

A Study to Assess Effectiveness of Planned Teaching Programme on Knowledge Regarding Hand Washing among the Staff Nurses in Secondary Care Hospital, Karad

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Abstract: ***Objectives:** The objectives of this study were (1) to assess knowledge regarding hand washing among the staff nurses in secondary care hospital, Karad. (2) To find out association between socio variables and knowledge of hand washing. **Material & Methods:** used for the study is the evaluative approach with one group pre & post test design was used. Study was conducted on 30 subjects from Karad using convenient sampling technique. The data were collected by structured questionnaire. The data were analyzed using descriptive and inferential statistics. **Results:** The mean post test knowledge (12.70) of staff nurses was significantly higher than mean pre test knowledge of staff nurses (4.53) regarding hand washing ($p < 0.0001$). **Conclusion:** It was found that; planned teaching programme was effective in increasing the knowledge of staff nurses regarding hand washing.*

Keywords: Hand washing with soap, Hand hygiene, Staff nurses

1. Introduction

Hand washing for hand hygiene is the method of cleaning the hands with or without water or another liquid like sanitizer, or with the use of soap, for the purpose of removing soil, dirt, and/or microorganisms.¹

Infectious diseases affect the world y. 62% of all deaths in Africa and 31% of all deaths in SE Asia are caused by infections (Global Health Council, 2005). At the same time only 5% of all deaths in Europe are from infectious causes. Reducing these rates of infection and mortality is a priority for the global community. However, the two biggest killers of children, the diarrheal diseases and the Acute Respiratory Infections (ARI) remain neglected by a public health professionals engaged in combating HIV/AIDS, malaria and TB. A half of all child deaths each year are due to diarrhea and ARIs, both of which are transmitted from person to person during everyday interaction, through the air, through skin contact and through contamination of the environment¹. One of the most important ways of reducing these infections is hand washing with soap (HWWS). This is because hand washing can remove the agents of infection both at the time that they are emitted from the primary host and prevent those reaching secondary hosts. Current epidemiological evidence has HWWS is one of the best of all infection prevention methods. This simple thing is capable of preventing about 47% of child diarrhoeas and 23% of respiratory infections², which, between them, account for over 4-6m deaths of children under five around the world¹.

Germs are everywhere. Washing your hands is the easiest and simplest way to stop germs from spreading. Washing your hands at least five times a day minimizes your risk of capturing cold, flu and other infections.

Hand washing is an important hygienic habit to stay hale and hearty. It not only helps in stopping germs and bacteria, but also helps in maintaining a good healthy life free from diseases. Therefore, it is very important to indulge in the habit of washing our hands frequently. The knowledge and importance of washing hands would help you in staying free from germs and bacteria.

Practicing hand hygiene is a simple and effective way to prevent infections. Cleaning your hands can prevent the spread of germs, including those that are resistant to antibiotics and are becoming difficult, if not impossible, to treat. On average, healthcare providers clean their hands less than half of the times they should. On any given day, about one in 25 hospital patients has at least one healthcare-associated infection.

The proper hand hygiene is one of the important techniques to reduce nosocomial infections. The hand hygiene is deemed as the simplest method for control of nosocomial infections if it is done properly it may prevent from a lot of costs and deaths. Due to constant relationship with patients, nurses play supreme role in proper execution of hand hygiene among clinical employees. The current study was carried out in order to assess the knowledge of nurses regarding hand hygiene.

2. Materials and Methods

The evaluative approach was used; One Group pre test, post test design was used. Study was conducted on 30 subjects from Karad by using convenient sampling technique. Data were collected, tabulated and analyzed using SPSS version 20.0 with regard to objectives of the study using descriptive and Inferential Statistics.

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3. Results

Table 1: Frequency and Percentage distribution of socio demographic data

Sr. No.	Socio Demographic Variables	No.	%
1	Age groups		
	20-30 Years	22	73.3
	31-40 Years	4	13.3
	41-50 Years	3	10
	51-60 Years	1	3.3
2	Sex		
	Females	23	76.7
	Males	7	23.3
3	Education		
	Illiterate	2	6.7
	Primary Education	2	6.7
	Secondary Education	10	33.3
	Graduation	16	53.3
4	Occupation		
	Service	30	100

Table 2: Classifications of Staff Nurses in Secondary Care Hospital, Karad on Pre- Test Knowledge Level Regarding Hand Washing

Level of Knowledge	Score	Level of Respondents	
		Frequency	Percentage
Poor	0-5	19	63.3
Good	6-10	11	36.7
Excellent	11-15	0	0
Total		30	100

The table-2 shows the pre-test level of knowledge of staff nurses in secondary care hospital, Karad regarding hand washing. In the table it is noticeable that majority of staff nurses i.e., 19(63.3%) had poor level of knowledge about hand washing, whereas 11(36.7%) of staff nurses had good level of knowledge and none 0 (0%) staff nurses in secondary care hospital, Karad had excellent knowledge regarding hand washing before administration of planned teaching programme.

Table 3: Classifications of Staff Nurses in Secondary Care Hospital, Karad on Post – Test Knowledge Level Regarding Hand Washing

Level of Knowledge	Score	Level of Respondents	
		Frequency	Percentage
Poor	0-5	0	0
Good	6-10	2	6.7
Excellent	11-15	28	93.3
Total		30	100

The table-3 Shows, the post-test level of knowledge of staff nurses in secondary care hospital, Karad on hand washing , in which majority of staff h i.e., 28 (93.3%) had excellent level of knowledge about Hand washing whereas 2(6.7%) of staff nurses h had good level of knowledge and none 0(0%) staff nurses in secondary care hospital, Karad had poor knowledge regarding Hand washing after administration of planned teaching programme.

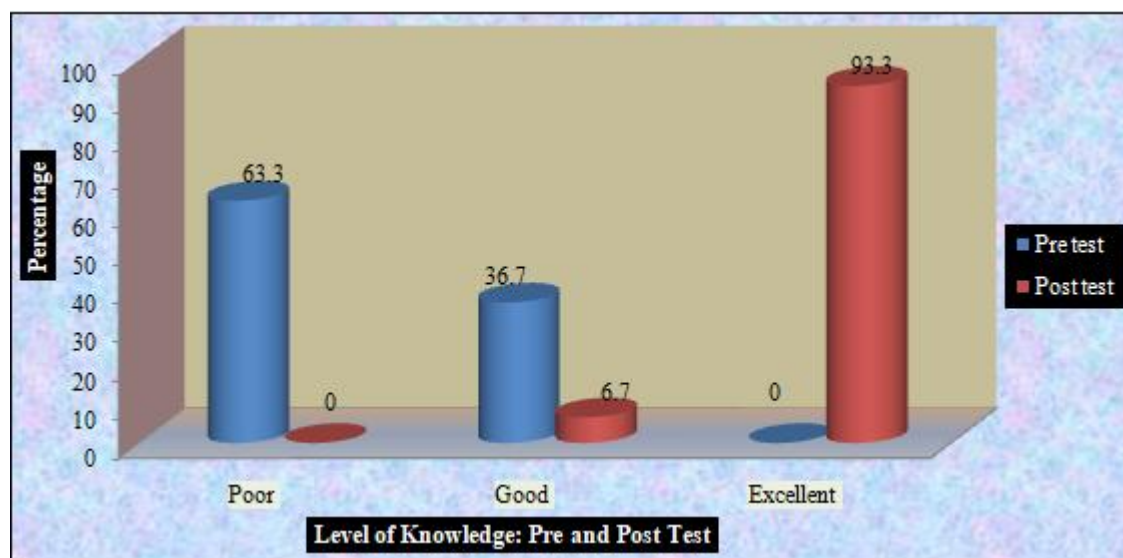


Figure 1: Simple bar diagram representing Mean% of the knowledge of staff nurses regarding Hand washing before and after administering the planned teaching programme.

Table 4: Comparison of Knowledge of Staff Nurses Regarding Hand Washing By Comparing Pre-Test with Post-Test

Level of knowledge	Score	Pre Test		Post Test	
		Frequency	%	Frequency	%
Poor	0-5	19	63.3	0	0
Good	6-10	11	36.7	2	6.7
Excellent	11-15	0	0	28	93.3
Total		30	100	30	100

The above table shows the comparison of pre test and post-test knowledge of staff nurses in secondary care hospital, Karad on hand washing. The pre-test table depicts that majority of staff nurses i.e., 19(63.3%) had poor level of knowledge about hand washing, whereas 11(36.7%) of staff nurses had good level of knowledge and none 0 (0%) staff nurses in secondary care hospital, Karad had Excellent knowledge regarding Hand washing before administration of planned teaching programme. The post-test table depicts that, majority of staff nurses i.e., 28 (93.3%) had excellent level of knowledge about hand washing whereas 2(6.7%) of staff nurses had good level of knowledge and none 0(0%)

staff nurses in secondary care hospital, Karad had poor planned teaching programme.
 knowledge about hand washing after administration of

Table 5: Determining the Knowledge of Staff Nurses Regarding Hand Washing

Pre test			Post test			Mean gain percentage	Paired t statistic	p- value
Mean	Mean Percentage	SD	Mean	Mean Percentage	SD			
4.53	30.22	2.19	12.7	84.67	1.8	54.45	19.79	<0.0001

The table 5 depicts the mean and standard deviation of knowledge score obtained before and after the administration of the planned teaching programme. The paired t test was used to test the hypothesis and highly significant difference in the level of knowledge between pre-

test and post-test by staff nurses in secondary care hospital, Karad regarding hand washing and mean post test knowledge (12.70) of staff nurses was significantly higher than mean pre test knowledge (4.53) of staff nurses regarding hand washing ($p < 0.0001$).

Table 6: Association between demographic variables and pre-test knowledge level of staff nurses in secondary care hospital, Karad on Hand washing

Karad On Hand washing									
Sr. No.	Socio Demographic Variables	No.	%	Knowledge: Pre Test				Chi Square statistic	P- value
				Poor		Good			
				F	%	F	%		
1	Age groups								
	20-30 Years	22	73.33	12	63.16	10	90.91	3.64	0.3, NS
	31-40 Years	4	13.33	4	21.05	0	0.00		
	41-50 Years	3	10.00	2	10.53	1	9.09		
	51-60 Years	1	3.33	1	5.26	0	0.00		
2	Sex								
	Females	23	76.67	13	68.42	10	90.91	1.97	0.16, NS
	Males	7	23.33	6	31.58	1	9.09		
3	Education								
	Illiterate	2	6.67	2	10.53	0	0.00	3.09	0.38, NS
	Primary Education	2	6.67	2	10.53	0	0.00		
	Secondary Education	10	33.33	5	26.32	5	45.45		
	Graduation	16	53.33	10	52.63	6	54.55		
4	Occupation								
	Service	30	100.00	19	100.00	11	100.00	Nil	Nil

N.S - Not significant S - Significant at $P < 0.05$ level

Table-6 shows the association of knowledge level of staff nurses in secondary care hospital, Karad regarding hand washing before administering the planned teaching programme with their selected demographical variables,

using Chi –square test. The analysis revealed that no significant association was found with any of the demographic variables of staff nurses.

Table 7: Association between demographic variables and post test knowledge level of staff nurses in secondary care hospital, Karad on Hand washing

Karad On Hand washing									
Sr. No.	Socio Demographic Variables	No.	%	Knowledge: Post Test				Chi Square statistic	P-value
				Good		Excellent			
				No.	%	No.	%		
1	Age groups								
	20-30 Years	22	73.33	2	100.00	20	71.43	0.78	0.85,NS
	31-40 Years	4	13.33	0	0.00	4	14.29		
	41-50 Years	3	10.00	0	0.00	3	10.71		
	51-60 Years	1	3.33	0	0.00	1	3.57		
2	Sex								
	Females	23	76.67	1	50.00	22	78.57	0.36	0.42, NS
	Males	7	23.33	1	50.00	6	21.43		
3	Education								
	Illiterate	2	6.67	1	50.00	1	3.57	6.89	0.07, NS
	Primary Education	2	6.67	0	0.00	2	7.14		
	Secondary Education	10	33.33	0	0.00	10	35.71		
	Graduation	16	53.33	1	50.00	15	53.57		
4	Occupation								
	Service	30	100.00	2	100.00	28	100.00	Nil	Nil

N.S- Not significant S- Significant at $P < 0.05$ level

Table-7 shows the association of knowledge level of staff nurses regarding hand washing after administering the

planned teaching programme with their selected demographical variables, using Chi –square test. The

analysis revealed that no significant association was found with any of the demographic variables of staff nurses.

4. Discussion

Many research studies have been conducted in National and International level to determine the level of knowledge among Staff Nurses regarding hand washing.

In the present study, findings suggests that 93.3% of nurses had excellent level of knowledge regarding hand washing as similar to the outcome of research conducted by Alireza Sharif (2015). The study showed that 74.5% had high level of knowledge. Therefore this study is quite similar to present study.

In the present study, findings suggest that post-test mean knowledge score of the Staff Nurses was 12.70 which is higher than pre-test mean knowledge score 4.53 regarding hand washing was homogeneous with the findings of study conducted by Purbia Vijay, VyasHimanshu, Kumar Sharma et.al.(2014) which concluded that post-test mean knowledge score of Staff Nurses was 21.53 which is higher than the pre-test mean knowledge score 13.51, therefore this study is consistent to present study.

In the present study Planned Teaching Program was effective in enhancing the level of knowledge regarding hand washing among Staff Nurses. These findings are very similar with finding of study carried out by Suchitra JB, Devi N Lakshmi(2007) which concluded that the education has a positive impact on retention of knowledge of Staff Nurses regarding prevention of Nosocomial Infection.

5. Conclusion

From the data analysis and findings of the present study, it is concluded that there was significant difference between the pre-test knowledge level and post-test knowledge level of staff nurses in secondary care hospital, Karad regarding hand washing. The mean knowledge score of 30 staff nurses in secondary care hospital, Karad during the pre-test was 30.22% where as it had raised up to 84.67% during the post-test as an effectiveness of planned teaching programme. Therefore the difference assessed was 54.45% between pre-test and post-test. Hence health education programs and on-going teaching both can further improve the knowledge of staff nurses.

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