average mean and SD was 15.16 ± 6.805 . The post-test level of knowledge among nursing students regarding infection control showed that majority 98(49%) had good knowledge was followed by 80(40%) had excellent knowledge and 22(11%) had average knowledge with minimum score was 14 and maximum score was 35 and an average mean and SD was 27.54 ± 4.892 .

CONCLUSION:-Structured Teaching Programme was effective in the improvement of knowledge regarding infection control among nursing students.

KEY WORDS: - Infection Control, Structured Teaching Programme , Knowledge.

INTRODUCTION

Poor hospital cleanliness was generally promoted, including patients' worries about health in hospital settings. It also turned infection control into an interesting issue in the community, for media as well as for the medical practice at large. A primary reason to control infection covers diminishing the transmission and event of transmitting any infectious disease. Particular teaching should be given to the students of medical field who attempts to work on any procedures on the patients which includes using sharp medical tools.¹

Nosocomial infections are most every now and again happening diseases of the lower respiratory tract, urinary tract as well as, careful injuries. A study conducted by World Health Organization demonstrated that regularly happening infections in the units of intensive care as well as orthopaedic wards. Rate of infection is additionally high among people with expanded weakness because of mature age, hidden illness, or chemotherapy.²

In an official statement on 13th October'2005, World Health Organization expresses that "Preventable Hospitals Infections are a significant reason for mortality and morbidity for the patients" In Neuro surgical intensive care unit During August 2009, 8 patients were distinguished to have diseases and three meningitis. Satisfactory learning with respect to standard safety measures can lessen the mortality and morbidity rates.³

Assessments was made that up to 25% infections could be controlled by actualizing standard precautionary measures carried out by nurses while operating on patients undergoing surgery, reducing their financial weight just as emergency hospital expenses and upgrade personal satisfaction of the patients by the uses of information and suggested practices.⁴

Cross-Sectional research has been conducted among doctors and nurses giving care for patient in 4 hospitals of Hong Kong and the significant effect of hospital services related to infection along with hand hygiene. 46% of the doctors along with 60% of nurses recognized that approximately 75% health infections can be counteracted due to hand hygiene.⁵

A descriptive report was done on the data as well as knowledge of avoidance of clinic acquired infection among educated nurses in the wards and medical ward which hinder the results. The findings of this study uncovered that near about 98% of the respondents have nosocomial infections whereas 2% don't. Approximately 78% of the respondents follow avoidance of clinic acquired disease illnesses whereas 20% do not. Approximately 94% of the respondents communicated they've interferences to learn of avoidance of nosocomial infection. The individuals include terrible workplace among 26%, bad information regarding the preventive activity of nosocomial disease was 10%, water absence for washing hand along with other material properties 58%. This research work uncovers the surgical wards of the trained nurses know about the nosocomial infections' prevalence yet not whole training because of absence of supplies as well as a poor working environment.⁶

OBJECTIVES OF THE STUDY

- 1) To assess the level of knowledge regarding infection control among nursing students.
- 2) To assess the effectiveness of structured teaching programme among nursing students regarding infection control.
- 3) To determine the association between pre-test knowledge score of infection control with selected demographic variable

MATERIAL AND METHODS

Total 200 nursing students i.e. in experimental group were selected on the basis of exclusion and inclusion criteria of study by using a method of convenient sampling. Pre-test of

experimental group were done on different days to assess their knowledge regarding infection control among nursing students.

A structured teaching programme was given to the students under first group of experimental by the researcher after pre-test. The post-test has been performed on experimental group after a period of 7 days.

RESULTS

Analysis data is organized and presented in accordance to the study objectives as follows:

- Pretest and Posttest knowledge among students of nursing.
- Comparison of structured program teaching impact on the knowledge of infection control.
- Association of knowledge scores with chosen demographic variables.

Table 1: Pre-test and Post-test level of knowledge regarding infection control

Among nursing students, N=200

Level of Knowledge	Pre-Test		Post-Test	
	f	%	f	%
Poor knowledge (0-10)	61	30.5	0	0
Average knowledge(11-20)	80	40	22	11
Good knowledge (21-30)	49	24.5	98	49
Excellent knowledge (31-40)	10	5	80	40
Mean and SD	15.16±6.805		27.54±4.892	
Score Range	8-33		14-35	

Table 1 shows the pre and post-test knowledge level the students of nursing has about the practices of controlling infection, where the results shows that 5%(10) had excellent knowledge, 24.5%(49) had good knowledge, 30.5%(61) had poor knowledge, and 40%(80) had average knowledge, as calculated by the pre-test analysis with 33 as maximum score and 8 as minimum score and an average mean and SD was 15.16±6.805.

The knowledge level the students of nursing has regarding the practice of infection control as per the post-test analysis showed that majority 98(49%) had good knowledge was followed by 80 (40%) were with excellent knowledge and 22(11%) had average knowledge with 14 was minimum score and 35 as maximum score and an average mean and SD was 27.54 ± 4.892 .

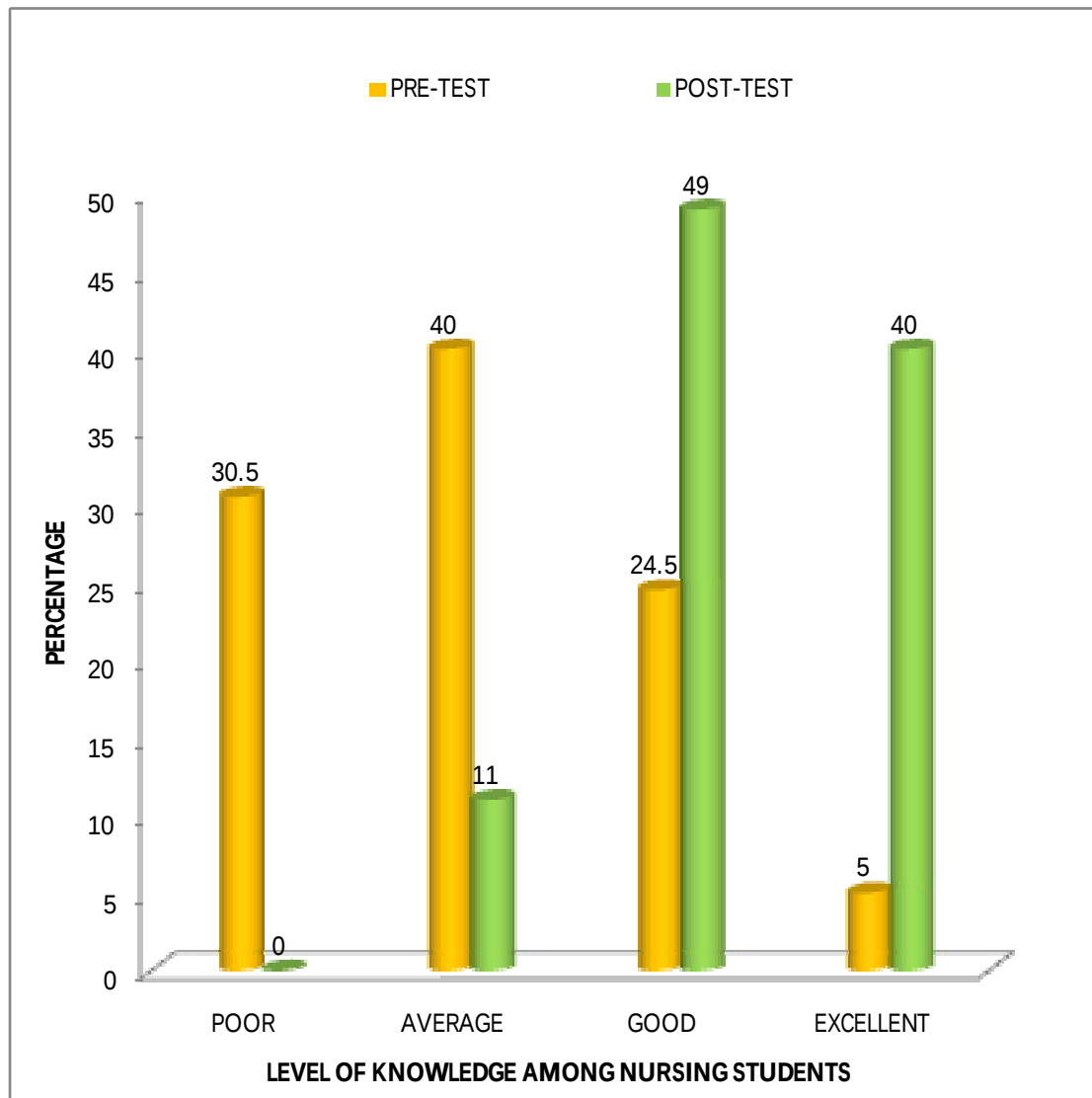


Fig 1: Pre-test and Post-test level of knowledge regarding infection control among nursing students

Table 2: Compare the pre-test and post-test level of knowledge regarding infection control among nursing students. N=200

Level of knowledge	Mean	SD	Mean D	't' value	df	'p' value
Pre-test	15.16	6.805	12.38	21.07	199	0.000*
Post-test	27.54	4.892				

P value – 0.01 level of significance.

Table 2 and fig 2 depicts a comparison of post and pre-test scores of knowledge about infection control in nursing students showed: The average mean and SD for pre-test is 15.16 ± 6.805 and for post-test it is 27.54 ± 4.892 . Difference in mean values in post and pre-test is 12.38 as tested using a paired t-test, which reveals that (t-value: 21.07 and p-value: 0.000). The result is highly significant and indicates that it was effective to use the program structured for teaching for improving nursing student's knowledge regarding infection control.

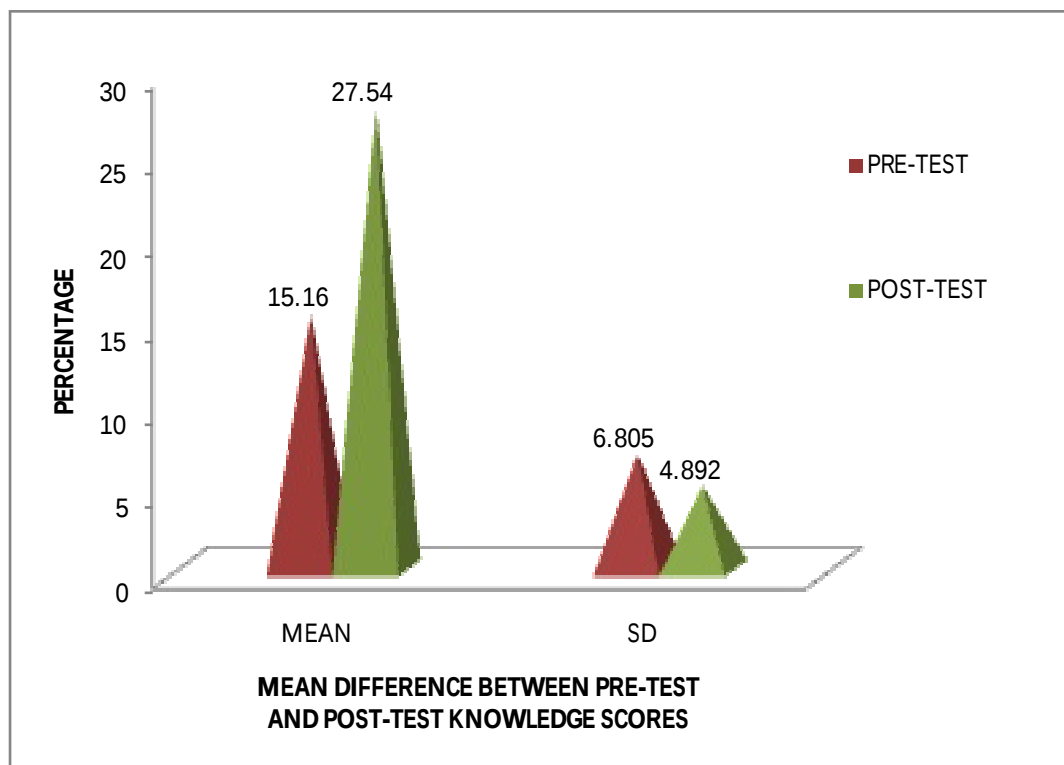


Fig 2: Mean and SD of pre-test and post-test level of knowledge scores regarding infection control among nursing students.

Table 3: Association between pre-test level of knowledge scores of nursing students with their selected demographic variables, N=200

S.No	Demographic Variable	Level of knowledge				chi square df p value
		Poor	Average	Good	Excellent	
1	Age in years					
	a. 17-19 years	44	44	30	6	18.33
	b. 20-22 years	16	24	17	2	9
	c. 23-2 years	0	9	0	2	0.031*
	d. 26-28 years	1	3	2	0	
2	Gender					1.742
	a. Male	5	9	7	2	3
	b. Female	56	71	42	8	0.628 NS
3	Religion					
	a. Hindu	14	16	10	2	3.260
	b. Sikh	42	58	36	7	9
	c. Christian	3	5	1	1	0.953 NS
	d. Muslim	2	1	2	0	
4	Course of study					
	a. B. Sc (N)	34	41	24	5	3.250
	b. Post B. Sc (N)	15	16	11	1	6
	c. GNM	12	23	14	4	0.776 NS
5	Area of residence					4.642
	a. Urban	43	46	31	4	3
	b. Rural	18	34	18	6	0.200 NS
6	Any family member in medical field					0.680
	a. Yes	10	10	7	2	3

	b. No	51	70	42	8	0.878 NS
7	In-service education attended	14	18	10	1	0.942
	a. Yes	47	62	39	9	0.815 NS
	b. No					
8	Source of information					
	a. Teaching faculty	35	52	28	4	9.572
	b. Hospital staff	17	19	11	3	9
	c. Books/Journals	4	5	6	3	0.386 NS
	d. Internet	5	4	4	0	

***p value – 0.05 level of significance NS-Non significance**

Table 3 demonstrates pre-test level scores of knowledge associated having demographic variable selected which was calculated with a chi-square test. The result reveals that age of the nursing students was found significant with pre-test level of knowledge at 0.05 significance level. The other demographic variables like region, gender, course of study, residence area, any family member in medical field, in-service education attended and source of information on infection control had not been found associated significantly with knowledge level from pre-test results regarding infection among nursing students.

DISCUSSION: This Study is supported with a similar findings in a quasi-experimental research conducted for assessing efficiency of an educational program for reducing ventilator-associated pneumonia in a tertiary care centre in Thailand.

CONCLUSION: Structured Teaching Programme was effective in the improvement of knowledge regarding infection control among nursing students.

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FINANCIAL DISCLOSURE

Not declared

CONFLICT OF INTEREST

None declared

REFERENCES

- 1 Tavoracci Marie-Pierre, Ladner Joël, Bailly Laurent, Merle Véronique, Pitrou Isabelle, Czernichow Pierre. Prevention of Nosocomial Infection and Standard Precautions: Knowledge and Source of Information Among Healthcare Students. *Infection Control and Hospital Epidemiology*. 2008;29(7):642–647. [[PubMed](#)]
- 2 Hospital acquired infection. [online] 2011 [cited on 2011 November]; Available from: URL.http://www.cdc.gov/ncidod/dhqp/nnis_pubs.html
- 3 Beghdadli, Belhadi, 2, Chabane, W,a and Ghomario (2008). Standard Precautions Among Nurses in a University Hospital in Western Algeria *Sante Publique* , (2005)
- 4 Sickder, H.K,Sae-Si, W,&Petpichetchian, W. (2014). Nurses Knowledge and Practise Regarding Prevention of Surgical Site Infection in Bangladesh
- 5 Tai JWM, Mok ESB, Ching PTY, Seto WH , Pittet D. Nurses and Physicians' Perception of the Importance and Impact of Healthcare-Associated Infections and HandHygiene: a Multi-Center Exploratory Study in Hong Kong . *Infection*;37(4) :320-333.
- 6 Agaral M, Thomas P. Prevalence of post op nosocomial infection in neuro surgical patients and associated risk factors-a prospective study .*NJI*. 2003sept; 107(3):625 - 620.