International Journal of Community Medicine and Public Health
Gomathi S et al. Int J Community Med Public Health. 2019 Jan;6(1):253-257
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20185252

Original Research Article

A study to assess the knowledge and practices regarding WASH among school children in selected school, Mangalagiri, Guntur district, Andhra Pradesh

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Received: 04 October 2018
Accepted: 02 November 2018

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ABSTRACT

Background: 'WASH' is an acronym that stands for water, sanitation and hygiene and several interrelated public health issues that are of particular interest to international development and is the focus of SDP goal-6. WASH in schools aims to improve the health and learning performance of School-aged children and by extension that of their families, by reducing the incidence of water and sanitation related diseases. The present study was undertaken to assess the knowledge and practices regarding WASH among school children.
Methods: A descriptive design was adopted for the study. The study was conducted at Zilla parishath Higher Secondary school with 150 participants selected using purposive sampling technique. Knowledge and practices of WASH were assessed using a structured questionnaire and checklist respectively.
Results: The results showed that majority of them 125 (83.33%) had inadequate knowledge and 25 (16.6%) had a moderately adequate knowledge, while 21 (14%) were found to have adequate practices, 81 (54%) had a moderately adequate practices and 48 (32%) were found to have inadequate practices. It was found that there was no significant association between the knowledge and the selected demographic variables and a negative correlation was found between knowledge and practices.
Conclusions: The findings revealed that, most of the school children had inadequate knowledge and a moderately adequate practice which indicates a need to impart knowledge and motivate the children regarding WASH to maximize the health and educational outcomes.

Keywords: WASH, WASH in schools, Water, Sanitation, Hygiene, Assess, Knowledge, Practices, School children

INTRODUCTION

'WASH' is an acronym that stands for Water, Sanitation and Hygiene and several interrelated public health issues that are of particular interest to international Development and is the focus of SDP goal-6.[1] Affordable access to WASH is a key health issue, especially in developing countries like India.

According to the "World Hygiene Program", every year around 700,000 (2000 a day) children die from diarrhea caused by poor sanitation and hygiene. Even if it doesn't kill, it can impact on child stunting mentally and physically and affecting children for the rest of their lives.[2]

According to WHO, every year, 443 million school days are lost due to Water and Sanitation related diseases. Countless schools worldwide suffer from lack of access to safe drinking water, sanitation and facilities for hand washing with soap. Good WASH in schools is essential to ensure a learning environment that enables children to reach their full mental and physical potential.[3]

According to UNICEF, 88% of diarrheal diseases are due to lack of access to safe drinking water, poor sanitation and hygiene.[4] A Cross-sectional Survey was conducted by Water aid India, Among 453 schools in 34 districts across nine states. The results showed, drinking water was not considered to be safe in almost 15% of schools. Functional toilets were found in 95% of the schools assessed across nine states, with only three-fourths of the schools having separate toilets for male and female students. The findings underscore that further improvements in WASH infrastructure and hygiene behavior are required to meet the norms specified under the Swacch Vidyalaya Abhiyan.[5] Swacch Vidyalaya" is the National Campaign driving "Clean India; Clean Schools". It is to ensure that every school in India has a set of functioning and well-maintained WASH facilities to have a healthy school environment and to develop appropriate health and hygiene behaviors.[6]

Thus, WASH in school aims to make a visible impact on the health and hygiene of children through improvement in their health and hygiene practices, and those of their families and the communities.[7] Thus to comprehensively understand the status of WASH among school children at schools, the study was undertaken.

METHODS

A descriptive design was chosen for the study. The study was conducted from February to April 2018 at a Zilla Parishath higher secondary school, Guntur District, Andhra Pradesh with a sample of 150 School children, selected using purposive sampling technique. A prior permission from the Head Master of the School was obtained to conduct the study. All the students who were studying classes 6 to 9, aging between 9 to 12 years and who obtained consent from their parents / guardian were only included in the study. The data was collected using a Structured questionnaire to assess the knowledge and a Checklist to assess the practices of WASH. The tool consisted of 3 sections.

Section A: Comprised of the socio- demographic characteristics of the participants viz. Age, gender, class of study, religion and source of health information.

Section B: Comprised of 30 Knowledge questions regarding WASH including various components of WASH viz. safe water, water borne diseases, sanitation, hand washing, solid waste disposal and hygiene. Each correct response was assigned a score of 1 and an incorrect response was given a score of 0. Based on the score obtained, the students were classified into three grades.

- Less than 50% - Inadequate knowledge
- 51–75% - Moderately adequate knowledge
- Above 75% - Adequate Knowledge

Section C: Comprised of a checklist to assess the practices of WASH consisting 33 items of which 18 items were related to the students practice and 15 items were related to the school infrastructure and facilities.

The tool was validated by experts in the subject and the reliability was checked by split- half method and the tool was found to be reliable. A pilot study was undertaken at a Zilla Parishath higher secondary school, Vadlamudi, Mangalagiri, Guntur dist. A.P which showed that the tool and the method of data collection was feasible, practicable and applicable. The data was collected from 09-04-2018 to 11-04-2018 each day covering each class. The students were given the structured questionnaire to assess the knowledge on WASH and were given a time period of 45 min was given. The practices of WASH among students were assessed using a Checklist.

RESULTS

Findings related to socio-demographic variables:

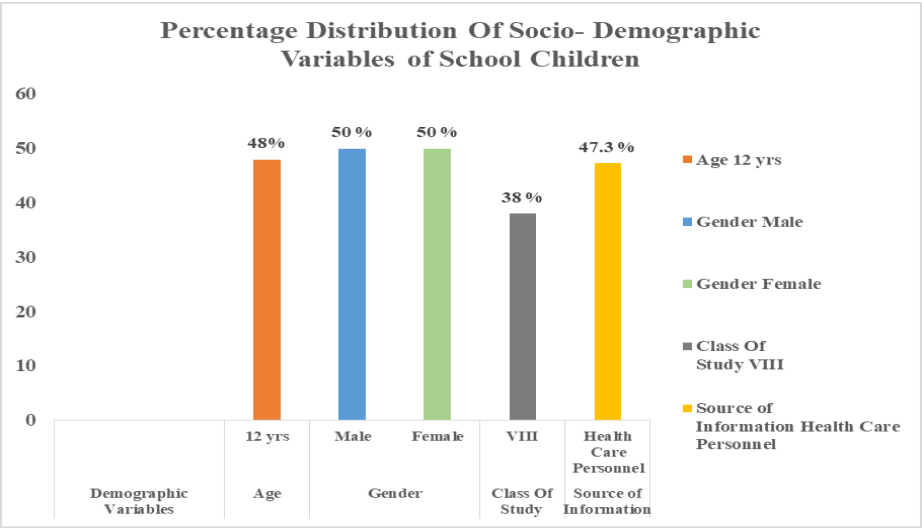

Figure 1: Percentage distribution of socio-demographic variables of school children.

Data presented in Figure 1 indicates that, on analyzing the demographic characteristics, the study revealed that, most of the participants were 12 years old, both boys and girls, majority studying class 8, and reported Health care personnel as source of information.

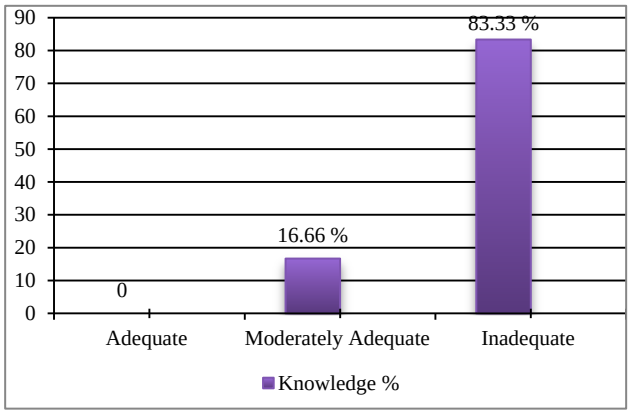

Figure 2: Percentage distribution of overall knowledge regarding WASH.

Figure 2 revealed that majority had inadequate knowledge 83.3% and a moderately adequate knowledge of 16.66%.

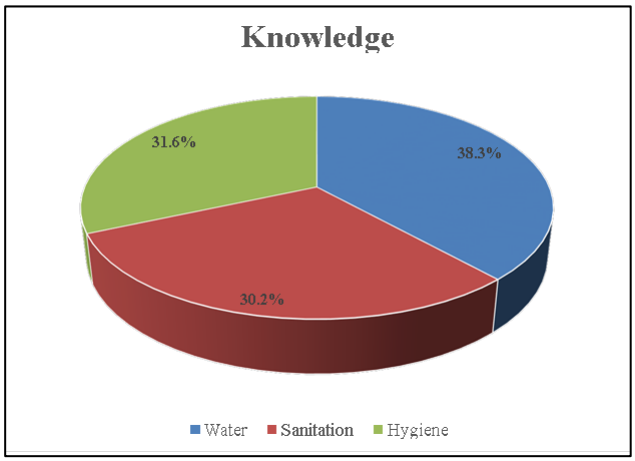

Figure 3: Percentage distribution of knowledge with various components of WASH.

Figure 3 revealed knowledge in each of the component of WASH, 38.3% have adequate knowledge regarding aspects of water. 30.2% have adequate knowledge with regard to sanitation while 31.6% have knowledge regarding hygiene.

Figure 4 revealed that majority had moderately adequate practice of 54%, inadequate practice of 32% and a adequate practice of 14%.

As shown in Figure 5, 32% of the participants have adequate practices regarding aspects of Water viz. source of drinking water, type of storage facility, ways water drawn from the container etc. Sanitary practices come to 36% viz. toilet usage during school hours etc. While about 32% were having adequate practices with regard to hygiene viz. hand washing before food, after toilet use etc.

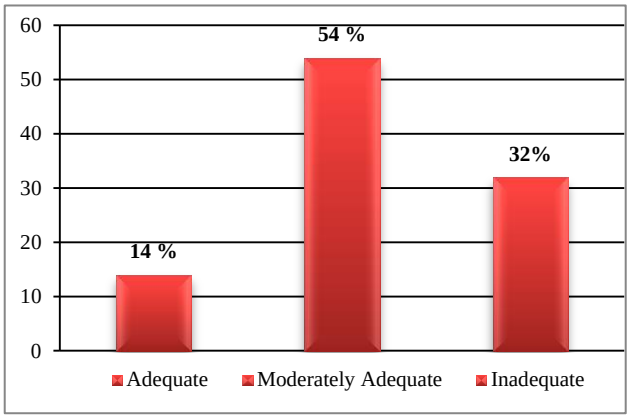

Figure 4: Percentage distribution of overall practices of WASH among school children.

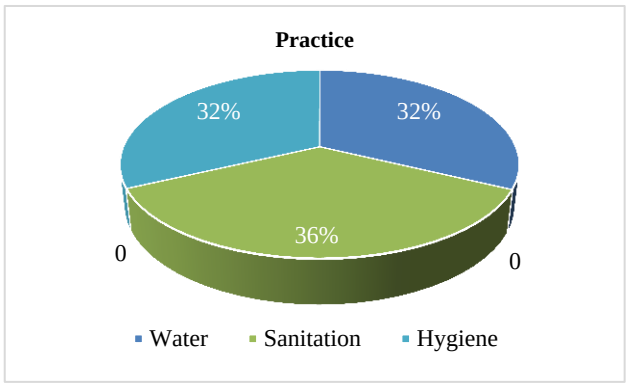

Figure 5: Percentage distribution of practices with each of the component of WASH.

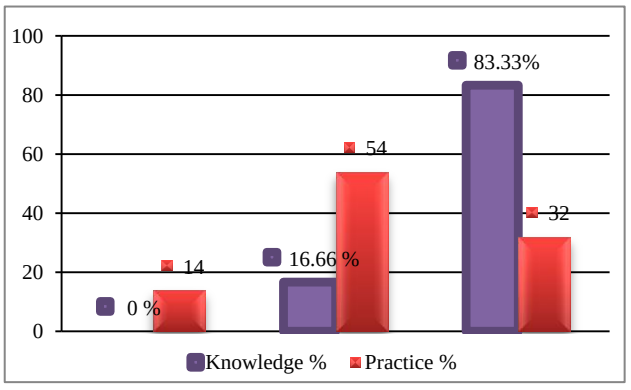

Figure 6: Comparison of percentage distribution between knowledge and practices of WASH among school children.

Figure 6 on comparing the knowledge and practices of WASH, it was found that, majority of the participants had inadequate knowledge and practice 83.33% and 32%

respectively. While that in moderately adequate knowledge 16.66% but practice was 54%. None of them were in adequate knowledge and 14% had adequate practices.

Table 1: Mean and standard deviations values of knowledge and practices regarding wash among school children.

S.no		Mean ($\bar{x}$)	Standard deviation (S.D)
1	**Knowledge on WASH**	12.8	3.01
2	**Practices on WASH**	19.86	3.28

Table I depicts, the overall mean of knowledge score was 12.8 with a standard deviation of 3.01, while that of practices were 19.86 with a standard deviation of 3.28.

- Mean and standard deviation for knowledge and practices were 12.8, 3.0 and 19.8, 3.28 respectively.
- Chi- square values were found to have no significant association between knowledge of WASH among school children with the selected demographic variables at $p \leq 0.05$ level of significance. Hence H01 is accepted.
- A correlation was computed by using Karl Pearson's correlation coefficient and was found to be –1 which showed a negative relationship between knowledge and practice.

DISCUSSION

In this study, the findings revealed that among 150 participants, majority of children 72 (48%) were 12 years of age. Male and female students were equally distributed 50% each. With regard to knowledge, majority of 125 (83.33%) were found to have inadequate knowledge. While that of practices were 81(54%) were having a moderately adequate practices. There were no significant association between the knowledge and the selected demographic variables of school children. Hence, the researcher accepted null hypothesis, H_0.

With respect to UNICEF report on assessment of child friendly WASH in school for the state of Uttar Pradesh shows that although a total of 97.5% of the schools had toilet facility, only 83.75% schools have an availability of separate toilet for girls and boys, with only 61.25% toilets being reported as functional. In case of drinking water, only 50% schools had a running water provision. And 33.75% schools have provision for children with special needs.[8]

The findings revealed that, most of the school children had inadequate Knowledge and moderately adequate Practices. However conditions in selected school were insufficient and require further attention and improvement.

CONCLUSION

From this study it was evident that majority of the children had inadequate knowledge regarding WASH (water, sanitation and hygiene) while most of the respondents were having a moderately adequate practice with regard to WASH. There was no significant association between knowledge and the selected demographic variables of school children. It was found that there is a negative correlation between the Knowledge and Practices of WASH in schools. Thus, stating that Knowledge and Practices are independent with each other. However, condition in the selected school was found to be insufficient and requires further attention and improvement. It underscores the need for integrating the WASH educational programs in schools in combination with appropriate infrastructural facilities by the school to maximize the health and educational outcomes. The study implies that the health care personnel play a pivotal role to create awareness to children and those of their families & community as a whole.

ACKNOWLEDGEMENTS

We acknowledge all the participants for their participation and the school personnel for the cooperation towards the study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Gomathi S, Samitha PC, Nishanth BK, Kumar NP, Sireesha K. A study to assess the knowledge and practices regarding WASH among school children in selected school, Mangalagiri, Guntur district, Andhra Pradesh. Int J Community Med Public Health 2019;6:253-7.