

Effectiveness of Educational Intervention in Improving Personal Hygiene among Urban Primary School Children – A KAP Study

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Abstract

Hygiene practices in early childhood education are very essential. In developing countries there is an increased burden of communicable diseases among children due to poor personal hygiene. Our study aimed to assess the effectiveness of intervention in improving the knowledge, attitude and practice on personal hygiene among urban primary school children. This prospective interventional study was conducted amongst 2 government and 2 private schools in Bengaluru. The schools were selected using multistage random sampling method. At 95% confidence interval (CI) sample size was 357. The students belonging to the classes 3rd, 4th, 5th and 6th were interviewed for both pre-test and post-test using a structured questionnaire. The questionnaire was validated using Cronbach's alpha and the score was 0.71. Respondents were assessed for their initial knowledge, attitude and practice towards personal hygiene in pre-test, followed by a planned teaching program. Post-test was administered to the same population after a period of one month. Descriptive statistics and paired sample T-test were applied to find the correlation within the groups. Based on gender distribution the boys in government and private schools were 43.37% and 53% whereas girls were 56.63% and 47% respectively. The post scores for government and private schools were found to be 98.5% and 94.6% for knowledge, 84.3% and 85.2% for attitude, 97.75% and 97.8% for practice. Our study demonstrated significant improvements in the knowledge, attitude and practice from the baseline. In future we recommend periodic awareness regarding personal hygiene in communities to reduce the prevalence of communicable diseases.

Keywords: *Personal Hygiene, Children, KAP*

1. INTRODUCTION

World health organization (WHO) defines hygiene as the circumstances and practices that help to encourage, sustain health and prevent the spread of diseases. According to the Centers of Disease Control and Prevention, health of the children and youth can be preserved if the spread of germs in the schools and colleges is prevented¹. In developing countries, lack of personal hygiene and unhygienic living conditions favor person-to-person transmission of infection and seem to be an important factor

for higher incidence of skin diseases, respiratory diseases, worm infestations, diarrheal diseases and dental diseases. These morbidities are found to be higher and more severe among children than adults². Personal hygiene serves two main objectives: First; it keeps the person healthy and prevents catching or spreading the diseases. Second; it helps in keeping good mentality, by feeling good in concern to self and body³. The practice of hygiene is mainly prejudiced by social, familial and individual factors as well as

the children's knowledge and attitudes towards hygiene⁴. Good hand washing practices have also been shown to reduce the incidence of other diseases, notably pneumonia, trachoma, scabies, skin and eye infections, and diarrheal-related diseases such as cholera and dysentery. Hand washing with soap can significantly reduce the incidence of diarrhoea, the second leading cause of death amongst children under five years old worldwide. Regular hand washing, especially and particularly before commencing and after completion of certain activities, is one of the best possible ways to remove the germs, avoid becoming sick, and prevent spread of germs to the others around. In India, the rate of infectious disease is known to be high among children with a poor socioeconomic status and in regions with poor hygiene conditions. On the other hand, the parasitic diseases, throat infections and tooth decay in school-aged children have been suggested to be associated with the inadequate personal hygiene measures. A great deal of research tells us that schools can have a major outcome on children's health by teaching about health and promoting healthy and well behaviors. Poor knowledge, attitude and practice to personal hygiene such as hand washing play major role in the high incidence of communicable diseases and therefore has negative consequences for a child's long term overall development⁵. The Health education being taught to primary school pupils may improve their personal hygiene and overall wellbeing of these children⁶. Good personal hygiene now forms part of primary health prevention strategy, this has been found to be effective by reducing morbidity and mortality in children^{6,7}.

KNOWLEDGE, ATTITUDE AND PRACTICE

WHO defines Knowledge, Attitude and Practices (KAP), a survey which is a quantitative method (predefined questions formatted in

standardized questionnaires) that provides access to quantitative and qualitative information. KAP surveys reveal misconceptions or misunderstandings that may represent obstacles to the activities which are likely to be performed.

2. METHODS AND METHODOLOGY

Study Site

The study was conducted in 4 primary schools in Mathikere, Bengaluru, and Karnataka.

Sample Size

357 students were involved in the study, including both boys and girls.

Study Design

An Observational interventional study was conducted where a pre and post assessment was done. Pre-test and post-test was used to determine the knowledge, attitude and practices of hygiene among primary school students in some selected schools of Mathikere, Bengaluru. The targeted population was primary school students.

Study Duration

The study was carried out for a period of 4 months from January 2018 - April 2018.

List of Schools

1. Gopal Ramnarayan Government Primary School
2. Shri Venkateshwara Government Primary School
3. New Carmel English School
4. Ramaiah Vidyaniketan School

Inclusion Criteria for Students

1. Both male and female students.
2. Able to understand and read English or Kannada language.

3. Willing to participate in the study.
4. Not undertaken any teaching session on hygiene importance in last 4 months period.

Exclusion Criteria for Students

1. Students who were absent during data collection.
2. Students who were sick during data collection.

Study Tool: A validated semi-structured questionnaire was used. The questionnaire contained questions on-

1. Hygiene related knowledge
2. Attitude related to hygiene
3. Practice regarding hygiene

Knowledge, attitude and practice (KAP) of the subjects was assessed using a 30 item self-structured questionnaire with Cronbach's alpha score of 0.71. KAP of the Subjects were assessed on a three-point Likert scale from low (-1) to high (2). Post assessment, education regarding hygiene, the importance of it through the direct conversation and by displaying placards and videos. A 1 month gap was provided after which the questionnaire was re-administered to analyse the response shift of their understanding from pre to post educational program. Data collected were analysed using descriptive statistics, t test using SPSS version 20.

Preparation of Questionnaire

The questionnaire was developed with the guidance from Dr. E. Maheswari. There are 3 parts in the questionnaire;

Part A: Knowledge based questions (7),

Part B: Attitude based questions (5),

Part C: Practice based questions (18)

Both Pre and post questionnaire has multiple-choice questions and participants answered the

questions by choosing the most relevant answers. Permission was obtained from the private school and government schools to conduct the study.

The major objective of this study was to promote knowledge about importance of hygiene. A total of 15 minutes was given to complete the three parts of questionnaire during the pre-test and post-test data collection. Following the presentation of power point slides on hygiene, the same sets of questionnaires were distributed to the same sample as post-test data collection after 2 weeks.

Validation of Questionnaire: The questionnaire was validated by Dr. E. Maheshwari HOD, Pharmacy practice and Dr. Pushpanjali, Academic registrar, Ramaiah University of Applied Sciences.

Data Collection: Official permission to conduct the study among primary school students was obtained from the principals of respective schools. After obtaining the informed consent from the students, the semi-structured questionnaire was administered to them.

Outcome Variables: Responses regarding knowledge of hygiene, attitude towards hygiene and practice followed by the students on everyday manner.

Analysis: The data was entered in MS Excel and were analyzed using SPSS version 20. Appropriate descriptive and inferential statistics were used to analyze the data $p < 0.05$ was considered statistically significant.

3. RESULTS

A total of 357 primary school children aging from 7 to 14 years were included in this study of which females were 178 (49.85%) and males were 179 (50.14%). This questionnaire study was divided into two segments. First segment was comprised of demographic details. Second component of the

questionnaire was aimed to understand knowledge, attitude and practice of the students.

Table 1. Age and Gender Distribution in the study

Age	Government		Private		Total (%)
	Male	Female	Male	Female	
7			0.56		0.56
8	1.12	1.96	2.52	2.24	7.84
9	5.04	5.04	7.56	5.88	23.52
10	1.96	7.56	7.00	7.56	24.08
11	3.36	3.08	6.16	7.28	19.88
12	2.52	3.36	7.28	6.72	19.88
13	1.68	0.56	0.28	0.84	3.36
14	0.28		0.56		0.84

Table 2. Occupation of the parents in the study

Occupation	Government		Private	
	Father	Mother	Father	Mother
Job	48.50	34.32	43.94	17.48
Home Maker	0	31.34	0	69.50
Business	14.92	7.46	29.14	4.84
Others	36.56	26.86	26.90	8.52
Total	134	134	223	223

Table 3. Knowledge Assessment

	Knowledge			
	PRE		POST	
	Govt	Private	Govt	Private
Poor		1.12		0.56
Moderate	14.56	18.76	2.52	10.08
Good	22.96	42.57	35.01	51.82

Table 4. Attitude Assessment

	Attitude			
	PRE		POST	
	Govt	Private	Govt	Private
Positive	36.13	60.50	36.69	61.34
Negative	1.40	1.96	0.84	1.12

Table 5. Practice Assessment

	Practice			
	PRE		POST	
	Govt	Private	Govt	Private
Poor				
Moderate	2.24	1.96	1.12	1.40
Good	36.41	60.50	35.29	61.08

Table 6. Paired Sample Test

		Paired Differences	t	df	Sig. (2-tailed)
		95 Confidence Interval of the Difference Upper			
Pair 1	Pre K Pvt - Post K Pvt	-0.378	-6.497	222	0
Pair 2	Pre A Pvt - Post A Pvt	-0.13711	-3.142	222	0.002
Pair 3	Pre P Pvt - Post P Pvt	1.74025	6.713	222	0
Pair 4	Pre K Gov - Post K Gov	-0.305	-5.014	132	0
Pair 5	Pre A Gov - Post A Gov	-0.10197	-2.532	132	0.013
Pair 6	Pre P Gov - Post P Gov	1.35232	2.026	132	0.045

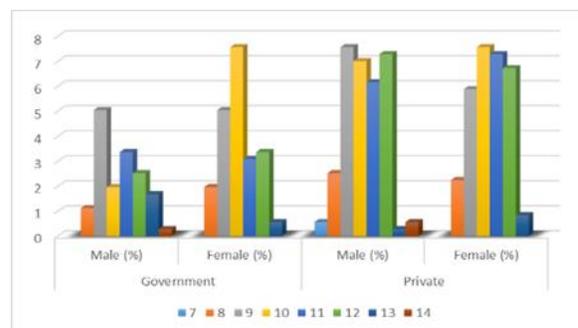


Fig. 1 Age and Gender Distribution in the study

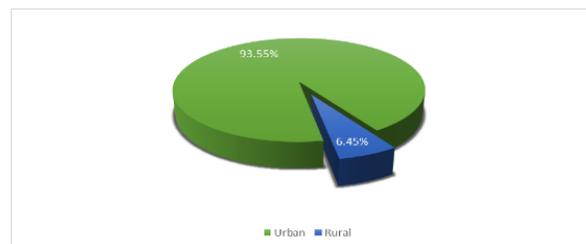


Fig. 2 Locality of the study subjects

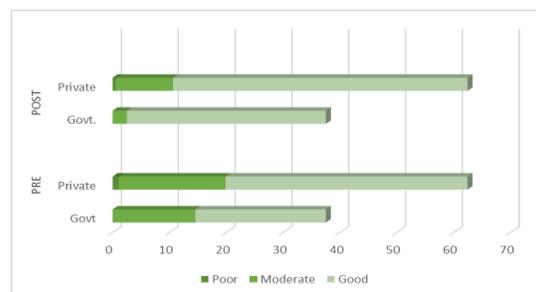


Fig. 3 Knowledge Assessment

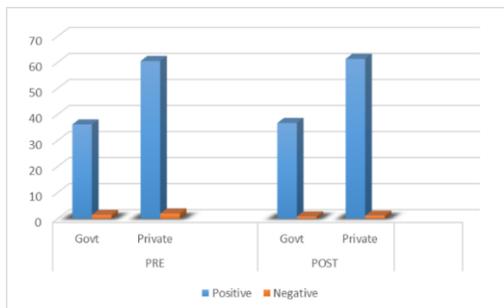


Fig. 4. Attitude Assessment

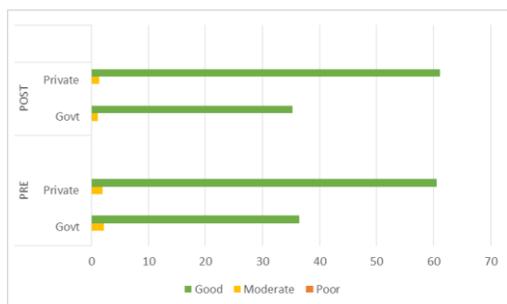


Fig. 5 Practice Assessment

4. DISCUSSION

Personal hygiene is a public health tool that is used for disease prevention and health promotion in individuals, families and communities. In our country, the rate of infectious disease is known to be high among children with a poor socioeconomic status and in regions with poor hygiene conditions. Our main aim was to assess knowledge, attitude and practices of personal hygiene among urban primary school children aged between 7-14years from both government and private schools.

A total of 357 students were enrolled in the study. We observed that majority of the subjects belonged to age group 9-10 years (95.23) which is similar to a study conducted by Madhutandra Sarkar in the year 2014. As per our study the knowledge among private school children were 1.12% poor, 18.76% moderate and 42.57% good, whereas in government schools, it was found to be 14.56% moderate and 22.96%. Amongst the

private and government school children, positive and negative attitude were found to be 60.50%, 1.96%, 36.13% and 1.40% respectively.

After administering the educational intervention the study showed improvement in knowledge as well as attitude. Both are highly benefitted only when they are practiced on a regular basis. The practice results for government and private schools were found to be varying to a larger extent.

Amongst private schools 1.96% moderate and 60.50% had good practice, whilst in government schools 2.24% moderate and 35.29% had good practice of hygiene.

After employing the educational intervention it was found that 1.4% moderate and 61.08% had good practice of hygiene among private school children. However the results among government school was found to be 1.12% as moderately practicing and 36.41% has good practice of hygienic behaviour.

The KAP was conducted for a period of four months. Due to the shortage of time and resources we couldn't achieve much difference in personal hygiene practices pre and post intervention.

5. CONCLUSION

Personal hygiene is of prime concern that forms a part of primary health prevention strategy. It lays down the foundation to build a healthy society. Developing personal hygiene practices among school children can improve their overall wellbeing, quality of life and longevity. While in modern medical sciences there is a set of standards of hygiene recommended for different situations, what is considered as hygienic or not can vary between different cultures, genders and age groups. Some regular hygienic practices may be considered good habits by a society while the neglect of hygiene can be considered disgusting, disrespectful or even threatening.

Educating the school children using interventions like videos, charts and power point presentations can help them in gaining knowledge about the simple strategies that could be adopted to prevent the spread of communicable diseases.

6. ACKNOWLEDGEMENT

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