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A Study To Assess the Effectiveness of Structured Teaching Programme on Knowledge and Practice Regarding Hand Washing among Students of Selected School of Gopeshwar, Chamoli

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Abstract: ***A study to assess the effectiveness of structured teaching program on knowledge and practice regarding hand washing among students of selected school of Gopeshwar, Chamoli. The conceptual framework used in this study was based on king's goal attainment theory. The study sample of 70 school students was selected conveniently after meeting the inclusion and exclusion criteria. The self developed structured questionnaire and checklist was used to assess the knowledge and practice regarding hand washing. The result of the study shows that level of knowledge, in pretest revealed that 3 (4.3%) were having good knowledge, 55 (78.57%) of them were having average knowledge and 12 (17.14%) of them were had poor knowledge whereas level of knowledge in post test revealed that 26 (37.14%) were having good knowledge, 44 (62.86%) of them were having average knowledge and no one of them were had poor knowledge, and the result of hand washing practice shows that the hand washing practice in pretest revealed that no one were having good practice, 13 (18.57%) of them were having average practice and 57 (81.42%) of them were had poor practice whereas hand washing practice in post test revealed that 42 (60%) were having good practice, 25 (35.72%) of them were having average practice and 03 (4.28%) of them were had poor practice and the association of knowledge with their demographic variable age, father education and family income is significant whereas association of practice with their demographic variable age and family income is significant. The difference between pre test and post test knowledge and practice is significant.***

Keywords: conceptual framework, structured questionnaire, theory, knowledge, checklist, demographic variables

1. Introduction

Social hand hygiene –routine hand washing. The aim of social (routine) hand washing with soap and warm water is to remove dirt and organic material, dead skin and most transient organisms. On visibly clean hands it can be undertaken using an alcohol hand rub, and this will remove transient organisms. Hand washing with soap consistently at critical moments during the day prevents the spread of diseases like diarrhea and cholera which are transmitted through fecal - oral routes. People can become infected with respiratory diseases such as influenza or the common cold, for example, if they do not wash their hands before touching their eyes, nose, or mouth. Hand washing is the most effective way of prevention of spread of infection. Hand hygiene is important element of patient safety for the prevention of health care associated infection HAI. In recent year many parts of the world have seen major improvements in hand hygiene. The facilities are increases like occurs to clean water, presence of sink or towels, enough awareness of hand washing practice. If hand washing practice is not repeatedly done so the hand sanitizers are most effective way against bacterial infection.

1.1 Need of the Study

Keeping hands clean is one of the most important steps we can take to avoid getting sick and spreading germs to others. Many diseases and conditions are spread by not washing hands with soap and clean, running water. Handwashing with soap removes germs from hands. This helps prevent infections. People frequently touch their eyes, nose, and mouth without even realizing it. Germs can get into the body through the eyes, nose and mouth and make us sick. Germs from unwashed hands can get into foods and drinks while people prepare or consume them. Germs can multiply in some types of foods or drinks, under certain conditions, and make people sick. Germs from unwashed hands can be transferred to other objects, like handrails, table tops, or toys, and then transferred to another person's hands. Removing germs through handwashing therefore helps prevent diarrhea and respiratory infections and may even help prevent skin and eye infections. Teaching people about handwashing helps them and their communities stay healthy. Handwashing education in the community: Reduces the number of people who get sick with diarrhea by 23 - 40%, Reduces diarrheal illness in people with weakened immune systems by 58% ' Reduces respiratory illnesses, like colds, in the general population by 16 - 21% Reduces absenteeism due to gastrointestinal illness in schoolchildren by 29 - 57%.

Preventing sickness reduces the amount of antibiotics people use and the likelihood that antibiotic resistance will develop. Handwashing can prevent about 30% of diarrhea - related sicknesses and about 20% of respiratory infections (e. g., colds). Antibiotics often are prescribed unnecessarily for these health issues. Reducing the number of these infections by washing hands frequently helps prevent the overuse of antibiotics—the single most important factor leading to antibiotic resistance around the world. Handwashing can also prevent people from getting sick with germs that are already resistant to antibiotics and that can be difficult to treat.

1.2 Objective

- To assess the pre test knowledge level and practice regarding hand washing among students.
- To administer the structured teaching programme regarding hand washing among students.
- To assess the post test knowledge and practice regarding hand washing among students.
- To assess the effectiveness of structured teaching programme regarding regarding hand washing among students.
- To find out the association of pre test knowledge score and practice score among their selected demographic variables.

1.3 Hypothesis

- **H1 -** There will be significant difference between pre test and post test knowledge of hand washing among school students.
- **H2** - There will be significant difference between pre test and post test practice of hand washing among school students
- **H3 -** There will be significant association between pre test knowledge score and practice score among students with their selected demographic variables.

1.4 Operational Definition

- **Assess** - In this study it refers to judge or decide the quality of hand washing.
- **Effectiveness** - In this study it refers to the capability to produce a desire result
- **Handwashing**: Hand washing is the practice of washing ones hand using antiseptic agents such as alcohol, chlorohexidine for the inhibiting the growth of microorganisms and preventing from cross infection.
- **Knowledge:** Understanding of Information about hand hygiene and awareness regarding infection control.
- **Practice**: Methods and skills of performing hand hygiene.
- **Student:** Someone who is learning at a school.

1.5 Conceptual Framework

For this study conceptual framework was used based on king's Goal attainment theory.

2. Review of Literature

Review of literature is categorized on the basis of -:

- Knowledge, practice and attitude
- Behavior and awareness
- Structured teaching program.

Review of literature based on knowledge, practice and attitude -:

In 2016, A cross sectional descriptive study was conducted among randomly selected primary school children of municipal cooperation school in Mumbai, India.2283 students were interviewed using structure interview schedule regarding socio demographic characteristic, history of illness and hand washing knowledge and practice the result of the analysis showed that more than half (54%) reported a history of illness in the part one month art of which 81.4% reported absenteeism due to illness around 34% children were unaware about health related consequences of not washing hands. Only 18% mentioned after toilet used of the 2283 students about (0.7%) reportedly practiced five step of hand washing only 1% for step of hand washing forget fullness was seen as the primary reason for nursing washing hand before eating food (88%) and after toilet use 84%. The study concluded that knowledge regarding hand washing was inadequate while practices were not up to recommended standard. This suggests that both behavior changes education and infrastructure improvement are equally important to improve hand washing practice in long time.

Review of literature based on the basis of behaviour and awareness

In 2014, a cross sectional study was conducted to assess the hand hygiene behavior among urban slum children and their caretakers in Oddisha, India.150 women, in 80 children were interviewed, children questionnaire were prepared to suit to their age and according to local context. The result of analysis showed that hand washing before preparing food is practiced by 85% of women.77% wash hands before serving food. out of total children interviewed 76% told that their teachers tell about sanitation and hand washing.17.5% told that they used soap for hand washing. When asked about critical time of hand washing 44 children told about at least 2 and 56% were unaware about critical time of hand washing. It concluded that inadequate knowledge on this among our study participant is a point of concern systematic integration of health and hygiene education in school through curricular modification could be an appropriate strategy**.**

Review of literature on the basis of structured teaching programme

In 2018, a study was conducted to evaluate the effectiveness of structured teaching program in terms of knowledge regarding hand washing technique among school going children in selected school of Barura Ambala. Structured questionnaire were used to collect the data. The result of the analysis showed that the mean post test score (11.27) was significantly higher than mean pretest score (7.9). The study concluded that the structured teaching program was found effective in increasing knowledge of school going children regarding hand washing practice.

3. Methodology

3.1 Research approach

In view of the nature of the problem under study and to accomplish the objectives of the study, quantitative approach was found to be appropriate.

3.2 Research Design

Pre experimental one group pre test post test Design was used for this study.

3.3 Sample Size and Technique

Total 70 students who studied in class 6th, 7th, 8th, 9th were the samples for this study they are selected by non - probability convenient sampling technique.

3.4 Method of data collection

Self developed structured Questionnaire and checklist was selected as the suitable method to collect data based on the study objectives.

4. Data Analysis

The data was analyzed by descriptive and inferential statistics.

4.1Results

Data was collected from 70 subjects by using self - structured questionnaire and checklist method. On the basis of the objective the data was presented in the following sections:

Section - A

Distribution of Subjects according to their Demographic

Table 1.1 (N=70)

Socio demographic variables	Frequency	Percentage (%)
Age (years)		
Nov-13	21	30%
13 - 15	40	57.14%
15 - 17	9	12.86%
Class		
6th	13	18.57%
7th	9	12.85%
8th	19	27.14%
9th	29	41.44%
Father education		
Illiterate	12	17.14%
Primary	13	18.57%
High school	19	27.14%
Intermediate	14	20%
Graduate	12	17.14%
Mother education		
Illiterate	21	30%
Primary	14	20%
High school	18	25.70%
Intermediate	12	17.10%
Graduate	5	17.14%
Family income		
<5000	13	18.57%
5000 - 10, 000	17	24.28%
10, 000 - 15, 000	14	20%
15, 000 - 20, 000	8	11.42%
>20, 000	18	25.71%

Section - B

Table 1.2: Association of Knowledge with Demographic Variables

Table 1.2 (N=70)

S. No	Demographic variables	Poor	Average	Good	Df	X^2	Tabulated value	Inference
1	**Age**							
	11-13	8	13	0	4	232.24	9.49	*Significant
	13 - 15	3	35	2				
	15 - 17	4	5	0				
2	**Education level**							
	Class VI	6	7	0	6	12.33	12.59	Not significant
	Class VII	2	7	0				
	Class VIII	2	17	0				
	Class IX	4	23	2				
3	**Education level of father**							
	Illiterate	6	6	0	8	67.16	15.51	*Significant
	Primary education	4	9	0				
	High School	6	13	0				
	intermediate	1	12	1				
	graduate	0	11	1				
4	**Education level of mother**							
	Illiterate	10	11	0	8	10.84	15.51	Not significant
	Primary education	3	10	1				
	High school	2	16	0				
	intermediate	2	9	1				
	Graduate	0	5	0				
5	**Family income**							
	<5, 000	4	9	0	8	30.27	15.51	* Significant
	5, 000 - 10, 000	2	15	0				
	10, 000 - 15, 000	2	12	0				
	15, 000 - 20, 000	2	6	0				
	>20, 000	5	11	2				

*Level of significance = 0.05 (p>0.05)

Table 1.3: Association of Practice with Demographic Variables

Table 1.3 (N=70)

S. No	Demographic variables	Poor	average	good	Df	X^2	Tabulated value	Inference
1	Age							
	11-13	16	5	0	4	1.39	9.49	*significant
	13 - 15	34	6	0				
	15 - 17	7	2	0				
2	Education level							
	Class VI	11	2	0	6	5.12	12.59	Not significant
	Class VII	7	2	0				
	Class VIII	13	6	0				
	Class IX	26	3	0				
3	Education level of father							
	Illiterate	16	5	0	8	5.89	15.51	Not Significant
	Primary education	12	2	0				
	highschool	16	2	0				
	intermediate	11	1	0				
	graduate	3	2	0				
4	Education level of mother							
	Illiterate	9	3	0	8	8.39	15.51	Not significant
	Primary education	10	3	0				
	highschool	17	2	0				
	intermediate	14	0	0				
	Graduate	6	6	0				
5	Family income							
	<5, 000	9	4	0	8	4.65	15.51	*significant
	5, 000 - 10, 000	14	3	0				
	10, 000 - 15, 000	9	5	0				
	15, 000 - 20, 000	7	1	0				
	>20, 000	16	2	0				

Section F

Table 1.4 Difference between pre test and post test level of Knowledge of student regarding hand washing

Table 1.4 (N=70)

Mean		Standard deviation (S. D.)		Standard Error (S. E.)	Z test
Mean1	23.12	S. D.1	4.36		
Mean2	28.17	S. D.2	3.71009	0.4682	10.785

Level of significance = 0.05 (p=2)

Result: Z value is greater then tabulated value. Therefore the result is significant and their is significant difference between pre test and post test knowledge.

Table no: 1.5 Difference between pre test and posttest practice of student regarding hand washing.

Table 1.5 (N=70)

Mean		Standard deviation (S. D.)		Standard Error (S. E.)	Z test
Mean1	6.4285	S. D.1	1.4994		
Mean2	10.4142	S. D.2	2.09015	0.094527	42.1646

Level of significance = 0.05 (p=2)

Result: Z value is greater then tabulated value. Therefore the result is significant and their is significant difference between pre test and post test practice.

5. Conclusion

It can be concluded that most of the 11 - 16 years age children were from the age group of 13 - 15 year. Majority of students were from class 9th. Most of them belong to group earning more than Rs.20, 000. Majority of the 11 - 16 year age students fathers education were upto high school and Most of them were having housewife mother. Majority of the 11 - 16 years age children mothers education were also upto high school. It is concluded that post test knowledge as well as practice of students was better than pre test. Majority of students of 8^{th} and 9^{th} class having good level of knowledge whereas the 7^{th} class students having good hand washing practice. Students whose father have study upto high school have good level of knowledge whereas the students whose father education level is upto intermediate have good hand washing practice, and students whose mothers are graduated have good hand washing practice. Students whose family income is less than 5000 have good level of knowledge and practice regarding hand washing.

6. Recommendation

- Similar study can be undertaken for large samples to generalize the findings.
- The comparative study can be carried out to assess the level of knowledge and practice regarding hand washing among 11 - 16 years age children
- Similar study can be undertaken in the community

settings.

- A comparative study can be undertaken to assess the level of knowledge of 11 - 16 years age children among different age groups.
- A comparative study can be undertaken to assess the level of knowledge of 11 - 16 years age students among different class groups.

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