



KNOWLEDGE LEVELS ON ENVIRONMENTAL SANITATION AMONG SCHOOL CHILDREN: COMPARITIVE STUDY

Dr. P.Kumari

Associate Professor, Department of Home Science, Sri Padmavathi Womens Degree and PG Women's College Andhra Pradesh- Tirupati, Chittoor (Dt), 517502, Andhra Pradesh.

ABSTRACT

Environmental sanitation including schools is one of the components for preventing many of the communicable diseases in developing countries like India. The current research was focused on obtaining environmental sanitation knowledge scores from the three local school schools and one central school of 8th and 9th classes. The results indicated that irrespective of the school, all children from 9th class scored better than 8th class as the knowledge levels increased with the progressive age. The important comparative results clearly stated that central school children were far better than the remaining three local school children and differed significantly at one percent level. However, regarding the percentage knowledge scores all of them scored very well of more than 65 percent. Thus, the situation highlighted to fulfill the gap and further reinforcement of the existing knowledge scores on environment sanitation to protect against communicable diseases.

KEYWORDS : Environmental sanitation, Safe water, School Children, India

Introduction

Perfect health is an important requisite for an individual or a family Health is wealth. Optimum health is the highest level of health attainable by an individual. Positive health means striving for preservations and improvements of health. Negative health means scientific efforts for prevention and cure of diseases. The important factors for cultivation of health are: environment conducive for healthful living, balanced diet, adequate physical activity and rest as per individual needs (Gupta, 2007).

Safe drinking water and basic sanitation is of crucial importance to the prevention of human health. Water can become a vehicle for transmission of faeco- oral group of infections, because the faecal contamination of water is common. WHO/UNICEF Joint Monitoring Programme for water supply and sanitation released in 2013, estimates that 36% of the world's population – 2.5 billion people lack improved sanitation facilities and 768 million people still use unsafe drinking water sources (Park, 2012).

Diarrhea and water-borne diseases are leading causes of mortality and morbidity in developing countries. Approximately 88% of diarrheal diseases are attributed to unsafe water supply, inadequate sanitation and hygiene (WHO, 2004). Diarrhea is one of the major killers of children in developing countries. In India lack of access to safe water supply and inadequate sanitation facilities together with unhygienic conditions have contributed to high morbidity amongst the rural population especially in children less than 5 years of age. Food contamination in developing countries is caused by many factors including traditional food processing methods, inappropriate holding temperatures, and poor personal hygiene of food handlers. Maintaining high food safety levels in school food services is very important because any incidences can affect a high number of students (Eram, 2017).

The provision of safe water and sanitation facilities is a first step towards a healthy physical learning environment. However, the mere provision of facilities does not make them sustainable or produce the desired impact. It is the use of the facilities – the related hygiene behaviour of people that provides health benefits. In schools, hygiene education aims to promote those practices that will help to prevent water and sanitation-related diseases as well as healthy behaviour in the future generation of adults (Burgers, 2000). The combination of facilities, correct behavioural practices and education are meant to have a positive impact on the health and hygiene conditions of the community as a whole, both now and in the future.

Health and nutrition are closely associated with environmental sanitation. Many health problems arise out of dirty and unhealthy

surroundings. Most of the dirty surroundings are the makings of man. Apart from poverty and non-availability of food, the wide spread infectious diseases are of the main reasons for poor nutritional and health status. These diseases are prevalent due to the lingering existence of two fundamental problems of environmental sanitation-Unsafe water supply and Unhygienic disposal of water, especially human excreta. Awareness on environmental sanitation should be developed since the school age and for this purpose, there is a need to explore the knowledge levels among school going children. Based on this background, knowledge assessment schedule was developed and evaluated through interviewing the children and made comparative study to understand the differences in the schools.

Methodology

The present study focused on assessment of knowledge levels on environmental sanitation among school children of Tirupati town, Andhra Pradesh. The comparative study was conducted among randomly selected three local schools against central school belonging to 8th and 9th classes aged 13 to 15 years through interview schedule comprising of two units. Unit-1 dealt with the questions related to safe drinking water, water borne diseases, waste disposal and cleaning of environment. Whereas, unit-2 comprised of the questions on communicable diseases, source of diseases and preventive measures.

Two point rating was used for scoring the knowledge schedule, where one mark was provided for right answer and zero for wrong answer. For the open ended questions, the children were asked to answer four important points for each question. For a correct point 1/4th mark was given and hence one mark for a fully corrected answer. The data thus collected was interpreted and discussed further. To find out the significant difference among local schools against central school for both 8th and 9th classes through paired t-test. Apart from standard deviation to find out variation within each age group the coefficient of variance was applied and calculated.

Results and discussion

Environmental sanitation being the part of protecting health from diseases including the school environment, the present study focused on collecting information on knowledge levels of school children. The data obtained was collected, pooled and interpreted the results for comparative study. The mean scores of school going children from different local schools and central school of both 8th and 9th classes on environmental sanitation containing two different units and the total score was presented in table no-1.

Table No-1: Mean Environmental Sanitation Knowledge scores among school going children

School	Mean Environmental knowledge scores		
	Unit-I (10)*	Unit-II (10)*	Total Mean± SD (20)*
Central School			
8 th Class	8.16	8.32	16.48±0.9
9 th Class	8.40	8.54	16.56±1.02
Local School-1			
8 th Class	6.56	6.52	13.20±1.4
9 th Class	7.92	6.64	14.4±3.9
Local School-2			
8 th Class	7.52	7.16	14.72±1.3
9 th Class	7.56	7.72	15.24±1.7
Local School-3			
8 th Class	7.16	6.88	14.04±1.4
9 th Class	7.77	7.32	15.09±3.08

Note: * = Expected Maximum Score for the corresponding unit

The findings from the table revealed that central school children scored far better on environmental sanitation knowledge mean scores than the local school children in both units as well as the total score. Whatever the differences existed, the 9th class school children always scored better than 8th class as naturally knowledge levels increased with the age. The total mean scores for knowledge in environmental sanitation were 13 to 15 for the three local schools against the higher score of 16 to 17 years. This may be due to the fact that central school children had a set syllabus and regular instruction with practical sessions by trained teachers. Obviously, this had a positive impact, which affected in higher knowledge levels among school children.

The mean environmental knowledge percentage scores for different schools in the two classes were presented in table no-2. As the findings well demonstrated higher mean scores in central school for both the classes, comparative study was conducted by expressing through t-value against each local school and each class and denoted in the same table. Coefficient variance values for knowledge scores within the group were also expressed and presented in the table no-2.

Table No-2: Mean percentages of Environmental Sanitation Knowledge scores among different schools along with t-values against central school and coefficient of variance

School	Mean Percentage	t-values	Coefficient of variance
Central School			
8 th Class	82.4	-	5.5
9 th Class	88.8	-	6.2
Local School-1			
8 th Class	66.0	9.93**	10.6
9 th Class	72.0	2.70**	27.4
Local School-2			
8 th Class	76.2	3.26**	11.2
9 th Class	73.6	5.57**	8.8
Local School-3			
8 th Class	70.2	7.39**	9.9
9 th Class	75.5	2.29**	20.4

Note: ** = significant at one percent level

The results from the table expressed that the mean percentage values were also higher for central school children in comparison to local school children. Local school children obtained 66 to 75 percentages in comparison to higher score of 82 to 89 percent. However, all the children had more than 65 per cent of knowledge in environmental sanitation. Irrespective of the nature of schools, all the children had two or three lessons on environmental sanitation, communicable diseases, proper air and safety water etc in their elementary and previous classes and hence scored better scores. The differences in mean scores between central school and local schools expressed by t-values represented significant differences at

one percent level.

The findings thus represented that the school children had better understanding about clean surroundings, excreta disposal, drainage and safe drinking water. In fact, they were aware of the infectious diseases that spread, modes of channels like water borne, food borne and the preventable measures. Not only environmental sanitation but also the basic necessity of safe drinking water for the well-being of the community was essential.

The pathetic situation was that in spite of appropriate knowledge levels on sanitation even among school going children, the standards of environmental hygienic conditions were not up to the mark indicating the challenging task to bring the sanitation into practice. The Government should take stringent actions on planning measures towards environmental sanitation, promoting healthy environment and adherence to the action plans at community level.

Kapila et al, 2012 showed that faeces of 260 out of 480 (54%) subjects were found to be contaminated with *Ascaris* ova. Helminthic infections are wide spread among people who live in line rooms in tea estates with low socioeconomic status and poor sanitary facilities. Among them, majority of the subjects living in slums in tea estates (70%) and sub urban area (57%) used not well defined public toilets and open ground for their defecation. These findings demonstrated the need of maintaining environmental sanitation to prevent occurrence and spread of infectious diseases.

Conclusion

References

- Gupta P. 2007. Text book of preventive and social medicine. CBS publishers and distributors. New Delhi.
- Kapila TRM, Rathnayaka, Z hong-Jun Wang. 2012. ZENITH International Journal of Multidisciplinary Research. 2(7) :ISSN 2231 5780
- Park K. 2012. Preventive and social medicine. Banarsidas Bhanot publishers Jabalpur.
- Rai AMG. 2013. Promotion of health and hygiene among school children by health education. Health Education. 1(4): 44-46.
- World Health Organization. Water Sanitation and Hygiene, Facts and Figures, March 2004. WHO, Geneva. http://www.who.int/water_sanitation_health/publications/facts_figures04/en/ [accessed 30 October 2006].
- Eram U. 2017. Review Article on Knowledge and Practices of People on Hygiene. International Journal of Health Sciences & Research. 7(4):425-428.
- Burgers L. 2000. Background and rationale for school sanitation and hygiene education. New York, NY, USA: UNICEF.