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ORIGINAL RESEARCH ARTICLE

Effectiveness of Health Education On Knowledge Regarding Personal Hygiene Among School Children in Rural Field Practice Area of Medical College

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Abstract:

Background: Personal hygiene is maintaining the cleanliness of the body. Young school children should be thought about personal hygiene which have an impact on their health. We intend to find the effectiveness of health education on the knowledge among the children regarding personal hygiene in rural field practice area of Medical College. **Methodology:** Study setting: Rural field practice area of Medical College, Bangalore. Study design: Interventional study. Study population: School children of primary and high school children: Study period: June 2015 - September 2015. Sampling Technique: Random selection of the school. Study participants: Govt primary and high school children and hence the complete enumeration was done for this study (N= 389). Study variables: Socio- demographic profile, questionnaire on knowledge regarding personal hygiene. Data collection: Self-administered questionnaire, after the questionnaire was collected, intervention was done i.e.; health education. Data analysis: Data collected was compiled in M S Excel worksheet and was analysed using SPSS V 20. Paired 't' test and Mcnemar test was used to see the association between pre and post-test variables. **Results:** Before intervention 19.8% had poor knowledge scoring, 26.7% had average knowledge scoring and 53.5% had good knowledge scoring while in the post intervention phase, poor scoring was 5.4%, average scoring (29.5%) and good scoring (65%). Tooth brushing twice a day, hand washing before eating, cleaning of ears, nail biting, socks cleaning, eating in a clean place, washing after playing had a significant increase in knowledge after intervention. **Conclusion:** It can be concluded from this study that knowledge regarding personal hygiene have improved among the school children after health education intervention program. The increase in knowledge was statistically significant.

Key Words: *Personal Hygiene, Intervention, Health Education, Pre –test and Post -test*

INTRODUCTION

Hygiene refers to practices that help to maintain health and prevent the spread of diseases. School children are particularly vulnerable to neglect the basis of personal hygiene which have a consequence in terms of morbidity and mortality. Poor knowledge, lack of awareness and practices on personal hygiene such as hand washing plays a major role in high incidence of communicable diseases. Majority of the health problems affecting school children can be prevented by promotion of health through health education.

Health Education is concerned with changes in knowledge, attitude and behaviour of people. It is one of the essential element in Primary Health Care [(1)]

In year 2004, the Government of India has started a Total Sanitation Campaign (TSC) to ensure School Sanitation and Hygiene Education (SSHE) which emphasizes skill based child to child hygiene education for behaviour change among school going children [(2).]

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Need for the study: School – based health programmes are widely used to improve the health of school children in developed countries. Health education programs have reported to have a significant reduction in the prevalence of communicable diseases. However, little effort has been made in the developing countries to provide the preventive and promotive school health programmes in rural areas. [3]

Limited studies have been carried out in our field practice area. Hence an effort was made to know the effectiveness of need- based Health Education Program on the knowledge regarding personal hygiene among the school children in rural area with the following objectives.

1. To assess the knowledge of school children regarding personal hygiene
2. To know the effectiveness of Health Education program on personal hygiene among school children.

METHODOLOGY

An interventional study was conducted in rural field practice area of Rajarajeswari Medical College and Hospital, Bangalore. The study period was from June 2015 - September 2015. The rural field practice area is Primary Health Centre, Ittamadu, Ramanagara District, catering its Minimum Needs Services to population of 10,600. It has three subcenters (Torredoddi, Banandur and Hegedegare). Each subcenter has one government school. One school was randomly selected by lottery method and hence school in Banandur subcenter was selected which has total strength of 397. The school has class from first standard to tenth standard. There were an average of 30-35 students enrolled per grade. The students who were absent on the specific day of the study were excluded. On the day of pre-test eight students were absent and thus, after excluding eight absentees, a total of 389 students were finally included in the study.

Ethical clearance was obtained from the Institutional Ethics Committee. The selected school authority was met and explained the purpose of the study. Permission was obtained and fixed the date to conduct the study. Semi–structured, validated questionnaire which had 15 questions was drawn in English, later translated to Kannada was used to assess the level of their knowledge. The study variables were Socio- demographic profile, questionnaire on knowledge regarding personal hygiene. The questionnaire covered the following indicators of personal hygiene, i.e. combing hair, brushing teeth, washing mouth after eating, washing hands before eating, washing hands after visiting toilet, trimming nails, taking bath daily, wearing shoes and wearing clean clothes. Each week, two grades were covered. During pre –intervention study rapport was built with the students and informed verbal consent was obtained from them. The questionnaires was distributed to the students and were asked to tick any one appropriate answer to the given questions and were supervised to see that they do not discuss with their friends. The students were given a brief introduction of the survey and the method of giving the responses. Since the target population had children in the age group of four to seven years, the questionnaires were administered by the investigators, as against self-administered method which is recommended for the older children. All questions were answered by all the respondents. There were no blank responses. After the questionnaire was collected, intervention was done i.e.; health education was given to students regarding personal hygiene on the same day for forty-five minutes by method of lecture using flip chart, power point presentations, videos regarding personal hygiene. It included the variables that was covered in the questionnaire, importance in maintaining personal hygiene and disease prevention.

After one-month duration we again visited the school to do post- test data collection. Same questionnaire was distributed to all those students who were present for pre-test.

Data analysis: Data collected was compiled in M S Excel worksheet and was analyzed using SPSS V 21. Paired 't' test and Mcnemar test was used to see the association between pre and post-test variables. To assess the level of knowledge, scoring was done. For every right answer, the score was '1' and for the wrong answer the score was '0'. Grades allocated was Poor :0-5 answers were correct, Average: 6-10 answers were correct and Good: 11-15 answers were correct.

Table 1: Distribution of study participants according to their age and gender

Age (Completed years)	Boys (%)	Girls (%)	Total
6-8	44 (61.1)	28 (38.9)	72 (18.5)
9-11	83(42.3)	113(57.7)	196(50.4)
12- 14	58 (47.9)	63 (52.1)	121 (31.1)
Total	185 (47.6)	204 (52.4)	389 (100)

Table 2: Knowledge scores among study participants before and after health education intervention.

Category of students	Before intervention (%)	After intervention (%)
Poor score (0-5)	77 (19.8)	21 (5.4)
Average score (6-10)	104 (26.7)	115 (29.5)
Good score (11-15)	208 (53.5)	253 (65.0)
Total	389	389
Mean Score	60.44	79.18
Standard Deviation	53.5	57.4
Standard error of mean	26.75	28.72
Paired t –test: t =1.6; p value = 0.2037, Not significant		

Table 3: Mean knowledge scores before and after health education

Boys	N	Mean	SD	t- test	p
Before	185	10.24	1.68	74.4	0.0001
After		12.03	1.43	114.21	
Girls	204	Mean	SD	t- test	p
Before		10.06	1.81	63.4	0.0001
After		13.20	1.22	131.0	

RESULTS

Among 389 study participants, 204 (52.4%) of them were girls and 185 (47.6%) were boys. Majority of the study participants were in the age group of 9-11years (50.4%) (Table 1)

It was observed from Table 2 that before intervention 19.8% of the study participants had poor knowledge scoring, 26.7% had average knowledge scoring and 53.5% had good knowledge scoring. In the post intervention phase, 5.4% had poor knowledge scoring, average knowledge scoring (29.5%) and good knowledge scoring (65%). The observed difference was not statistically significant.

The mean knowledge score of personal hygiene before intervention among males was 10.2 ±1.68 which increased to 12.03 ± 1.43 after health education intervention, which was statistically significant at paired t- test, $p<0.0001$. Similarly, the mean knowledge score of personal hygiene before intervention among females was 10.06 ±1.81 which increased to 13.20 ± 1.22 after health education intervention, which was statistically significant at paired t- test, $p<0.0001$(Table 3)

Table 4 demonstrated that tooth brushing twice a day, hand washing before eating, cleaning of ears, nail biting, socks cleaning, eating in a clean place, washing after playing had an significant increase after intervention.

DISCUSSION

Among 389 study subjects, 50.4% of them were in the age group of 9-11years, majority were girls (57.7%).

It was observed that before health education intervention, the proportion of students with good scoring in knowledge domain were 53.5%, but after intervention the proportion increased to 65%. Anindya Mukherjee [4] et.al in their study quoted that the students scored highest in knowledge domain.

The mean knowledge score was more among the boys before health education intervention, but was more among the girls after health education intervention. The observed difference was found to be statistically significant at

Table 4: Knowledge regarding personal hygiene among the students before and after health education intervention program.

Knowledge indicators	Before Intervention (%)	After Intervention (%)	Mc Nemars X^2 test	p-value
Personal hygiene is body cleansing	171 (43.9)	223 (57.3)	6.8	0.008
Daily bathing and change of clothes	209 (53.7)	261(67.1)	5.7	0.01
Tooth brushing twice a day	204 (52.4)	310 (79.6)	3.6	0.05*
Hand washing before eating	310 (79.6)	376(96.6)	21.8	0.0000*
Hand washing using soap and water after using toilet	301 (77.3)	366 (94.1)	6.3	0.011
Use of foot wear	296 (76.1)	323 (83)	6.3	0.011
Use of hand kerchief while coughing and sneezing	175 (44.9)	208 (53.4)	1.1	0.27
Combing of hairs	226 (58.1)	283 (72.7)	2.8	0.09
Trimming of nails	266 (68.3)	371(95.3)	6.3	0.01
Cleaning of ears and eyes	153 (39.3)	305 (78.4)	17.3	0.0000*
Nail biting	212 (54.4)	317 (81.4)	50.4	0.0000*
Washing socks daily	227 (58.3)	343 (88.1)	20.8	0.0000*
Eating in clean place	211 (54.2)	368 (94.6)	23.6	0.0000*
Washing of hands, legs and face after playing	303 (77.8)	352 (90.4)	42.5	0.0000*

*statistically significant

$p<0.0001$. Similar observations were reported by Sarkar M [5]. It was found in their study that 28 (65.12%) male and 50 (81.97%) female students obtained good scores. The average score obtained by the female students was significantly higher than that of the male students ($p < 0.05$).

In the present study the proportion of students having knowledge regarding having bath daily, tooth brushing, hand washing, trimming of nails eating in clean place improved significantly after health education intervention. Meena Siwach[6] and Ashutosh Shresta[7] showed that health education has an impact and scores of children after post testing improved significantly. The Author acknowledges the limitations of this study and implications for future improvement. First, the sample size was small. Second, the nutritional status and morbidity conditions of the children was not studied, which might be related to the state of personal hygiene. These aspects need to be taken care of in future. The findings of this study cannot be generalised to entire rural area as the study was conducted in one selected school.

CONCLUSION

The knowledge on personal hygiene and its indicators significantly increased after health education intervention. The mean knowledge scores was more among the female students than the male students after health education intervention. The study suggests that there should be continuous health education program in schools at regular interval which can get maximum benefits with the involvement of teachers and parents.

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