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"A STUDY TO ASSESS THE EFFECTIVENESS PROGRAMME ON PERSONAL AND ENVIRONMENTAL HYGIENE AMONG MOTHERS OF CHILDREN STUDYING IN PRIMARY SCHOOLS"

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1. INTRODUCTION

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The foundation of a healthy lifestyle mainly relies on the education and practices adopted during childhood; a healthy childhood leads to a healthy adulthood. Childhood plays a vital role in molding an individual personality and developing positive values about health and various health services. Children are our nation's most precious resource, but as children, they often lack the skills to protect themselves. It is the responsibility of parents and teachers to safeguard children and teach them the skills to be safe. Children are equipped with new knowledge, skills and information to make the growing buds spread health related messages to the community in preventing many health problems. Children are the foundation of a strong and healthy nation. Morbidity and mortality among school children are primarily due to preventable causes. Young and growing children have poor knowledge and lack of awareness about infectious disease transmission and the ill health affecting them. The significant barriers to this are: lack of accurate information, absence of proper guidance, parent's ignorance, lack of skills and insufficient services from health care delivery system. The school-age refers to children between the age of 6 and 12 years experiencing a time of slow progressive physical growth while their social and cognitive developmental growth accelerate and increase in complexity. The focus of their world expands from family to teachers, peers and other outside influences (coaches, media). The child at this stage becomes increasingly more independent while participating in activities outside the home. Childhood is the best time to learn about hygiene and sanitation. Children today are exposed to media from a very young age. Teaching with different methods of the topic to be

covered will catch their attention soon. Childhood years are significant for intellectual growth and personality development. It is the period of maximum learning and is crucial for the child's education. The health habits of school children regarding personal hygiene, nutritious diet, clean surrounding, exercise, rest and recreation. It formed at an early age; it will remain with the person throughout life and help to develop healthy citizens. Hence school is the best place for giving health education on health subjects. Every child has a fundamental right to total health, and we must fulfil this faith. To bring children happily from childhood through adolescence is a difficult task and requires an approach that is carefully planned, coordinated and implemented by knowledgeable people.

Parents have a significant role in preventing communicable diseases in their children. Children spend most of their time with their parents, guardians, and especially mothers. These early years involve primary socialization, during which the earliest childhood routines and habits are required. These include hygienic habits and healthy behaviors established as norms in the home and are dependent on the knowledge and behavior of parents and elder siblings. Studies have reported that inadequate knowledge and poor practice of mothers towards personal and environmental hygiene are directly associated with childhood illness. Mother is the primary caregiver for the child in almost all societies across the world. Hence the health practices, along with the knowledge and attitude of the mothers, directly imply the health of the child. Mother's knowledge plays an important role and one of the determinants of child health. Simple health education for mothers has the potential to prevent or reduce morbidity at the earliest. Health education forms an essential element of primary health care. Children can be highly effective agents for social change if they utilize their creativity and power of persuasion in a concentrated and directed way. Children often communicate and share more than adults and, in some cases, are more literate than their parents. The child-to-child approach (child as an agent) is a new way of providing health education. It was developed for the international year of the children (1979) by a group of health and education professionals. The founders were Huge Hawes, a senior educationalist and Dr David Morley, a senior pediatrician. They introduce Child to child approach to school-aged children. Sanitation is vital for health. Every child has a right to grow up in a healthy environment- to live, learn and play in healthy places. According to the World Health Organization (WHO), "hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." Hygienic practices are employed as preventive measures to reduce the incidence and spread of disease. Hygiene practices are acting to safeguard of children's environment and it can save millions of lives, reduce diseases, provide a safer and create healthier world for their future. The entry of the causative agent of the disease into the human body and its multiplication is known as the infection. A disease is caused due to a specific organism or its toxic products. It is transmitted from man, animal, or from environmental agents like food wastes, air, soil and dust, fluid, flies, faeces and fomite, which is called a 'communicable disease'. These infectious agents may transmit through the 5 F's, i.e., Feces, Fingers, Food, Fluids and Fomites. As a result of growing prevalence of communicable diseases and the related cost burden, health promotion and illness prevention are increasingly important. The most effective way of preventing pathogens are by avoiding or eliminating their source and transmission routes. This may not always be possible, but we can reduce the risk of contamination to a minimum

by improving sanitation and hygiene practices as barriers that prevent pathogens from accessing us. The improper disposal of waste, hand washing, being smart about food preparation, not sharing personal items, getting vaccination, and environmental cleanliness are the way to prevent infection. India is undergoing an epidemiologic, demographic and health transition. The expectancy of life has increased, with a consequent rise in degenerative diseases of ageing and lifestyles. Nevertheless, communicable diseases are still dominant and constitute major public health issues. A large fraction of the world's illnesses and death is attributable to communicable diseases. This trend is especially notable in developing countries where acute respiratory and intestinal infections are the primary causes of morbidity and mortality among young children. Since many communicable diseases are transmitted through contact or droplet. Performing proper hand hygiene and maintaining respiratory hygiene are two prerequisites for the prevention of such diseases. There are several factors associated with the control of communicable diseases, such as hygiene, sanitation and safe drinking water, which are interlinked. Inadequate sanitary conditions and poor hygiene practices play significant roles in the increased burden of communicable diseases. A communicable disease is a misery, and an ounce of prevention is worth a pound of cure.10 Cleanliness is next to godliness. Keeping one's body and environment clean is an essential part of keeping oneself healthy and helping one feel good. Caring about the way one looks is essential to one's self-esteem. A child is precious not only to the parents, family, community and nation also to the world at large.

2. NEED FOR THE STUDY

Health is wealth a famous proverb that almost everyone has heard of but may have yet to understand its essence fully. Health comes from maintaining cleanliness and hygiene which starts from home and expands to workplaces and public areas. By practicing hygiene in the home and everyday life settings, it will have an impact significantly in reducing the global burden of infectious diseases that kills over 17 million people a year. Mainly caused by microorganisms, infections can quickly spread by direct and indirect contact. Hygiene is an old concept related to medicine, as well as to personal and professional care practices. Hygiene refers to the set of practices linked to the conservation of health and healthy living. It involves practices and conditions that help to maintain health and prevent the spread of diseases, as well as practices that deal with the preservation of health. Personal hygiene in a straight-line aid in disease prevention and health promotion. Hygienic practices are prejudiced by social, familial, and individual factors, as well as the individual's knowledge and attitudes towards hygiene. Personal hygiene comprises various behaviors like brushing teeth and washing hands which retain viruses, bacteria and fungi away from the body. These behaviors help to protect mental well-being and activity. Likewise, good personal hygiene will assist in keeping feel good. Meanwhile, those who don't take care of their personal hygiene create body odor and wearing dirty clothes, bad breath suffer from discrimination, and this determines mainly leads to problems related to mental. The main important point is that people have their personal hygiene, but a few people do their hygienic activities better than others; these activities mainly depend on each society, person's culture and family norms. Knowledge, Attitudes and beliefs are the measures that are thought to be on the causal path to the behavior.

Poor practice, knowledge and attitudes to personal hygiene have ominous significance for children for an extended period of time for overall development. The alertness to health aspects of behavioral sanitation is significant because it controls the degree of sustainability of the intervention in sanitation.

The United Nation's Sustainable Development Goal of good health and wellbeing has been embraced globally as a result of its aim of reducing mortality. The potential of achieving this goal requires a paradigm shift from the traditional approach to disease prevention, treatment and education. The possibilities of achieving the main goal require a paradigm shift via the conventional approach to treatment, education and disease prevention. Personal hygiene, also known as personal care, which includes, cleaning foot, nails, genitals, hair, bathing and dental care, and washing of clothes. Grooming includes looking after hairs and fingernails, such as trimming of fingernails and barbing of hairs. Household and personal hygiene can also act as a shielding strategy against upcoming epidemics. Therefore, hygiene is the prime security to lessen the spread of pathogens in every day's environment.

3. OBJECTIVE

To assess the pre-test level of knowledge, practice regarding personal and environmental hygiene among primary school children and their mothers.

To assess the effectiveness of child to mother programmed on personal and environmental hygiene among primary school children and their mothers

To correlate the pre and posttests level of knowledge, practice regarding personal and environmental hygiene among primary school children and their mothers.

To find out the association between pre-test level of knowledge, practice regarding personal and environmental hygiene with the selected demographic variables among primary school children and their mothers.

Operational Definitions

Effectiveness

It refers to producing intended result and brought statistically significant gain in the level of knowledge, practice among mothers of children studying in primary schools by the implementation of systematically planned Child to mother programmed.

Child to Mother Programmed

It refers to a method of teaching and learning where one child or a group of children are selected as change agent and made to train, teach to transform the information to their mothers under proper guidance through multi dimensional educational programmed using teaching aids like power point presentation, playing videos, rhymes, demonstration and followed by discussion to clarify their doubts.

Personal Hygiene

It refers to the activities performed by an individual to care for one's bodily health and wellbeing through proper cleanliness. In this study the aspects of personal hygiene include general body cleanliness, brushing, hand washing, hair care, nail cutting and wearing clean clothes.

Environmental Hygiene

It encompasses maintenance of healthful housing, clean water, and clean environment, safe handling segregation of household waste and appropriate methods of disposal.

Mothers of Primary School children

Mothers of trained primary school children by multidimensional education programmed to act as change agent on personal and environmental hygiene.

4. HYPOTHESIS

H1: There is a significant difference in level of knowledge, practice regarding personal and environmental hygiene among primary school children and their mothers before and after child to mother programmed.

H2: There is a significant correlation between the pre and post test levels of knowledge and practice regarding personal, environmental hygiene among primary school children and their mothers

H3: There is a significant association between the pre test level of knowledge, practice with the selected demographic variables among primary school children and their mothers.

5. ASSUMPTION

Primary school children and their mothers have inadequate knowledge, poor practices on personal and environmental hygiene

The child to mother programmed will help to improve the knowledge, practice on personal and environmental hygiene among primary school children and their mothers

The primary school children can understand the concept and need of personal and environmental hygienic measures to safeguard themselves and act as effective change agents to educate in a better way to enhance their mother's knowledge, and practice.

6. REVIEW OF LITERETURE

Mahmud NS et al. (2020) adopted a quasi- experimental, quantitative, pre and post research design to evaluate the effectiveness of health education on knowledge of high school students regarding plastic use and its health hazards among 60 students. The educational intervention involves three education session about plastic use and its health hazards in which the researcher educates the students about the health hazards of plastics, the prevention of plastic objects as well as health complications. Results showed that the majority of the participants were boys. The mean, SD prior to the educational intervention was 8.98 ± 3.281 and after the educational intervention the mean, SD was 16.85 ± 3.036. The educational intervention was highly effective and significant at $p< 0.00$. The result of the study showed that children had adequate knowledge about health hazards of plastic use. The ill effects of plastic can be reduced by educational intervention among school children.

Parham NA et al. (2020) conducted a quasi-experimental, mixed methods study to assess primary grade children and their mother's hygiene status in Pakistan. Multi-component intervention with behavior change strategies was implemented to improve children's and mother's hygiene knowledge and practices. The study findings supported that innovative way of health message transmission through child to mother approach. It was very effective to improve children and their mother's knowledge, practice on personal and environmental hygiene. They had found significant differences in before and after the educational programmed.

Lithia, Logeshwari et al. (2020) conducted a cross-sectional study to analyze the prevalence and various causes attributing to skin infection among the school children. The study result showed that 17 % of them had pityriasis Alba, 16% of them had impetigo and 14.6 % of them had scabies. Significant association was found between personal hygiene practices of students with the prevalence of skin diseases at $p<0.05$. The study concluded that most of the children had a history of poor personal hygiene practices. So, the researcher recommended that regular health education to parents and children is mandatory; this can reduce the occurrence of skin infections.

Ashok, Kumar et al. (2019) conducted a cross-sectional study to assess the knowledge, attitude, and practices of school teachers on oral hygiene in Karur, India. A total of 50 teachers were given with a self-assessed questionnaire comprising questions eliciting information about the knowledge, attitude, and practice of oral hygiene. The study result revealed that teachers were not aware of the importance of oral hygiene and the knowledge, practice of oral hygiene measures were also deplorable. This study concluded that the knowledge, attitudes, and practice regarding oral hygiene are inadequate among school teachers and recommended that teachers are needed to be educated and motivated to cultivate proper oral hygiene measures by initiating awareness programs; it paves the way for cultivating the children's hygienic practices.

Antipathy K et al. (2018) conducted a study to assess the nutritional status and personal hygiene related morbidities among rural school children in Pondicherry. The study result depicted that untrimmed and dirty nails were the most common personal hygiene related problem among school children. 39.9 % (42.2 % boy and 38.1 % girls) of children's nails were dirty and unclean. It was found that 20.6 % school children wore unclean uniform and tiny percentage of girls showing uncombed hair. Dental hygiene was much better in this study, 17.5 % of children's teeth were unclean. Head lice were common and half of the (56.6%) children had head lice infestation. The study concluded that the status of personal hygiene among school children was poor.

Kaka R, Kendal SD et al. (2018) conducted a study to assess the morbidity status of the school children & elicit relationship of healthy habits with morbidity pattern. Study results revealed that worm infestation was higher in boys (65.1%) as compared to Girls (57.3%). Among the boys 53.1% of them had dental Caries and 16.3% of them had dermatitis. Healthy habits like daily bathing (82.6%), daily teeth brushing (61.1%), mouth rinsing after meal (53%) and hair clean/combed (80.2%) were more in girls as compared to boys while the habit of trimming the nails were equally (55%) noticed among both the groups. The researcher has concluded that morbidities found amongst students are basically due to inadequate awareness & negligent behavior about personal hygiene which

are the critical areas of concern and by active involvement of parents, school teachers may help to improve in personal hygiene of school children, it can reduce the morbidities related to poor hygienic practices.

Survey type of study had conducted on morbidity pattern and hygienic practices in school children. Survey reported that malnutrition, infectious diseases, intestinal parasites, diseases of skin, eye, ear and dental caries are more prevalent in children. Lack of personal hygiene along with poor sanitation causes person-to person transmission of infection. Infection and malnutrition form a vicious circle and leads to retardation of children's physical development. Repeated attacks of infections compromise children's attendance and performance at school and not uncommonly can result in death**.** Soap, water, and latrines are essential for proper hygiene practice in schools and also in home**.** Early identification of childhood illnesses through regular school health check-ups helps prevent complications.

Keaton R et al. (2017) conducted a cross-sectional descriptive study among 800 students of Lucknow district. Structured questionnaire was used for data collection. The result revealed that most of the students belonged to the 10–12 years age group. Improvement in the level of knowledge among students regarding general body cleanliness was 87.5% in posttest as compared to 53.8% in the pretest. Keeping the hair well-trimmed was considered as a part of personal hygiene by 38.0% of students. Knowledge about eating less food in diarrhea was positive in 80% of students. Only 12.5% of students accepted that diarrhea can kill children (pretest) while 100% (posttest) children were aware of this fact. Practice regarding change of clothes on alternate days was 79.5%. Most of the students were found washing their hair once a week (72.5%) and 70% of students were washing hands before meal. The study concluded that knowledge and practice about personal hygiene was in poor condition among students at the time of pretest and posttest results were highly satisfactory.

Matthew C. Freeman, Joshua V. Garn et al. (2017) conducted met analyses to assess the impact of different levels of sanitation services and to explore sources of heterogeneity. A total of 171 studies met the review's inclusion criteria and 64 studies were not included in the previous reviews. The evidence suggested that sanitation is a protective measure to against diarrhea, active trachoma, some STH infections, schistosomiasis, and height-for-age, with no protective effect for other anthropometric outcomes. This review confirmed that positive impacts of sanitation on aspects of health.

Gaeta Parana, Novena JH et al. (2016), conducted a pre-experimental one group pre and posttest among 60 primary school children of Meerut. The study revealed that mean post test knowledge score 17.4 ± 1.86 was higher than the mean pre test knowledge score 11.26 ± 3.30**.** The mean post test practice score 23.8 ± 3.56 was higher than the mean pre test practice score 21.45 ± 2.17. There was an association found between the age, type of family with gain in knowledge scores of students. Occupation of the mother was found to be significantly associated with the practices of students regarding personal hygiene. The study concluded that the Video-Assisted Teaching (VAT) is an effective strategy in improving knowledge and practices of Primary School Students regarding Personal Hygiene.

Komag P. Heidi et al. (2016) conducted a cross sectional study to identify the Morbidity pattern and its association with personal hygiene practices among school going children studying 5th to 9th standards. The study result revealed that 84% of the students take bath daily, 66% of them brush their teeth daily and washing their hands with soaps and water were the most common hygienic practices among school children. Maximum personal hygiene practices not followed by the students such as 40.8% of them not cutting their nails and 37.8% of them not washing their hands properly. They were reported that cold was the most common health problem among school children. 49.8% of the students had knowledge regarding common health problems due to neglected hygienic practices.

7. METHODOLOGY

Research methodology is a systematic way to solve the research problems. It is of vital importance which consists of the various steps that are generally adopted by a researcher in studying the problem along with the logic behind them. The methodology of the researcher indicates the general pattern of organizing the procedure for gathering valid and reliable data for the purpose of the study.

This chapter includes research approach, research design, setting of the study, population, sampling technique, sample size, sampling criteria, instruments, validity and reliability, pilot study method of data collection, plan for data analysis and interpretation and ethical implications.

Research approach

A Quantitative approach was adopted for the present study and it was aimed to evaluate the effectiveness of child to mother programmed on personal and environmental hygiene among mothers of children studying in primary schools at deoli.

The purpose of a quantitative study is to summarize the data that support generalization about the phenomenon under study, also gives objectivity and accuracy of results. This approach is considered to be the most suitable one to conduct the study. It helps the researcher to evaluate the effectiveness of child to mother programmed on personal and environmental hygiene among mothers of primary school children.

Research Design

The present study was pre-experimental pre-test -post test research design. A pre assessment of personal and environmental hygiene among primary school children and their mothers were assessed by structured knowledge questionnaire and self-expressed practice questionnaire with interview method and which was followed by a Multidimensional educational programmed on personal and environmental hygiene was implemented by the researcher only to the primary school children.

Variables

Independent Variable

The independent variable of the present study was a child to mother programmed on personal and environmental hygiene. It comprised of multi dimensional teaching programmed on personal and environmental hygiene by using different type of A.V aids.

Dependent Variable

The dependent variable of present study was knowledge, practice regarding personal and environmental hygiene among primary school children and their mothers.

Demographic Variables

The demographic variables under the study were age, sex, class of study, birth order of the child, age of the mother, education level of parents, occupation of the parents, family monthly income, religion, source of previous information regarding personal and environmental hygiene among primary school children and their mothers.

Population of the study

Population of the study is defined as the entire set of individuals or objects having some common characteristics. The population of present study was all the children studying from 3rd to 5th standard in primary school and their mothers at deoli tonk District.

Sample & sampling techniques

A sample is a subset of the population that is selected for a particular setting. Sampling procedures are selecting a group of people, events, behaviors or other elements with which to conduct a study. Non probability convenience sampling method was selected for the study.

Sample size

The sample size of the present study was 453 primary school children and their mothers. The primary school children are studying from 3rd to 5th standard in selected primary school in deoli. Among the 453 children 245 were boys and 208 were girls.

Data collection procedure

The present study was conducted by pre-experimental research design. The period of data collection was 10 months. School student's age group between 8-10 years and studying from 3rd to 5th standard and their mothers were the sample of the study. Six primary schools were selected. Using non probability convenience sampling method 453 primary school children and their mothers were selected. The schools were located in deoli the distance of 6 km in radius from the busstand. Primary school children who were absent and not willing to participate were excluded while selecting the study participants. Baseline data were collected from primary school children and their mothers. Pre test level of knowledge and practice were assessed by using structured knowledge questionnaire and practices by self-expressed questionnaire among primary school children and their mothers.

Plan for data analysis

The data are planned to analyze based on the formulated objectives and hypotheses. The research finding depends on statistical analysis of the gathered data which needs to be organized, summarized and interpreted by the researcher. The data were analyzed on the basis of the objectives and hypotheses.

 Descriptive statistics such as frequency and percentages were used to analyze each category of socio-demographic variables and level of knowledge, practice on personal and environmental hygiene.

 Dependent/ paired‘t’ test was used to determine the significance of the difference between mean, SD scores of the pretest, posttest-I &, posttest-II.

 Repeated ANOVA measure used to identify the difference in the score over time and used to compare the mean scores at different time interval to assess whether a significant mean difference exist.

 Karl Pearson correlation coefficient used to find the correlation between knowledge and practice of primary school children and their mothers

 Chi-square test was used to find the association between knowledge, practice with their selected demographic variables among primary school children and their mothers.

8. Major findings of the study

Among 453 primary school children 142 (31.3%) of them were 8years old and highest 162 (35.8%) of them were 10 years old.

 Regarding the sex of the primary school children majority 245 (54.1%) were male and 208(45.9%) were males.

 Regarding the studying class lowest 132 (29.1%) primary school children were studying IIIrd standard and highest 166 (36.6%) of them were studying Vth standard.

 Based on the birth order of the children highest 216 (47.7%) were first child in their family and only 41 (9.1%) of them were third child in their family.

 Regarding the source of the information on personal and environmental hygiene among primary school children lowest 36 7.9(7.9%) of them were got information from Health professionals and highest 147 (32.5%) of them were got information from Teachers.

9. Recommendations for further studies

In the light of the finding of the present study, the researcher puts forward the following recommendation for conducting further research.

 A similar study can be done on a larger scale in different setting

 A cross sectional study can be conducted on knowledge, practice and attitude regarding personal and environmental hygiene among mothers of primary school studying children.

 A comparative study can be done to assess the knowledge regarding personal and environmental hygiene among urban and rural mothers of primary school studying children

 A similar study can be done on various topics such as diarrheal management, accident prevention which can be implemented through child to mother programme

 A comparative study can be done to assess the knowledge regarding personal and environmental hygiene among government and private school children

 A comparative study can be conducted with different interventional programme to improve the knowledge, attitude and practice regarding prevention of infectious diseases among mothers of primary school children

 A Quasi experimental study can be done to assess the effectiveness of child to mother programme on knowledge, Attitude and Practice regarding personal and environmental hygiene among mothers of school age children.

 Qualitative research involving Focus Group Discussion (FGD) can be conducted to understand about their attitude of hand washing and health outcomes

10. Limitations

 The study sample size was 453 primary school children and their mothers only, hence generalization is not possible

 Extraneous variables are controlled to some extent only

 There was no randomization and control group.

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