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A STUDY TO ASSESS THE EFFECTIVENESS OF INTERVENTIONAL PROGRAMS ON KNOWLEDGE AND PRACTICE REGARDING WASH INTERVENTION AMONG SCHOOL AGE CHILDREN AT SELECTED COMMUNITY AREAS, KOLLAM

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ABSTRACT

A preexperimental onegroup study was done to assess the effectiveness of interventional programs on knowledge and practice regarding WASH intervention among school age children at selected community areas, Kollam. The objectives of the study were to assess the effectiveness of interventional programs on knowledge regarding WASH intervention among school age children at selected community areas, Kollam, to assess the effectiveness of interventional programs on practice regarding WASH intervention among school age children, to find out the association between pretest knowledge score among school age children with selected demographic variables, to find out the association between pretest practice score among school age children with selected demographic variables, and to find out the correlation between knowledge and practice score on WASH intervention among school age children. Quantitative research approach was used with pre experimental one group pre and post test design. Convenient sampling technique was used to select 100 sample studying in 4th standard and residing in Eravipuram and Pallithottam who met the inclusion criteria. Structured teaching program, hand washing and well chlorination demonstration were given as intervention. Pre and post test was conducted by structured knowledge questionnaire, and practice check list. The data analysis was done by using descriptive and inferential statistics. The result revealed that there was statistically significant difference between pre and post test knowledge and practice score regarding WASH intervention among school age children at $p < 0.05$. This study implies that by providing knowledge and practice regarding WASH intervention, infectious disease among school children can be minimised.

KEYWORDS: Effectiveness; Interventional programs; Knowledge; Practice; WASH Intervention; School age children.

INTRODUCTION

WASH is the acronym for Water, Sanitation and Hygiene. Global access to safe water, adequate sanitation, and proper education about hygiene can reduce illness and death from disease. This lead to improved health, reduce poverty, and socio-economic development. However, many countries are challenged in providing these basic necessities to their people, leaving them at risk for water, sanitation, and hygiene (WASH)-related diseases.

All children have the right to clean water and basic sanitation, as stated in the Convention on the Rights of a Child. The ultimate aim of UNICEF's work in water, sanitation and hygiene (WASH) is to ensure that all children fulfil this right, and that no child is left behind. In 2015, India achieved 93 per cent coverage of access to improved water supply in rural areas. Illness-related absenteeism is an important problem among preschool and school children for low, middle- and high-income countries. Appropriate hand hygiene is one commonly investigated and implemented strategy to reduce the spread of illness and subsequently the number of days spent absent. In India in 2017, 59.5% have access to "at least basic sanitation". Between 2014 and 2019, the National Democratic Alliance Government in India built around 110 million toilets all across India, due to which the basic sanitation coverage went up from 38.7% in October, 2014 to 93.3% in 2019. If these numbers sound too good to be true, they are most likely to be quite off the mark.[7]

India has made rapid progress in ending open defecation across the Country which is having a huge impact on improving water, sanitation and hygiene (WASH). UNICEF focuses on community-managed drinking water, including water safety and security planning, in support of the National rural drinking water program. At

the institutional level, UNICEF focuses on developing improved water quality monitoring systems and strengthening operation and maintenance of water supply infrastructures.

Statement of the problem
A study to assess the effectiveness of interventional programs on knowledge and practice regarding WASH intervention among school age children at selected community areas, Kollam.

OBJECTIVES
1. To assess the effectiveness of interventional program on knowledge regarding WASH interventions among school age children at selected community areas, Kollam
2. To assess the effectiveness of interventional program on practice regarding WASH interventions among school age children at selected community areas, Kollam.
3. To find out the association between pretest knowledge score among school age children with selected demographic variables
4. To find out the association between pretest practice score among school age children with selected demographic variables.
5. To find out the correlation between knowledge and practice score on WASH intervention among school age children at selected community areas, Kollam

Hypotheses
All hypotheses were tested at 0.05 level of significance
H_1: There will be significant difference between mean pretest and posttest knowledge score regarding WASH intervention among school age children at selected community areas, Kollam
H_2: There will be significant difference between mean pretest and posttest practice score regarding WASH intervention among school age children at selected community areas, Kollam
H_3: There will be significant association between pretest knowledge score among school age children with selected demographic variables.
H_4: There will be significant association between pretest practice score among school age children with selected demographic variables.
H_5: There will be positive correlation between knowledge and practice score on WASH intervention among school age children at selected community areas Kollam.

MATERIALS AND METHODS
The research design adopted for this study was preexperimental one group pretest posttest design. In this study, the sample consisted of 100 children studying in 4th standard and residing at Eravipuram and Pallithottam area who met the inclusion criteria. Convenient sampling technique was used in this study.
The data were analysed under following headings.
Section A: Baseline characteristics were analysed by frequency and percentage.

Section B: Description of knowledge score
- Mean, mean difference and standard deviation were used to analyse the pretest knowledge score of children in selected areas of Kollam

Section C: Description of practice score
- Mean, mean difference and standard deviation were used to analyse the pretest practice score of children in selected areas of Kollam

Section D: Effectiveness of interventional program on knowledge regarding WASH intervention.
- Paired 't' test was used to find out the effectiveness of interventional program on knowledge regarding WASH intervention among children at selected areas of Kollam

Section E: Effectiveness of interventional program on practice regarding WASH intervention
- Paired t test was used to find out the effectiveness of interventional program on practice regarding WASH intervention among children at selected areas of Kollam.

Section F: Chi –square test was used to find out the association between pretest level of knowledge and selected demographic variables.

Section G: Chi- square test was used to find out the association between pretest level of practice and selected demographic variables.

Section H: Correlation coefficient r was used to find out the correlation between pretest knowledge and pretest practice score on WASH intervention

RESULT
Section A: Description of sample characteristics.
Description of demographic variables under study
This section deals with result of the sample characteristics under study. It included age, gender, type of family, type of house, source of income, source of water supply and type of latrine used. The demographic characteristics of selected samples were analysed by using descriptive statistics including frequency and percentage distribution

Demographic Data
- The percentage wise distribution of the sample age showed that more than half of the samples (55%) were in the age group of 8-9 years, and 45%were in the age group of 10-11 years.
- The percentage wise distribution of the samples according to gender showed that majority (65%) of the sample were females and the remaining were males (35%).
- The percentage wise distribution of the samples according to type of family showed that half of the sample (50%) lives in joint family, and 39% in nuclear family and the remaining 11% lives in

extended family.

- The percentage wise distribution of the samples according to breadwinner of the family showed that for 56% of the participants, father is the only breadwinner in the family and for 11% of the participants mother is the only breadwinner in the family. For 32% of the respondents both father and mother earn money to meet the expenses. Among the sample, only 1 of the respondent (1%) the care taker is the breadwinner in the family.

- The percentage wise distribution of the samples according to type of family showed that 38% of the sample lives in terraced houses and 22% of the sample lives in cabined houses and 40% lives in asbestosis houses.

- The percentage wise distribution of the samples according to source of water supply showed that 66% of the samples uses pipe water, 22% of the samples uses well water, 8% uses delivered water and 4% uses packaged water for their daily house hold activities.

- The percentage wise distribution of the samples according to type of latrine showed that 68% of the sample uses European closet and 32% of the sample uses Indian style closet for defecation.

Section B: Description of knowledge score
Description of pretest and posttest knowledge scores
The findings of the study showed that in pretest, 25% of the samples possessed good level of knowledge and 57% of the samples possessed average and remaining 18% possessed poor level of knowledge. In the posttest, 20% of the samples had excellent and 75% possessed good level of knowledge and remaining 5% possessed average level of knowledge.

Mean, standard deviation and mean difference between pretest and posttest knowledge score
The pretest knowledge score was 11.26 and posttest knowledge score was 19.32. The mean difference was 8.06. It shows that there is significant difference in mean pretest (11.26) and posttest (19.32) score on knowledge regarding WASH intervention among school age children after interventional program.

Section C: Description of practice score
Description of pretest and posttest practice score
The findings of the study showed that in the pretest most of the samples (69%) had good level of wash practices, 27% had average level of hand wash practices and 4% had poor level of wash practices. In the posttest, majority of the samples (99%) had good level of wash practices and remaining 1% had average level of wash practices.

Mean, standard deviation and mean difference between pretest and posttest practice score
The pretest practice score was 12.13 and posttest practice score was 15.53. The mean difference was 3.4. It shows that there is significant difference in mean pretest and posttest practice score regarding WASH intervention among school age children after interventional program.

Section D: Effectiveness of interventional programs on knowledge regarding WASH intervention among school age children at selected areas of Kollam
Paired 't' test was used to find out the effectiveness of interventional program on knowledge regarding WASH intervention among school age children at selected areas of Kollam

Mean, Standard Deviation, 't' value of pretest and posttest knowledge score
The mean pretest score of selected samples was 11.26 with standard deviation of 3.09 and the mean posttest score was 19.32 with standard deviation of 4.45 and the calculated 't' value was 17.49. Since the calculated 't' value (17.49) is greater than table value (2.260), at 0.05 level of significance. The findings of the study showed that there was statistically significant difference in mean pretest and posttest knowledge scores.

Section E: Effectiveness of interventional programs on practice regarding WASH intervention among school age children at selected areas of Kollam
Paired 't' test was used to find out the effectiveness of interventional program on practice regarding WASH intervention among school age children at selected areas of Kollam

Mean, standard deviation, 't' value of pretest and posttest practice score
The mean pretest score was 12.13 with standard deviation of 2.49 and the mean posttest value was 15.53 with standard deviation 1.15 and the calculated 't' value was 13.90. The findings of the study showed that there is significant difference in pretest and posttest mean and standard deviation and the calculated 't' value is greater than table value (2.260), at 0.05 level of significance.

Section F: Association between pretest level of knowledge and selected demographic variables
Chi square was test used to find the association between pretest level of knowledge and selected demographic variables such as age of the children, sex, family, breadwinner of the family, type of house, source of water supply, and types of latrine used.

Association between pretest level of knowledge and selected demographic variables
There was a significant association between pretest level of knowledge score and type of latrine used. The calculated chi square value (6.22) is greater than the table value (5.991) at 0.05 level of significance.

There was no significant association between pretest level of knowledge score and the demographic variables. The calculated chi square value for Age [table value-5.99 X^2-1.96], gender [table value-5.99 X^2-2.74], Type of family [table value-9.48 X^2-3.34], Type of house[table

value-9.48 X^2-3.7], breadwinner of the family[table value-12.59 X^2-4.9], and Source of water [table value-9.48 X^2-7.46]regarding WASH practices among children is less than the calculated value.

Section G: Association between pretest level of practice and selected demographic variables

Chi square was used to find the association between practice score with selected demographic variables.

Association between pretest level of practice and selected demographic variables

The calculated chi square values are less than table value in all the above mentioned demographic variables except breadwinner of the family and source of water used. There is a significant association between level of practice score with source of water used and source of income. The calculated chi square value is greater than the table value at 0.05 level of significance.

The calculated chi square value for Age [table value-5.99 X^2-1.64], gender [table value-5.91 X^2-0.01], Type of family [table value-9.48 X^2-2.84], Type of house [table value-9.48 X^2-5.88], Type of latrine used [table value-5.99 X^2-1.49] regarding wash practices among children is lesser than the calculated value.

Section H: Correlation between knowledge and practice score on WASH intervention among school age children

In order to find the relationship between knowledge and practice regarding wash intervention among school age children, the pretest and posttest knowledge and practice score of children was calculated by using Karl Pearson correlation coefficient.

Correlation between pretest knowledge and practice score

The calculated 'r' value for pretest knowledge and practice score was 0.21. The findings of the study revealed that there is weak positive correlation between pretest knowledge and pretest practice score regarding WASH intervention among school age children.

Correlation between posttest knowledge and practice score

The calculated 'r' value for posttest knowledge and practice score was 0.09.The findings of the study revealed that there is very weak positive correlation between posttest knowledge and posttest practice score regarding WASH intervention among school age children.

CONCLUSION

The present study was done to assess the effectiveness of an interventional programs on knowledge and practice regarding WASH intervention among school age children at selected community areas Kollam. The study result revealed that the mean pretest knowledge score was 11.26 with standard deviation of 3.09 and the mean

posttest value was 19.32 with standard deviation 4.45 and 't' value is 17.49.This indicated that there was a significant difference in pretest and posttest knowledge score of school children regarding WASH intervention. The present study proved that WASH intervention was effective in improving the knowledge regarding WASH intervention among school age children.

The findings of the study showed that the mean pretest practice score was 12.13 with standard deviation of 2.49 and the mean posttest value was 15.53 with standard deviation 1.15 and 't' value is 13.90. This indicated that there was a significant difference in pretest and posttest practice score of school children regarding WASH intervention. The present study proved that WASH intervention was effective in improving the practice regarding WASH intervention among school age children.

The present study also indicated that there was statistically significant association between pretest knowledge score and type of latrine used and pretest practice score with source of water used and source of income.

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