

“Hand hygiene is arguably our most important life skill. So teach it well and teach it often.

Micheal J Blackburn-2006

CHAPTER –I INTRODUCTION

Hand washing is one of the most effective ways to help prevent diarrheal related disease among children. In Kenya, the prevalence of diarrhea among children under five is 15% the rate is even higher 18.7% among children who live and go to school in formal settlements. Educating children about the importance of hand hygiene as well as how and when to wash your hands is a key factor in promoting good health and wellbeing. Behavior change communication approach to hygiene promotion that uses an in depth understanding of people’s behavior to design persuasive communication. At CFK Africa children are engaged as equal and active participants in designing messaging around process starts by trying to understand on a deeper level how children think and feel what motivates them to practice or not practice a behavior.

Sarah Lebu-CFK Africa-2004

According to the centers for disease control 2010 in America, 160 million school days are lost each year due to infectious illness. The uncontrolled spread of infection has historically been a problem in young school age children kinder garden through 3 rd grade. Although regular hand washing has been widely recognized of infectious illness, hand washing among school age children is inconsistent at best. Washing among school children in Bogotá, Columbia, elementary school age children are particularly vulnerable to infections. While hand washing is the best method if preventing infections, many elementary schools are housed in buildings that have barrier to effective hand hygiene. Most childhood illness disease and deaths are caused by the use of unsafe water for drinking and hand washing water supply and hygienic benefits are the health of the school child in the sense that it directly reduces disease and indirectly improves the child’s prospects in his educational Endeavour. when kids come into contact with germs can unknowingly become infected simply by touching their eyes, nose, or mouth moreover, once they are infected, it is usually just a matter of time before the whole family comes down with the same illness.

Austin D. Amoako-2003

Hand washing also known as hand hygiene is the act of cleaning one's hand with soap or hand wash and water to remove viruses, bacteria, microorganisms, dirt, grease, or other harmful and unwanted substances stuck to the hands. Drying of the washed hands is part of the process as wet and moist hands are more easily decontaminated. If soap and water are unavailable, hand sanitizer that is at least 60% alcohol in water can be used as long as hands are not visibly excessively dirty or greasy. Hand hygiene is central to preventing the spread of infectious disease in home and everyday life settings. The world health organization is recommending washing hands for at least 20 seconds before and after certain activities. These includes the five critical times during the day where washing hands with soap is important to reduce fecal-oral transmission of disease, after the using the toilet after cleaning child's bottom, before feeding a child, before eating and before after preparing food or handling raw meat, fish, or poultry. When both hands washing and using sanitizer are not available, hands can be cleaned with uncontaminated ash and clean water, although the benefits and harms are uncertain for reducing the spread of viral or bacterial infections. However frequent hand washing can lead to skin damage due to drying of the skin. Moisturizing lotion is often recommended to keep the hands from drying out; dry skin can lead to skin damage which can increase the risk for the transmission of infection.

World Health Organization-2004

A large fraction of the world's illness and death is attributable to communicable disease. sixty-two percent and 31% of all death in Africa and Southeast Asia, respectively, are caused by infectious disease. 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. Inadequate sanitary conditions and poor hygiene practices play major roles in the increased burden of communicable disease within these developing countries.

Alyssa Vivas, Bizu Gelaye and Michelle A. williams-2010

Hand hygiene is recognized as the leading measure to prevent cross-transmission of microorganisms and to reduce the incidence of health care associated infections. despite the relative simplicity of this procedure, compliance with hand hygiene among health care providers is as low as 40% to address this problem, continuous efforts are being made to identify effective and sustainable strategies. one of such efforts

is the introduction of an evidence based concept of “My five moments for hand hygiene” by world health organization. these five moments that call for the use of hand hygiene include the moment before touching a patient, before performing aseptic and clean procedures after being at risk of exposure to body fluids, after touching patient surroundings. this concept training monitoring and reporting hand hygiene health care workers.

Sreejith Sasidharan Nair-2014

Hand hygiene is one of the most effective and efficient ways of controlling fecal oral disease. However, little is known about the predictors of hand hygiene behavior among school children. A predesigned checklist guide was used to observe hygiene behavior Pf 460 pupils from rural schools in shama south district, Zimbabwe. A pretested questionnaire was administered to obtain demographic data of the observed school children. membership of water sanitation and hygiene club, age, gender and the level of education were associated with hand hygiene practices. The findings indicated that investing in hand hygiene behavior change processes among school children using the promotion, formation, resuscitation and empowerment of wash clubs in schools is important in disease prevention among communities in developing countries.

Margaret Macherera-2001

Hand washing is the core of the intervention to prevent diarrhea and pneumonia among children and is the single and only cost effective intervention. Maternal and child survival program hand hygiene is a fundamental way to prevent infection as in most feco-oral infections, hands are an important vector. If hand washing is done effectively, it becomes an important measure to limit the spread of microbes. Encouraging hand washing habits among children is comparable to the anti-diarrheal vaccine and can prevent diarrhea related illness and deaths.

Marie Louise-2007

Good hand hygiene is a cornerstone of safe and effective health care. It is a highly cost effective public health measure that is also crucial to protecting against a range of disease like pneumonia and diarrhea. Global and national estimates reflect vast inequalities in access to Hand washing, even within countries. Where hand hygiene facilities are available, research has shown that people, especially men do not use them

consistently. Greater political support and behavior change intervention are needed to make substantial improvements in the policies, strategies and actions that drive sustainable change.

UNICEF-2008

Good hand hygiene practices help ensure children are healthy, so they can attend class and learn. Globally, children miss a cumulative 272 million schooldays each year due to diarrhea, and hand washing with soap has been found to help reduce school absenteeism that is caused by diarrhea, influenza and conjunctivitis by up to 50%. The use of hand sanitizers was found to reduce rhinorrhea a common symptom of the flu and cold like illnesses. School should provide hand washing stations with soap near where food is prepared and consumed, to help staff and students practice good hand washing stations with soap and water also help girls manage their menstruation hygienically. When girls miss school during their menstruation due to inadequate hygiene facilities, these absences interrupt education. This can result in reduced academic performance, delays in academic and social development and reduced future earning potential.

Hutton G, Haller L-2001

Good hand hygiene is one of the most critical control strategies in outbreak management, hand hygiene is defining as any method that removes or destroy microorganisms on hands, it is well documented that the most important measures for preventing the spread of pathogens is effective hand washing. Global hand washing day is observed every year on October 15 come on wash your hands frequently is the most cost effective intervention, most of the infectious disease can be prevented by simple hand washing. Think of the huge savings in terms of health budget whether it is the country health budget or the families' health budget. Germs are found everywhere, germs are too small that cannot be seen, germs can make person sick, generally persons are touching 15 objects is within a minute so easily they can get infection which increase the mortality thereby control of health care. Children need to understand why it is important to wash their hands, to do this they need help from their parents, care givers and teachers or from a member of staff at their schools. Children love to play with mud and sand which host a lot of germs which can cause illness. Teaching them significance of proper hand washing it is crucial step towards living a healthy life.

NEED FOR THE STUDY

The cross sectional study was conducted in Bogota, Colombia to help identify and overcome barriers to proper hygiene practices, data on hand washing behavior and interventions and individual and contextual factors were collected from 2042 sixth through eighth grade students in 25 schools in Bogota via anonymous questionnaire. A member of the school administrator or teaching staff completed a questionnaire about the school environment. Site inspections of bathroom facilities were conducted. Only 33.6% reported or very often hand washing hands with soap and water before eating and after using the toilet. First order statistical was calculated to characterize the sample and ascertain the prevalence hand washing behavior and positive hand washing intentions. Associations between outcome variables and individual and contextual factors were examined in logistic regression models and are expressed as unadjusted odds ratios. Consistent with the behavior theory underpinning our study, a high level of perceived control over hand washing behavior was thoroughly associated AOR= 6.0%; 95% CI= 4.8%, 7.5% with positive intentions toward proper hand washing.

LOPEZ-QUINTERO C, FREEMAN P, NEUMARK Y- 2009

The cross sectional study conducted in 42 bedded medical intensive care units of a tertiary care hospital. Were observed during routine patient care by observers posted on each ICU and their Hand washing compliance was noted. Thereafter questionnaire regarding knowledge perception and attitude toward hand washing was filled by each health care worker. Percentage and X² test over all compliance was 43%, it was 68.9% in the intensivist, 56.3% in attending physicians, 40.0% in the post graduate residents and in the nurses. Compliance was inversely related to activity index. Compliance for high, medium, low risk of cross transmission was 38.8% respectively. Compliance of the study group is affected by the activity index of opportunities they come across per hour and professional status. The listed less knowledge lack of motivation, increased work load as some of the factor influencing hand washing.

SHARMA S, PURI S- 2011

The cross sectional study was conducted a longitudinal, observational design was used in to collect data from 120 registered nurse's employee in critical care and post critical care units. Nurses provided information about motivational factor and intention and self-report of the proportion of time they followed

guidelines. At least 2 weeks later the nurses hand hygiene performance was observed while they provided patient care. Structured equation modeling was used to test the TPB based model. Hand washing recommendation was low $r=0.21$. TPB variables predicted intention to hand wash and infection was related to self-reported hand hygiene. Actual hand hygiene of work activity in the clinical setting than to internal motivational factors.

C A O' BOYLE -2001

Across sectional descriptive study of hand washing knowledge and practices among primary school children in Mumbai. Randomly selected primary school in Mumbai, India two hundred and eighty-three students were interviewed using a structured interview schedule regarding socio demographic characteristics history of illness and hand washing knowledge and practices. More than 54% of the population reported illness in the past one month out of which 81.4% reported absenteeism due to illness. Around 34% children were unaware about health related consequences of not washing hands. When asked about the important times when hands ought to be washed, only 18% mentioned after toilet use. Of the 2283 students a very small percentage of respondents 0.7% reportedly practiced four steps of hand washing. Knowledge regarding hand washing was found to be inadequate while practices were not up to the recommended standard.

GAWAI PP, TAWARE SA-2016

A survey conducted to improve hand washing knowledge and practice among school children through health education out of 7 schools Government Urdu primary school was selected by simple random sampling. All of students of grade 3rd, 4th and 5th were included. Baseline and end line survey was done in February 2013, and September 2013 health education sessions were calculated once a week for six weeks. Paired t test McNemar test and proportions were calculated. Ethical clearance and informed consent was obtained. Result the mean knowledge score of personal hygiene was 53.86 which increased to 77.54 after health education intervention, which was statistically significant at paired t 5.17 df 6 and $p < 0.01$. The mean practice score of personal hygiene was 41.43 which increased to 60.87 after health education intervention. The increase in correct practice was statistically significant at paired t 7.52 df 8, and $p < 0.001$, the change in behavior of school children was possible if the health education intervention is properly implemented.

SHRESTHA A, ANGOLKAR M-2015

A questionnaire based study was conducted in rural schools of Maval taluka of pune district to assess the knowledge about hand washing practices and behavior in school going children. It is well known that hand contamination plays a major role in disease prevention. A questionnaire based study on hand washing practices and behavior in school going children in Maval taluka was carried out on 340 volunteers from grade 6 to 8 of rural area of Maval taluka pune district. Statistical analysis was done by using percentages and proportions. A total of 340 students from grade 6 to 8 participated in the study. Majority were from age 11 to 13 years (n=147). Almost all (n=320), 93% were knowing the practice of hand washing. Majority (n=209.61%) were using soap in some form for cleaning of hands before meals. Majority of the students used water and soap for hand washing and knew the importance of hand cleaning to prevent many diseases.

DEEPALI AMBIKE 2019

The cross sectional study was conducted in randomly selected schools in Chennai, city from September 2014 included 450 adolescents of 10 to 19 years' age using semi structured questionnaire. Multistage sampling method was used descriptive and inferential statistics were used in data analysis. Out of 450 students 54.7% were males 45.3% were females. Adequate knowledge and practice of hand washing was described as hand washing with soap and water during two critical times. 85.6% of had adequate knowledge but only 24.9% were practicing adequate hand washing. 95% participants knew that adequate hand washing is must before eating but only 32% were practicing the same. 90% of the students knew adequate and washing after using toilet was essential but only 69% were practicing the same.

RAJAJEYAKUMAR MANIVEL -2016

A comparative research study to assess the knowledge and practice regarding hand hygiene to prevent infection among rural and urban people selected areas of Ahmadabad in view to develop an information booklet. A quantitative research approach was used in the study, adopted convenient sampling technique to select the samples. Samples who met the criteria for sample selection were selected. Data was collected by self-structured knowledge questionnaire and a checklist. The result shows that the knowledge practice of the people residing in urban area. The mean score of knowledge of urban area is 13.54 and rural area is 13.1. The mean score of practice of urban area is 10.67 and rural area is 8.16. The t value of knowledge is 0.51

and practice is 4.11. The present study shows that the knowledge and practice of the people residing in urban area is more than the people residing in the rural area regarding hand hygiene.

HARI MOHAN SINGH -2022

STATEMENT OF THE PROBLEM

“A study to assess the effectiveness of structured teaching program on knowledge regarding hand washing techniques and its importance among school going children’s in selected school at Namakkal district”.

OBJECTIVES OF THE STUDY

- To assess the level of knowledge regarding hand washing techniques among school going children before and after structure teaching program.
- To implement and evaluate the effectiveness of structured teaching programme regarding hand washing techniques among school going children.
- To find out association between level of knowledge school going children and selected demographic variables such as Age, Gender, Religion, Income, domicile, Type of family, Number of siblings, previous knowledge, Toilet practice, Nature of drainage system.

HYPOTHESIS

H1- There will be significant enhancement in the level of knowledge regarding hand washing techniques among school going children after structure teaching program

H2- There will be significant association between the level of knowledge of school going children with selected demographic variables such as Age, Gender, Religion, Income, domicile, Type of family, Number of siblings, previous knowledge, Toilet practice, Nature of drainage system.

ASSUMPTIONS

- School children may not have adequate knowledge regarding hand washing techniques among school going children.
- Structured teaching programme on hand washing techniques will improve the knowledge among school going children.

LIMITATIONS

- ❖ The school going children who are attending Panchayat union primary school at Namakkal, District.
- ❖ Sample size is limited to 60 only.
- ❖ The study period limited only 4 weeks.

OPERATIONAL DEFINITIONS

Assess

It refers to evaluate or estimate the nature, ability, character and quality. In this study assess means to ascertain knowledge. Among school going children's regarding hand washing techniques.

Effectiveness

It refers to the capability of producing a desired result or the ability, to produce desired output.

In this study effectiveness means the improvement in the knowledge of hand washing techniques among school going children.

Structures teaching programme

Structured teaching programme is an advanced teaching system. Intended to meet a desired outcome, in this study structured teaching programme means a well prepared and well planned explanation session conducted by the investigator and will be given by using flash card about the hand washing techniques among school going children.

Hand washing techniques

It refers to act of cleaning the hands using soap and water to remove the microorganisms, dirt, grease, or other harmful and unwanted substances stuck to the hands.

In this study hand washing techniques refers to meeting all school going children such as hand washing techniques, importance of school going children.

School children

It refers to school children age between 6-10 years or studying 1 standard to 5th standard

In this study school going children's refers to 6-10 years, meeting all the school going children's hand washing techniques and its importance.

CONCEPTUAL FRAME WORK

Conceptual frame work is inter related concepts that assembled together in some rational scheme by virtue of their relevance to a common theme conceptual frame work helps to stimulate research and the extension of knowledge and attitude by providing both directions and inputs.

Polit and hungler-1999

Conceptual frame work is the precursor of theory. It provides broad prospective for nursing practice and education conceptual frame work plays several interrelated roles of science. Their overall purpose is to make scientific and meaningful findings and also to generalize the finding.

Polit and hungler-1999

The conceptual frame work deals with the interrelated concepts that assembled together in some relations schemes by virtue do relevance to a common theme. The conceptual frame work of the present study is modified Dorothy Johnson's [1980] open system theory. According to general system theory a system consists of a set of interacting components that are regulated by biological, psychological, sociological factors. An individual composed of open and interactive subsystem. An open system consists of inputs, throughput and output. According to theorist view the information matter, energy, that the system receives from the environment are called as input for the system. The system uses organize transforms the input in a process called as throughput and releases information matter, and energy as output into the environment. Output that returns to the system as input is called as feedback. In this study school going children's are the person's, has an open and interactive subsystem.

INPUT

In the study, the input refers to assess the level of knowledge in experimental group. This influenced by the demographic variables such as Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

THROUGH PUT

Through put was implementation of structured teaching programme regarding hand washing techniques among school going children's.

OUTPUT

The expected outcome was obtained by assessing the level of knowledge of the sample present study, the feedback considered as a process of maintaining the effectiveness of structured teaching programme. Feedback was based on the analysis of post test scores; the intervention strategy can be modified if necessary the same pattern can be followed once again.

FEEDBACK

Differences in pre and post test score were observed from the level of comprehensive knowledge of the sample in the present study, the feedback considered as a process of maintaining the effectiveness of structured teaching programme regarding hand washing techniques. Feedback

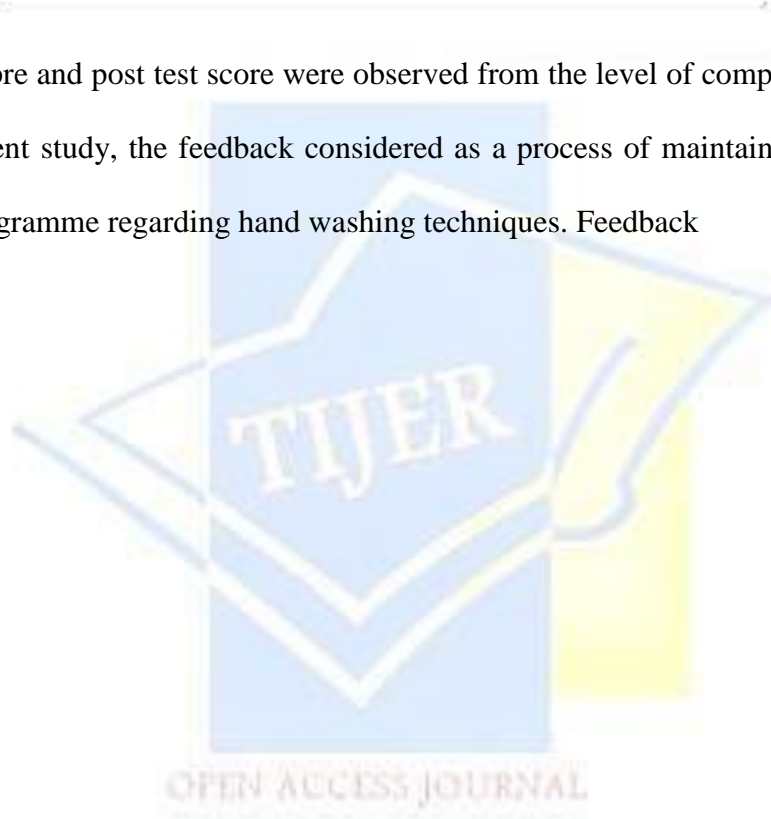
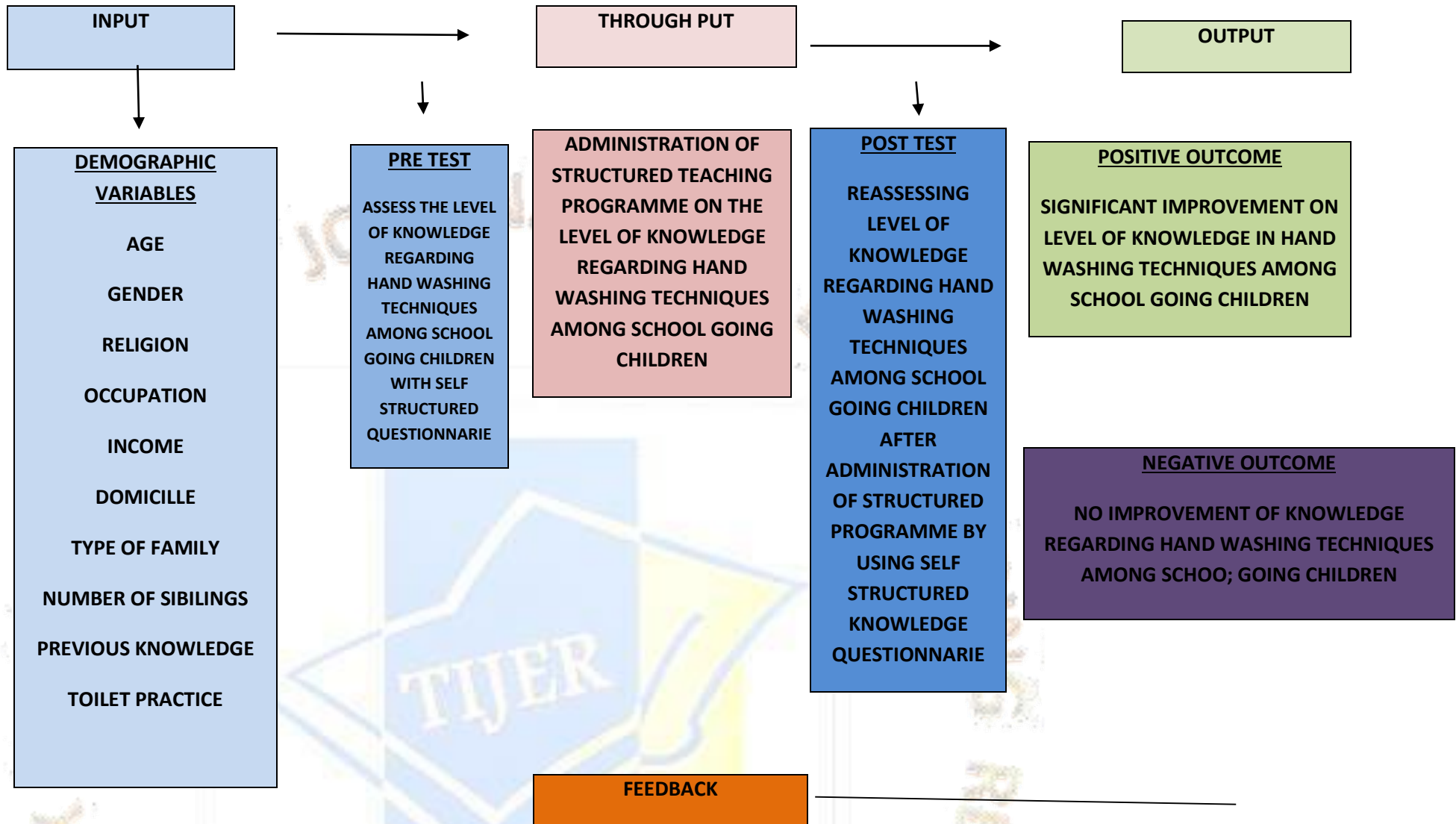


Fig 1: CONCEPTUAL FRAMEWORK BASED ON MODIFIED J.W.KENNYS OPEN SYSTEM



CHAPTER-II

REVIEW OF LITERATURE

A literature review is a body of text that aims to review the critical points of knowledge on a particular topic of research.

ANA, 2000

A literature review is an account of what has been already established or published on a particular research topic by accredited scholars and researchers.

UNIVERSITY OF TORONTO, 2001

A review of related research and non-research literature was done to broaden the understanding and develop an insight into the related problem under study.

Review can be categorized under the following heading

- 1. Literature review related to knowledge of school going children's.**
 - 2. Literature review related to school going children's in hand washing techniques.**
 - 3. Literature review related to structured teaching programme on hand washing techniques among school going children's.**
- 1. Literature review related to knowledge of school going children's.**

Mohammed AL Bashtawy (2001) A cross functional study was conducted over a period of 3 months; the participants were school students from grade 1 to 12 randomly chosen from 14 public schools, located in Mafraq Government, Jordan using a multistage sampling technique. The study assessing the hands washing knowledge among school going children's, self-reported data requiring caution especially towards non normative findings, furthermore, some bias may occur from over reporting good hand washing habits. The findings reveal that a low percentage of school's students ignored hand washing after different critical situations, and this figure decreased with age. Nevertheless, the practice should be improved further.

Munthir M. Almoslem (2009) A cross sectional study was conducted to determine the level of hand washing knowledge, and practices among school students in eastern province school, Saudi Arabia. A cross sectional survey recruited from November 2019 to March 2020 to assess the level of the student's hand washing knowledge. A reliable questionnaire prepared conducted using a two stage sampling technique. A total of 271 students participated in the study from primary, middle, and high schools. 80% were boys most of whom displayed an acceptable level of knowledge on hand washing. Nearly 75% and 74% boys and girls, respectively, gained knowledge about hand hygiene practices from their parents. Only 46% of the students thought that hand washing is a potential protective measure against diseases. 93% students used water and soap and water are the best methods to wash their hands [p value < 0.001=0.044]. Results collectively indicated that hand washing knowledge and practices among school students in the eastern province are acceptable interventions in preventing the transmission of infectious diseases such as COVID-19. Indeed, further improvement conducted through specific health education programs to emphasize the role of hand washing in health hygiene is highly recommended.

Ashutosh shrestha & Mubashir B A (2004) conducted a cross sectional study millions of lives could be saved through simple and proper hand washing and educational intervention which are cost effective in developing world. There are marked changes in hand washing behavior among school children after health education intervention at schools. To assess the knowledge and practice among school children's out of 7 schools Government Urdu Primary school was selected by simple random sampling. All of students of grade 3rd and 4th and 5th were included. Baseline and end line survey was done in February 2013, and September. Health education sessions were conducted once a week for six weeks. Paired t test, McNemar test and proportion were calculated. Ethical clearance and informed consent was obtained. Results the mean knowledge score of personal hygiene was 53.86 which increased to 77.54 after health education intervention which was statistically significant at paired t 5.17 df 6 and p<0.01. The mean practice score of personal hygiene was 41.43 which increased to 60.87 after health education intervention. The increase in correct practice was statistically significant at paired t 7.52 df 8 and p<0.001 conclusion. The change in behavior of school children was possible implemented.

S.A. Pratinidhi, S.V. Haribhakta (2006) A questionnaire- based study on hand washing practices and behavior in school going children in Maval taluka was carried out on 340 volunteers from grade 6 to 8 of rural area of Maval taluka, Pune District Maharashtra, Statistical was done by using percentage and proportions. A total of 340 students from grade 6 to 8 participated in the study. Majority were from 11-13 years (n=147) almost all (n=209.61%) were using soap in some form for cleaning hands. Many (n=250.73%) were having practice of washing hands before meals. Almost all (n=309.91%) were knowing the reason for washing of hands. The benefits and prevention of disease were known majority of students (n=295.87%) nail trimming was done once a week in almost all students. (n=326.96%) as it prevents the spread of the disease, only (n=14-4%) were not aware of the reason for trimming of the nails. About (n=201.59%) of mothers had formal education upto tenth standard.

Ahmet Ergin & Mehmet Bostanci (2012) conducted a cross sectional study, this study aimed to evaluate the student's hand washing knowledge skills related factors. All existing 1st year students in the medical and educational faculty, plus all existing 2nd and 3rd year students in the medical faculty of Pamukkale University, Denizil, Turkey from April to May 2010 were eligible for the study. Participants filled questionnaire. The questionnaire tested the student's social hand washing knowledge 8 questions, practices 21 question, and techniques 10 question and it was prepared using previously published studies. Participants received 1 point for each correct answer provided. Final score was calculated by summing up the points from all question in this section and multiplied by 100. The family affluence scale was used to determine a socio economic status. All 303 students participated in this study participants age (+/_SD) was 20.1 +/_ 1.6 and the age range was between 18 and 32 sixty-two point seven percent of the participants were women. Forty-four-point nice percent of the participants were medical students. Fifty-one point eight percent of the participants were in low SES. Twenty-seven point four percent of the participants wash their hands less than 5 times a day. Main reason for skipping hand washing was the participant's belief of no need (63.7%). The mean score (+/- SD) of participant's hand washing knowledge, practices, and techniques were 71.2% +/_ 20.7, 60.3 +/_ 13.4 and 79.7+/_ 18.4, respectively all s ores were significantly higher in women. A multivariate analysis showed that gender quality and or quality of available campus based public health educational programs, creating hand washing promotion to the general public and using the findings from this study are recommended.

U.S Centers for disease control and prevention (2015) conducted a survey and started that forty million American children contract illness every year due to the bacteria on the hands and around eighty thousands of them die due to the infections by not washing hands. It is also inoculating this habit in children from the very beginning itself so that it becomes a way of life for them. Only 70% of the children actually wash hands after use a public toilet. Almost four fifths of all infection that because illness can be prevented if child keep their hands were properly washed and cleaned.

Guinan Severeid (2015) conducted a cross sectional study on prevalence of bacteria in the hands of children and their perception on hand washing in two schools of Bangalore and Kolkata. This was assessed by questionnaire as well as by collection of swab from hands and performing bacteriological culture in the laboratory. The study results showed that with regard to student's perception about the dirty areas of the hands. It was observed that majority 78% felt palm was likely to be more dirty while less than 70%. Felt that web spaces could harbor dirt. Almost 86% reported that they washed before eating lunch, but not only 21.3% said they always used soap while 47.3% never used it. Availability of soap all the time in the school was reported by only 18.4% students. The swab of 61% children showed potential pathogens. The commonest of these was staphylococcus aureus which was seen in 44% samples. The study concluded that the student's hands were contaminated before taking food. Although they washed hands before meals they hardly used soap due to non-availability of soap and recommended that the school authority should be asked to keep soaps in the toilet for hand washing.

Alysa vivas bizugileye (2014) conducted a cross sectional study was evaluated that the knowledge and practice of hygiene rural school children in Ethiopia and assessed the extent to which proper knowledge of hand hygiene was associated with hand hygiene characteristics. This cross sectional studies comprised of 699 students who were interviewed by trained staff. Participants were in grades 1-6 at Angolela primary school, located in rural Ethiopia. Data consisted washing practices knowledge about hand washing. Approximately 52% of students were classified as having adequate knowledge of hand hygiene. Most students' reported hand washing before meals 99.0%, but only 36.2% reported using soap. Although 76.7% of student's that reported that washing hands after defecation was important only 14.8% reported actually following this practice.

Lupez quintar (2014) conducted an experimental study was assessed the hand washing behaviors and intention among school children in Bogota, Colombia to help identify and overcome barriers to proper hygiene practices. Data on hand washing behavior and intentions and individual and contextual factor were collected from 2042 sixth through eighth grade students in 25 schools in Bogota via anonymous questionnaire. A member the school administration or teaching staff completed a questionnaire about the school environment. Site inspections of bathroom facilities were conducted. Only 33.6% of the sample reported always or very often washing hands with soap and clean water before eating after using toilet. About 7% of students reported regular access to soap and clean water at school. A high level of perceived control was the strongest predictor of positive hand washing intentions 95% confident interval, (CI) =4,8 7.5) students with proper hand washing behavior were less likely to report previous year school absenteeism (OR =0.8, 95% CL=0.9%) or previous month gastrointestinal symptoms. Scarcity of adequate facilities in most school in Bogota prevents children from adopting proper hygiene behavior and towards health promotion.

Le thithanhxuan (2014) conducted a cross sectional study in six primary and secondary schools and in the homes of four ethnic villages in Northern Vietnam. Quantitative methods included face to face interviews and demonstration of hand washing protocol to 319 school children in first fourth and seventh grades. Qualitative methods included structured observation at six schools and 20 homes comprising 24 children. The dependent variable was the self-reported HWWS behavior. The independent variables included grade, school type, gender, ethnicity group, performed to examine association between HWWS behavior and demographic factors. Among the 319 school children performed HWWS. Through the demonstration protocol only 10 out of 319 school children HWWS satisfactory. The percentage of students who washed their hands at recommended times (30-60 sec) was 58%. This proportion increased by grade from 43% among grade 1 to 67 % among grade 7: $p < 0.05$. Correlates of self-reported HWWS were more common in higher grades [grade 4 vs. grade 1: odds ratio (OR)=4.14 (2.00-8.56), GRADE 7 VS GRADE 1:OR=7.76 (3.67-16.4)] and less common in ethnic minority groups [XaPho vs. Kinch-Tay : OR=0.28 (0.11-0.70)]. All 20 homes of school children visited had soap and water but none of the six schools had soap for hand washing.

2. Literature review related to school going children's in hand washing techniques.

Issac Monney, Oparebea Sussana (2013) Conducted a descriptive cross sectional study about washing practice, the prevalence of proper hand washing and related factors among sixth grade of elementary students in selected sub district, Indonesia. A self-administered questionnaire was administered to 274 students at seven schools randomly selected by proportion to size from five villages. Data were analyzed using descriptive statistics Chi square tests, and multiple logistic regressions to explore association between the various study factors characteristics, attitudes, subjective norms, perceived control and availability of facilities. Nine combinations of hand washing emerged from this study which combined washing hands by using water and soap with two critical events before eating and after visiting the toilet. Only 40.5% of the respondents washed their hands properly. Availability of clean water (Adj OR=4.24, 95% CI=1.92-9.35) and soap (Adj OR =5.55, 95% CI =2.36-13.0.8) at hand washing stands were found to be significant predictors of proper hand washing, when adjusted with other factors.

Sae-Lim V, Lim LP(2013) Conducted a cross sectional descriptive study to evaluate the effect of intensive education on self-reported frequency of hand washing, measured quality of hand washing, and measured scores of knowledge, attitude, and practice after 7 days and 90 days home based intensive education of participants aged >7 years in households with an influenza positive child. The researchers provided intensive hand washing education using interactive participation including individual training, self-monitoring diary, provision of soap findings suggested that there were significant improvement on FHW and QHW on day 7, control group (n(1)=135) reported 3.9 hand washing episodes day, whereas the intervention group (n(2)=140) reported 5.7 episodes day, control group (n(2)=164) obtained a 3.2 measured quality score whereas the intervention group (n(2)=167) obtained a score a score of 6.4. FHW significantly improved by 2 episodes day and QHW increased by scores/episode. Conclusion were drawn that knowledge of influenza and hand washing following coughing /sneezing showed significant improvement, but attitude modification toward severity of influenza requires a more intensified and longer intervention.

McGukin (2012) conducted a study comparative study was in Karachi, Pakistan study was to evaluate association between hand washing promotion and child growth and development. A total 461 children were enrolled in a trail of household level and washing promotion in 2006 and was younger than 8 years at reassessment in 2012, in 2016 neighborhoods were randomized to control (n=9), hand washing promotion (n=9), or hand washing promotion and drinking water treatment (n=10) intervention households received free soap and weekly hand washing promotion for 9 months. Anthropometrics and development quotients measured with the Battelle development inventory II at 5 years of age. The result of the study showed that 24.9% and 22-1% of children had Z scores that were more than 2 SDs, below the expected z scores for height and body mass index for age, respectively Anthropometrics did not differ significantly across study group, global development quotients averaged 104.4, 95 among intervention children and 98.3 among control children 9 (p=04) difference of similar magnitude were domains. Although growth was similar across group, children randomized to the hand washing promotion during their first 30 month of age attained global development quotients 0.4 SDs greater than those of control children at 5 to 7 years' age. The study concluded and suggested that hand washing promotion could improve child well-being and societal productivity.

Jodrell. C.M. (2012) Conducted a cross sectional study to assess the effect of hand washing promotion with soap on the incidence of acute respiratory infection, impetigo and diarrhea. Results showed that children younger than 5 years in households that received plain soap and hand washing promotion had 50% lower incidence of pneumonia than controls. Also compared with control, children younger than 15 years in households with plain soap had a 53% lower incidence of diarrhea and a 34% lower incidence of impetigo, incidence of disease did not differ significantly between households given plain soap compared with those given antibacterial soap. The study interpreted that hand washing with soap prevents the two clinical syndromes that cause the largest number of childhood deaths globally namely diarrhea and acute lower respiratory infection.

Oyibo. P.G,(2012) did the descriptive study to assess the knowledge and practices of hand hygiene among school children aged 6-14 years in Abraka, Delta state, Nigeria. This is a school based cross sectional descriptive study conducted from September 2012 among primary school children in Abraka selected by multistage sampling technique. The study instrument was a pre tested structured interviewer administered questionnaire. The average knowledge and practice scores related to hand hygiene recorded among the school children studied were 74.6%

and 54.9% respectively. The high level of knowledge related to hand hygiene exhibited by the children was not totally reflective of their practices of hand hygiene. As 29.4%, 37% and 46.3% of them washed their hands after using the toilet, wash their uniform daily and wash their hands after playing respectively. The result of had dirty hair, dirty uniform and dirty nails respectively. The study was proved that although a sizeable number of the children had knowledge related to hand hygiene their practices related to same were poor.

Stuar Tousman PhD, Dani Arnold M.S, (2011) Evaluated the hand washing program for 2nd grades the purpose of this study was to determine if a multiple week learner centered hand washing program could improve hand hygiene behaviors of 2nd grades in a northern Illinois public school system. Volunteers from the Rockford hand washing coalition went into 19 different classrooms for 4 consecutive class discussions and activities using Glitter Bug training devices and agar plate materials. A one factor repeated measure analysis of variance indicated a statistically significant 34% decrease in the absenteeism rate for students in the intervention group. Chi square analysis on agar plate data indicated that students had cleaner hands after washing. Qualitative data from parents and teachers indicated that a majority of the students were engaging in hand washing behavior. These results indicate that integrating a learner centered interactive program in a multiple week structure can lead to improvement in hand hygiene behavior.

M. Steiner-Asiedu, S.E, Van-Ess-(2011) carried out a comparative study to determine the hand washing practices among children in private and public school in the metropolis in the Greater-Accra region of Ghana, with both private and public schools. A total of 295 school children were randomly recruited into the study. The study was cross sectional in design and used qualitative and quantitative methods to collect data. A questionnaire was used to obtain information on socio demographics. A check list was used during the observation hand washing practices and an interview guide was used for the focus group discussion. The results showed that most school children observed did not practice proper hand washing with soap, both in school and at home due to the unavailability and inaccessibility of hand washing facilities such as soap, towel and clean running water. However, majority (90.25) of those who used the school toilet practiced hand washing with soap after defecation. Private school were found to be 63% ($p=0.02$) less likely to wash their hands after using the toilet, 51% ($p=0.03$) less likely to wash their hands before eating and 77% ($p<0.001$) less likely to wash their hands with soap after eating compared to the or public school counterparts. Parents reported the presence of hand washing facilities at

home but structured observation during home visits proved otherwise. The need to extend the hand washing campaigns to private schools cannot be over emphasized. This union will foster stronger linkages that will pave the way for educating and monitoring the school children for effective hand washing practices.

AL-Jundi SH, AL-Waeili .H (2011) Explained the effect of a soap prevention and hygiene education campaign on hand washing behavior in rural India. The objective of the study was to investigate the effectiveness of a hygiene promotion intervention based on germ awareness in increasing hand washing soap on key occasions (after fecal contact and before eating) in rural Indian households. The methods used were cluster randomized trial of a hygiene promotion intervention in five interventions and five control villages. Hand washing was assessed through structured observation in a random sample of 30 households per villages using electronic motion detectors reached 40% of the target population. Germ awareness increased as well as reported hand washing. Observed hand washing with soap on key occasions was rare (6%) especially after fecal contact (2%). Data from motion detectors indicated a significant but small increase in overall soap use in the intervention arm. The study concluded that the intervention proved scalable and effective in raising hygiene awareness.

James H. Stark MPH, (2011) did the observation study how the improper use of gloves limits compliance to hand hygiene and exposes patients to infection in five wards in a French university hospital. Staff patient and staff environment contacts were observed in 120 healthcare workers caring for patients colonized or infected with pathogenic bacteria. Hand washing was not undertaken due to improper gloving in 64.4% (95% CI, 1% to 65.1%) of instances. Possible microbial transmission might have occurred in 18.3% (95% CI, 17.8% to 18.8%) of all contacts because used gloves were not removed before performing care activities that necessitated strict aseptic precautions. The study concluded that improving hand hygiene compliance will require changing healthcare worker's behavior towards glove use.

3. Literature review related to structured teaching programme on hand washing techniques among school going children's.

Mohamed Moussal, Nabila Hassan Ali Abdella (2015) conducted a cross sectional study was stated that hand washing with soap has been viewed as one of the most effective ways of reducing the global infectious disease burden. Proper hand washing technique is easy to learn and can significantly reduce the spread of

infectious disease among children. Aim of the study was conducted to evaluate the effectiveness of a training program on improving the hand washing children in primary schools. Quasi experimental design was collected from 450 students aged 6 to 12 years. The study data were collected by a self-administered questionnaire sheet and observation checklist; the field data was collected in Port Said city elementary schools in six months' periods. The study concluded that there were highly significant statistical differences in total knowledge and practice score of the student sample after implementation of educational program. Based on the findings of the current study, it is concluded that the hand washing practices of children in primary school was improved after the program implementation.

Rubanprem Kumar, Sasikala M. (2014) conducted a descriptive study to identify the effectiveness of hand hygiene teaching knowledge and compliance of hand washing among the students at a selected school in Mugalivakkam village, Kancheepuram District. Quantitative quasi experimental randomized one group pretest and posttest design study was carried out to find out the effectiveness of hand hygiene knowledge with compliance of hand washing among the students. The knowledge was assessed by questionnaire and compliance was assessed by sterile hand swab collection to do bacteriological culture test in the microbiology laboratory. Among six primary schools in the Mugallivakkam village at Kancheepuram District on primary school was selected using simple lottery method five students from 2nd, 3rd, 4th, and 5th standard was selected using simple random sampling. The total sample size was 20. The period of data collection was from 16-6-2012 to 13-7-2012. The 20 primary school students were split into four subgroups of each consisting of five school children. Then teaching programme on hand hygiene was given laptop. Post test was conducted on knowledge and compliance after three weeks. The mean value of knowledge between the pretest showed a vast statistically significant difference at $p < 0.001$ level and there was an extremely important difference in the mean score of the various pathogens in the hand flora which was estimated to assess the compliance indicators to hand hygiene between the pretest and posttest at $P < 0.001$ level. This study imposes importance of suitable health teaching intervention through proper structure to the school children for enhancement concerning hand hygiene among them all over the country.

Pete (2014) did a survey to assess the effectiveness of hand washing behavior with soap in Kenya. The overall effectiveness of hand washing behavior survey on hand washing with soap in community and in the school environment in urban and rural areas. Secondary and primary researches methods were utilized. It was executed

at two levels, community and schools. The school setting targeted children in primary school. This approach sought to understand hand washing behavior in schools. Structured observations are done before and after soap placement. It involved observing hand washing behavior after using the toilet, focus group discussions were held with children to understand the way of life, perception of dirt, and attitudes towards hand washing, conclusion were drawn that hand washing behavior with only water was practiced, especially after contact with stool, adoption of soap in hand washing needs to be scaled up, level of hand washing for primary school children after defecation in school was lower than at home. Soap and water availability were key facilitators. The presence of soap at the washing site is of critical importance. Washing hands with soap takes a lower priority in the hygiene practice in most of the school children.

Leppanen K A, (2014) conducted a longitudinal study to determine the effectiveness of an instructional program on hand washing. The hypothesis stated that an instructional program on germs and hand washing in child care could significantly reduce the spread of infectious disease in the test centre. A longitudinal study was conducted in a field setting with a test group and control group of 3 to 5-year-old children and their teachers in two similar child care settings for 21 weeks' illness and symptoms of infectious disease were assessed with a health assessment check list. The test group received a developmentally appropriate instructional program on germs and hand washing. The teachers in the test group attended workshops on infectious disease and hand washing. The control group maintained their usual hand washing procedures. The study result showed that at weeks 1 through 11 data were collected. At weeks 12 through 21, peak cold and flu season, helped to reduce colds at the test centers where proper and frequent hand washing practices were practiced and incorporated into the curriculum through an intervention program.

CHAPTER -III

RESEARCH METHODOLOGY

INTRODUCTION

Research methodology by its definition means “the systemic way to solve the research problems”

Kothari 2014

Methodology of research refers to the ways of obtaining and organizing and analyzing data. Methodological studies address the development, validation and evaluation of research tools or methods.

Polit&beck 2004

This chapter details the research questions the researches undertakes and the way researcher interprets the result of these operations in terms of the central problem. The main focus of this chapter is to present the research design, targeted population, sample and sampling procedures, data collection methods, data analysis and interpretation, reliability and validity of research instrument and ethical considerations.

RESEARCH APPROACH

“The strength of the true experimental over the methods lie, in the fact that the experimental can achieve greater confidence in the genuineness and interpretability of relationship because they are observed under carefully controlled conditions”

Hungler.1999

The research approach selected to accomplish the objectives of the study was “Quantitative Educative and Evaluation research approach. Since the purpose of the study to find out the effectiveness of structured teaching programme regarding hand washing techniques among school going children. The Quantitative Educative and evaluative approach was found to be suitable for this research study.

RESEARCH DESIGN

The research design is the overall plan for addressing a research question including specifications for enhancing the studies integrity.

Polit &beck 2010

“Pre-experimental research design with one group pretest and was used in this study.

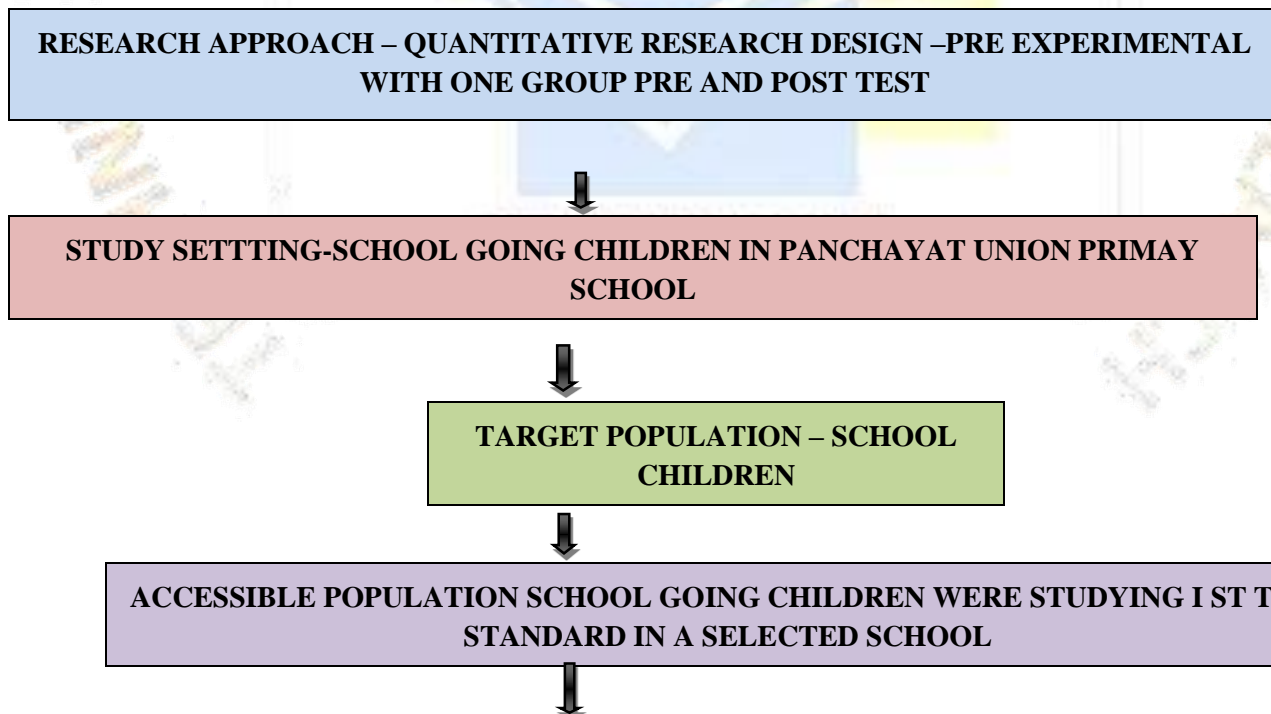
Group	Pretest	Intervention	Post test
Study	01	X	02

KEYS

O1- Before structured teaching programme level of knowledge regarding hand washing techniques among school going children.

X – Administration of structured teaching programme regarding hand washing techniques among school going children.

O2- After structured teaching programme level of knowledge regarding hand washing techniques among school going children.



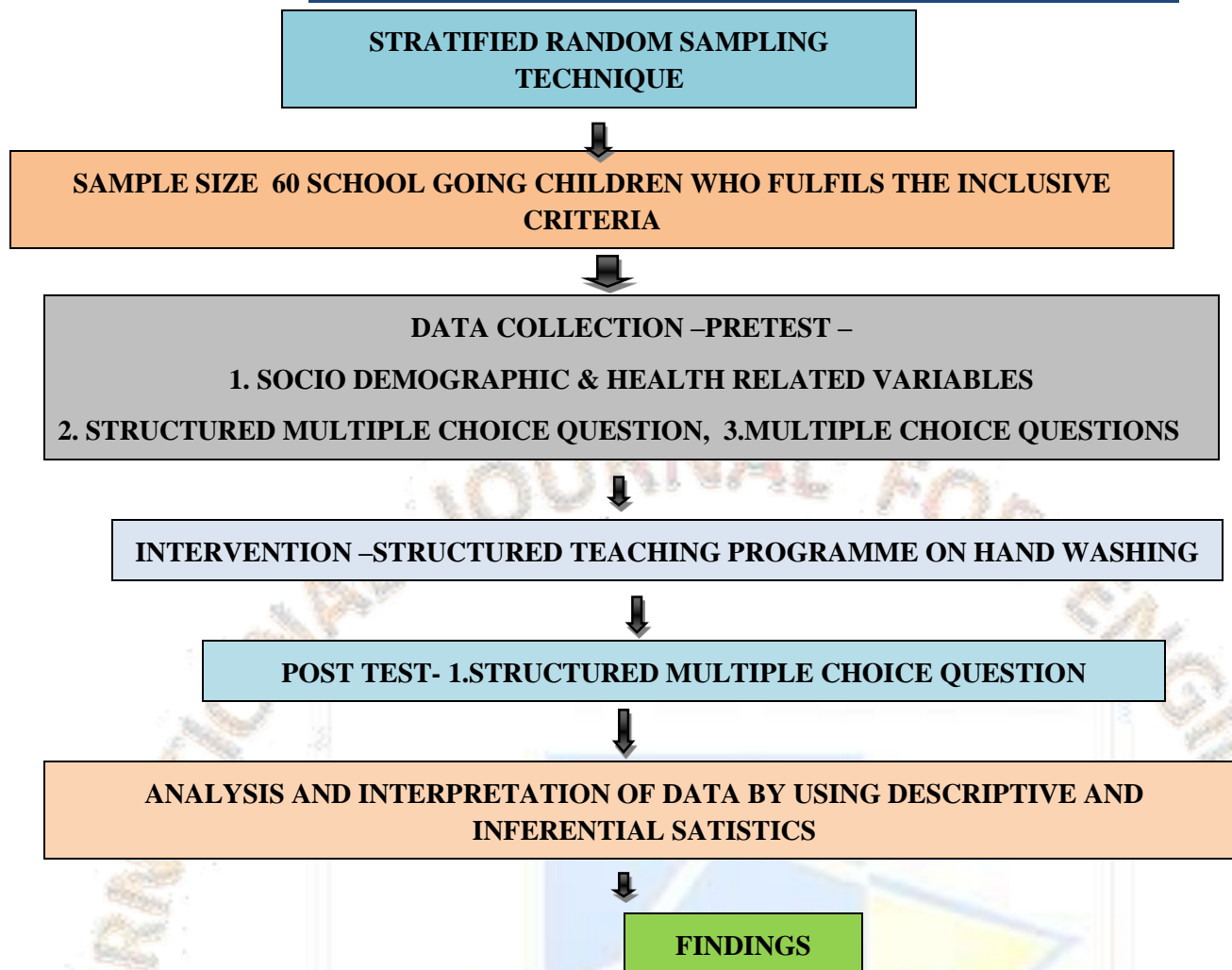


FIG- 3.1 SCHEMATIC PRESENTATION OF RESEARCH METHODOLOGY

SETTING OF THE STUDY

The selection of an appropriate setting because the setting can influence the way people behave, feel and how they respond. “The researches needs to decide where the intervention will be implemented and where the data will be collected”

Polit and Hungler 2002

The study will be planned to conduct in Panchayat union primary school at Namakkal district.

RESEARCH VARIABLES

The term variables are concept of different level of obstruction that are concisely define to promote their measurement (or) manipulation within study.

INDEPENDENT VARIABLES

“Variables that are purposefully manipulated or changed by the researcher”

Sureh.k Sharma 2011

In the present study, independent variable was structured teaching programme regarding hand washing techniques among school going children.

DEPENDENT VARIABLES

“Variables that changes as the dependent variable is manipulated by the researcher”

In the present study dependent variables were level of knowledge and techniques regarding hand washing among school going children

ATTRIBUTED VARIABLES

Attributed variables or demographic variables are the characteristics of the subjects that are collected to describe the samples.

In the present study attributed variables such as Age, Gender, Religion, Income, domicile, Type of family, Number of siblings, previous knowledge, Toilet practice, Nature of drainage system

POPULATION

Population the entire set of individuals or subject having some common characteristics selects for a research study population are two types, target population and accessible population.

Suresh k. Sharma 2011

In this study population includes primary school children at Namakkal District.

SAMPLE

Sample may be defined as the representative unit of a target population which is to be work upon by research as during their study.

Suresh's Sharma 2011

In this study sample comprised of school going children, who are attending Panchayat union primary school children at Namakkal, District.

SAMPLE SIZE

Sample size is a number of elements or individuals in a sample.

Suresh's Sharma 2011

Sample size used for the study is 60 of school going children.

SAMPLE TECHNIQUE

Sampling is the process of selecting a part of the assigned population to represent the entire population.

Suresh.k Sharma 2011

Non probability convenient sampling technique was used in this study.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

- ❖ Primary school children who are willing to participate in this study
- ❖ Primary school children who read Tamil and English
- ❖ Primary school children who are attending in Panchayat union primary school children at Namakkal, District.

EXCLUSION CRITERIA

- Primary school children who are not available during collection
- Primary school children having any previous knowledge about hand washing technique

SELECTION AND DEVELOPMENT OF TOOL

Selection of research instruments

Research instruments or tool are ways of gathering data. Without them data would be impossible to put in hand which is used by the researcher to observe or measure the key variables in the research problem. The major

task of the researcher is to select instrument most accurately and precisely measure the variables of interest questioning allows gathering information or data from a large number of sample, relatively quickly, it avoids interview bias, offer anonymity and it cost effective.

The instrument used in this was self-structured knowledge questionnaire to assess the level of knowledge regarding hand washing techniques among school going children at Namakkal, District

DATA COLLECTION METHOD

Self-structured knowledge questionnaire was used for the data collection.

DESCRIPTION OF THE TOOL

Questionnaire consists of three sections

- **Section I** – Selected demographic variables such as Age, Gender, Religion, Income, domicile, Type of family, Number of siblings, previous knowledge, Toilet practice, Nature of drainage system.
- **Section II** - Self structured knowledge questionnaire (MCQ) which consists of 20 questionnaires assessing the level of knowledge. Total score was 20, every correct answer carries one mark (1), and wrong answer carries zero mark (0).

SCORING INTERPRETATION

The interpretation of the total scoring was

S.NO	LEVEL OF KNOWLEDGE	SCORING
1.	POOR	1-10
2.	GOOD	11-20

TESTING OF THE TOOL

CONTENT VALIDITY

Validity is a quality criterion referring to the degree to which interferences made in a study are accurate and well-found in measurement the degree to which an instrument measures what it is intended to measure.

POLIT AND BECK (2010)

The instrument was validated by the 5 experts in the field of nursing and medicine. The tool was accepted and suggested by all experts and so it was finalized.

RELIABILITY

Reliability is the degree of consistency or dependency with which an instrument measures an attribute.

POLIT AND BECK (2010)

The reliability of tool was tested the test retested method (Karl Pearson coefficient) and the tool was found to reliable ----- . This correlation coefficient was very high and it was a good tool for assessing the effectiveness structured teaching programme regarding hand washing techniques among school going children.

PILOT STUDY

Pilot study is a small scale version or trial, done in preparation for a major study.

POLI AND BECK (2010)

The pilot study was conducted among 5 school going children at namakkal district in a manner in which final study would be done. It revealed that the study feasible. Data were analyzed by using differential statistics. The study report ensured feasibility of the study.

METHOD OF DATA COLLECTION

Data collection procedure

Data collections refer to the steps for gathering the information needed to address a research problem.

SURESH K SHARMA (2011)

The study was conducted in panchayat Union Primary School at Namakkal District.

- ❖ Prior to the data collection, formal administrative written permission was obtained from the principal, PGP College of nursing and from general manager, Panchayat Union Primary School at Namakkal for conducting the study.
- ❖ Information consent was obtained from the samples.

- ❖ The period of data collection was 4 weeks.
- ❖ Using non probability convenient sampling techniques 60 samples who met the inclusion criteria was selected.
- ❖ On the same day the structured teaching programme hand washing techniques among school going children was given to the selected sample about 20- 30 minutes by power point presentation.
- ❖ On the 11th day post test was conducted among sample by using the self-structured knowledge questionnaire. one day 60 samples were selected

DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and in quantitative studies. The testing of hypothesis using those data. Testing of null hypothesis by using the obtained data.

The collected data was organized tabulated, summarized and analyzed by using the descriptive and inferential statistical. Study was commuted at 0.05 level of significant.

1. To assess the level of knowledge among primary pretest and posttest were using descriptive statistics.
2. To evaluate the effectiveness of hand washing techniques of school going children among structure teaching program were using inferential statistics.
3. Chi-square test was used to find out the effectiveness between post test scores effectiveness of hand washing techniques with their demographic variables.
4. Paired t test was used to find out the effectiveness of structured teaching programme among school going children.
5. Analyzed data was presented in the form of tablets, graphs, and figures.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

Analysis is the process of organizing and synthesizing data in such a way that research questions can be answered hypothesis tested.

POLIT AND HUNGLE (2010)

This chapter deals with the description of the analysis and interpretation of the data collected to evaluate the effectiveness of structured teaching program on knowledge regarding hand washing techniques and its importance among school going children's in selected school at Namakkal district". The obtained data was analyzed, tabulated and interpreted employing descriptive and inferential statistics.

OBJECTIVES

- To assess the level of knowledge regarding hand washing techniques among school going children's before and after structure teaching program.
- To implement and evaluate the effectiveness of structured teaching programme regarding hand washing techniques among school going children's.
- To find out association between level of knowledge school going children and a selected demographic variables Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

The data were presented under the following headings

Section I – Frequency and percentage distribution was used to describe the selected demographic variables of 60 samples.

Section II – Frequency and percentage distribution of pretest and posttest level of knowledge in hand washing techniques and its importance among school going children's

Section III – comparison of pretest and posttest level of knowledge

Section IV – Association between the pretest level of knowledge with their demographic variables such as Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

Section v –Association between the posttest level of knowledge with their selected demographic variables such as Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

The data given in 1 shows that

- ❖ Regarding **Age** majority 22 (37%) them were in the group of 8 to 10 years, 21 (35%) them were in more than 10 years, 17 (28%) them were in 6 to 8 years.
- ❖ Regarding **Gender** majority 36 (60%) them were in males, 24 (40%) them were in females.
- ❖ Regarding **Religion** majority 49 (82%) them were Hindu, 6 (10%) them were Christian, 5 (8%) them were Muslim.
- ❖ Regarding **Occupation** majority 26 (43%) them were coolie, 21 (35%) them were self-employment, 13 (22%) them were government employee.
- ❖ Regarding **Income** majority 25 (41%) them were 5000 to 10000, 22 (37%) them were above 15000, 13 (22%) them were below 5000.
- ❖ Regarding **Domicile** majority 38 (63%) them were rural, 22 (37%) them were urban.
- ❖ Regarding **Type of family** majority 36 (60%) them were nuclear family, 13 (22%) them were joint family, 11 (18%) them were blended family.
- ❖ Regarding **sibling's** majority 34 (57%) them were one, 15 (25%) them were two, 11 (18%) them were above two siblings.
- ❖ Regarding **previous source of knowledge** 36 (60%) them were teacher, 15 (25%) them were mass media.
- ❖ Regarding **Toilet practice** 49 (82%) them were closed toilet, 11 (18%) them were open toilet.
- ❖ Regarding **Nature of drainage system** 46 (77%) them were open toilet, 14 (23%) them were closed toilet.

SECTION-A

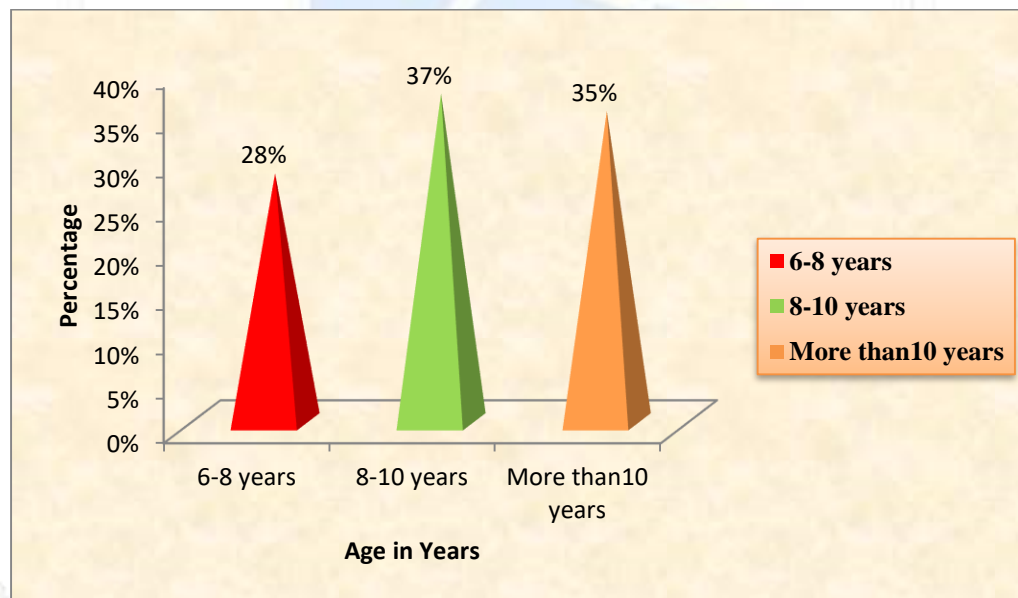
DISTRIBUTION OF SOCIO DEMOGRAPHY VARIABLES AMONG SCHOOL GOING CHILDREN IN SELECTED SCHOOLS

4.1.1 Distribution of socio demography variables according to school going children

N=60

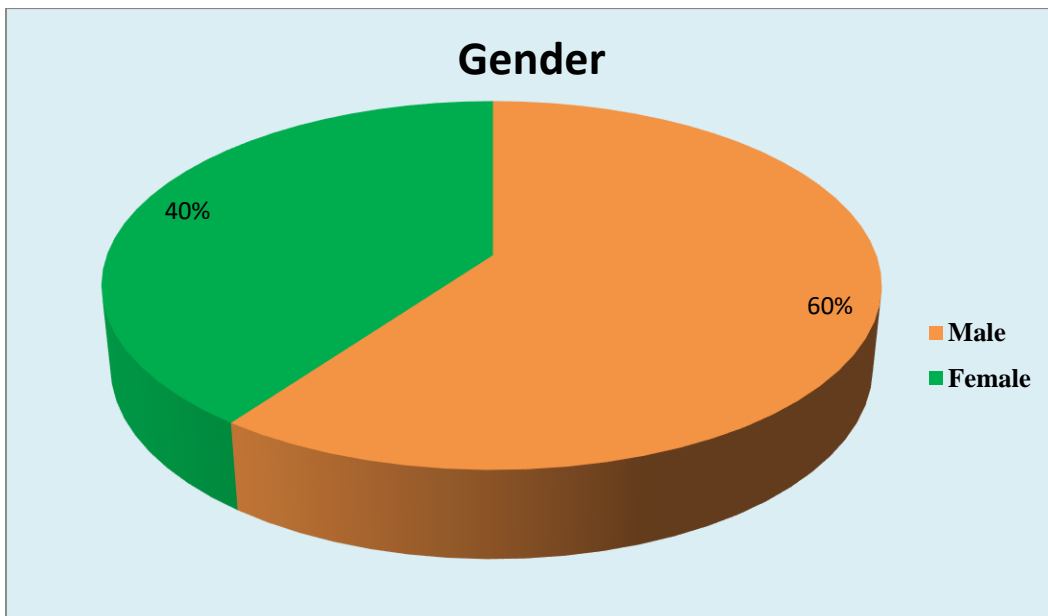
S.No	Demography variables	Frequency	Percentage
1	Age in years		
	a) 6-8 years	17	28%
	b) 8-10 years	22	37%
	c) More than 10 years	21	35%
2	Gender		
	a) Male	36	60%
	b) Female	24	40%
3	Religion		
	a) Hindu	49	82%
	b) Christian	6	10%
	c) Muslim	5	8%
4	Occupation		
	a) Coolie	26	43%
	b) Self employment	21	35%
	c) Government employee	13	22%
5	Family income		
	a) Below 5000	13	22%
	b) 5000-10000	25	41%
	c) Above 10000	22	37%
6	Domicile		
	a) Urban	22	37%
	b) Rural	38	63%
7	Type of family		
	a) Joint family	13	22%
	b) Nuclear family	36	60%

	c] Blended family	11	18%
8	Number of siblings		
	a] One	34	57%
	b] Two	15	25%
	c] Above two	11	18%
9	Previous Source of knowledge		
	a] Teacher	36	60%
	b] Mass media	24	40%
	c] None	0	0%
10	Toilet Practice		
	a] Open field defecation	11	18%
	b] Closed field defecation	49	82%
11	Nature of drainage system		
	a] Open	46	77%
	b] Closed	14	23%



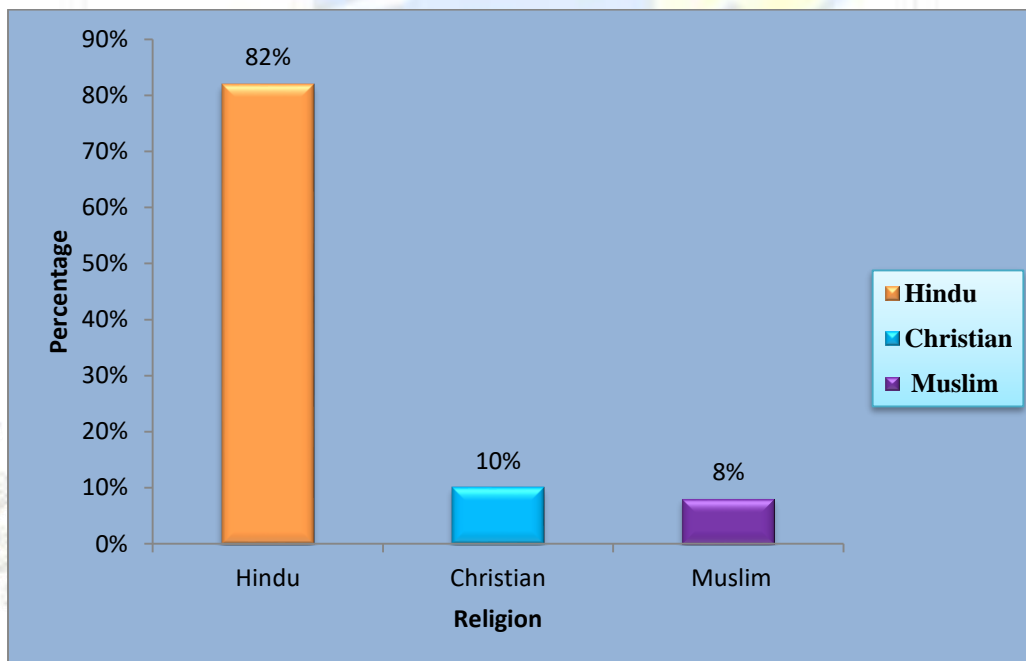
4.1.1 Distribution of School going children according to age

Figure 4.1.1 shows that distribution of school going children according to age, among them 17(28%) of age were between 6-8 years, 22(37%) of them age were between 8-10 years and 21(35%) of age were more than 10 years.



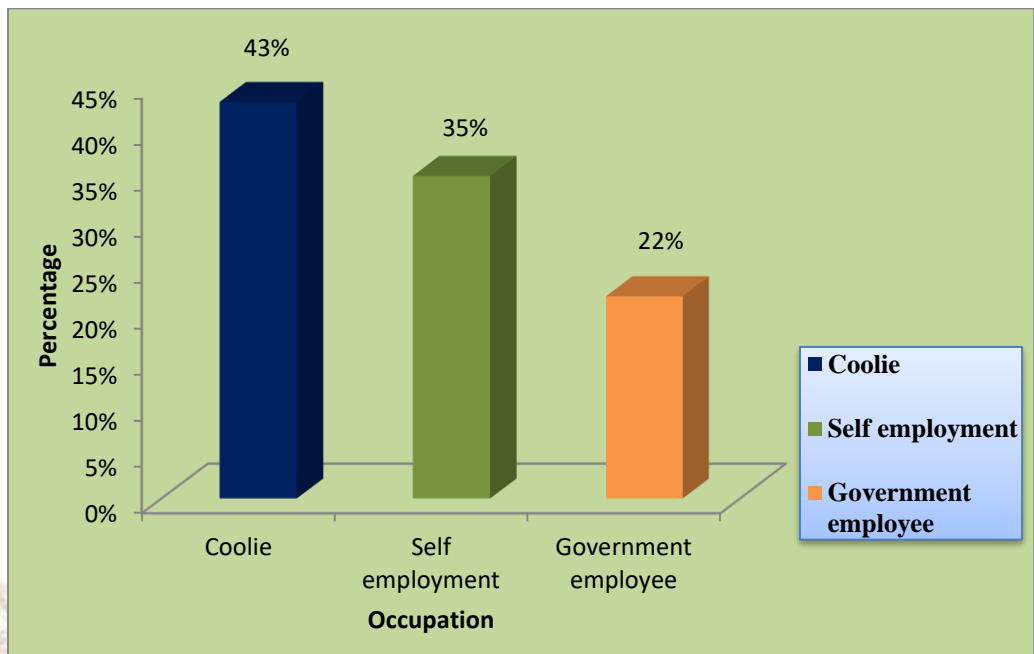
4.1.2 Distribution of School going children according to gender

Figure 4.1.2 shows that distribution of school going children according to gender, among the students 36(60%) of them were male and 24(40%) of them were female.



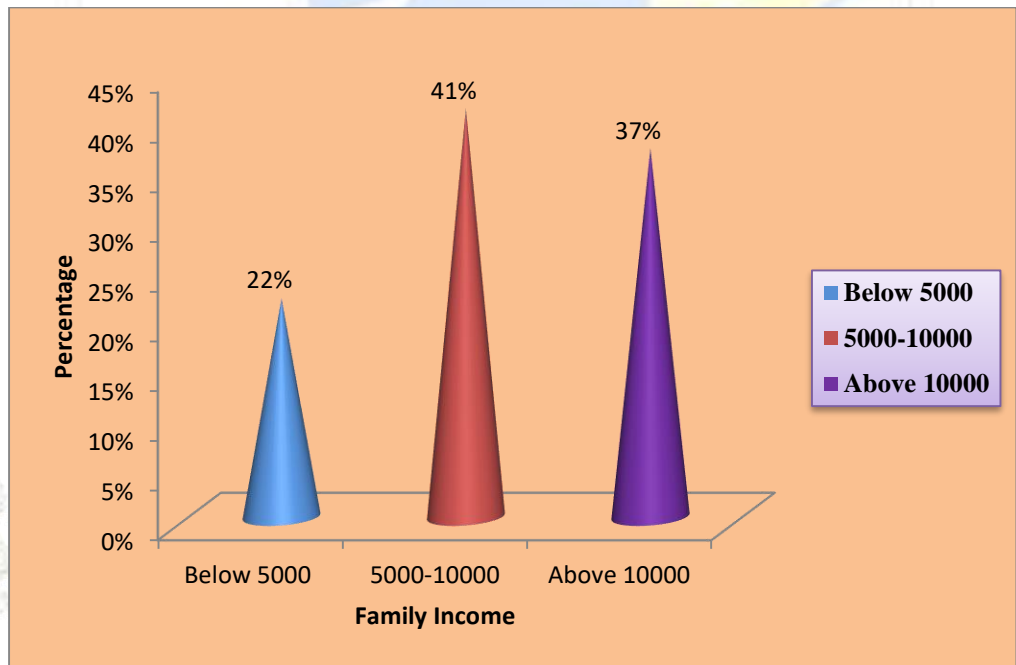
4.1.3 Distribution of School going children according to Religion

Figure 4.1.3 shows that distribution of school going children according to religion, among the students 19(82%) were Hindu, 6(10%) were Muslim and 5(8%) were Christian.



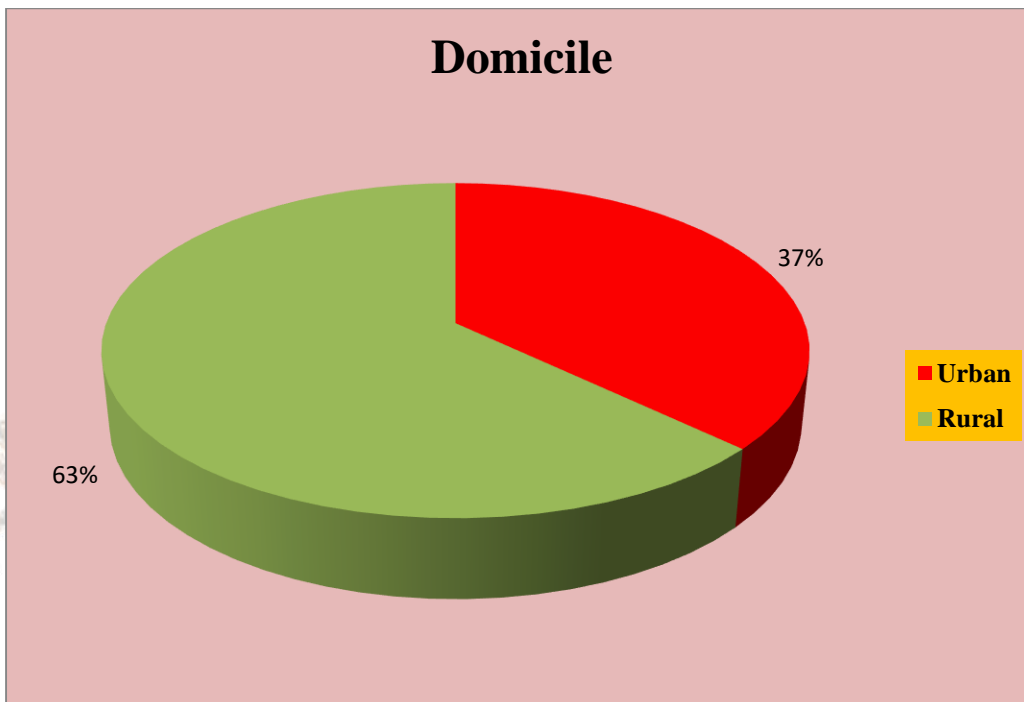
4.1.4 Distribution of School going children according to Occupation

Figure 4.1.4 shows that distribution of school going children according to occupation, among the students' parents 26(46%) were coolie, 21(35%) were having self-employment, and 13(22%) were government employee.



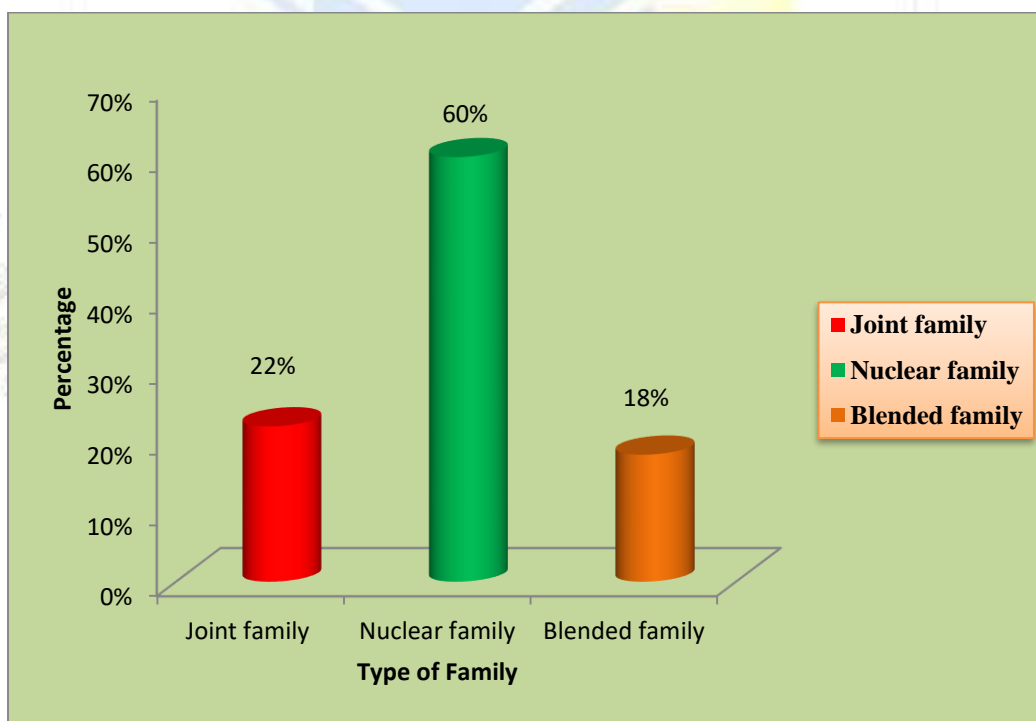
4.1.5 Distribution of School going children according to Family income

Figure 4.1.5 shows that distribution of school going children according to family monthly income, among them 13(22%) of were earning below 5000, 24(41%) of were earning between 5001-10000, and 22(37%) of were earning above 10000.



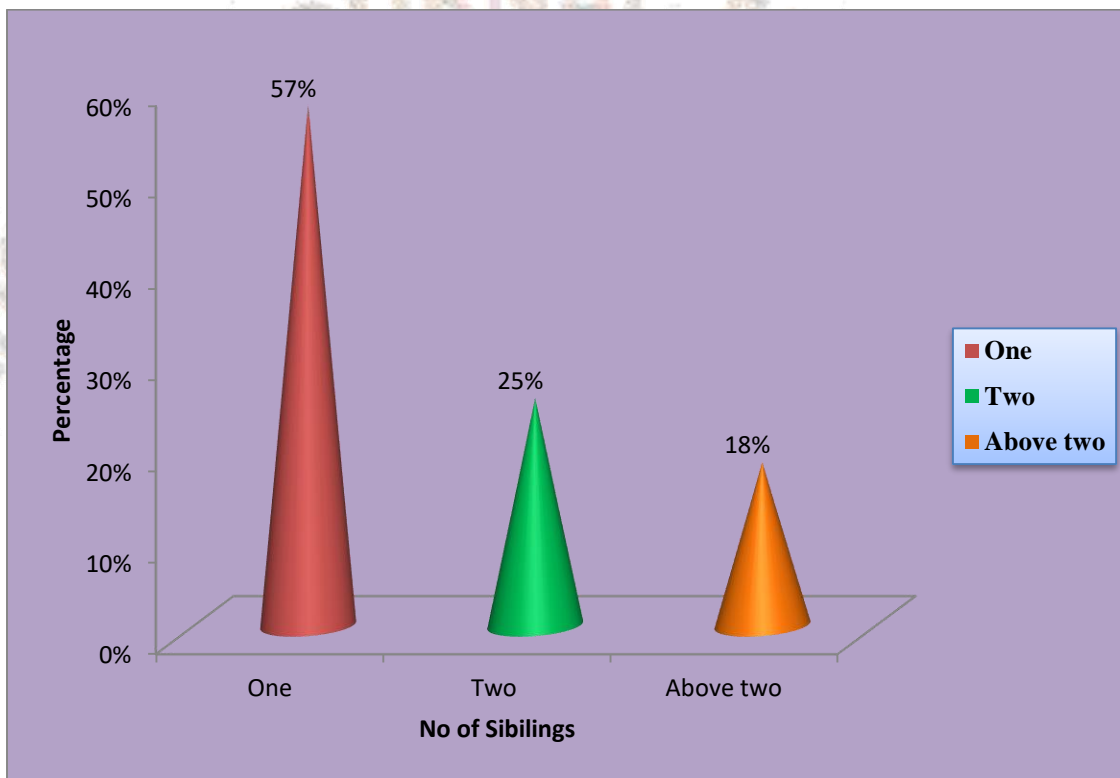
4.1.6 Distribution of School going children according to Domicile

Figure 4.1.6 shows that distribution of school going children according to domicile, among the students 22 (37%) of them were belongs to urban area and 38(63%) of them were belongs to rural area.



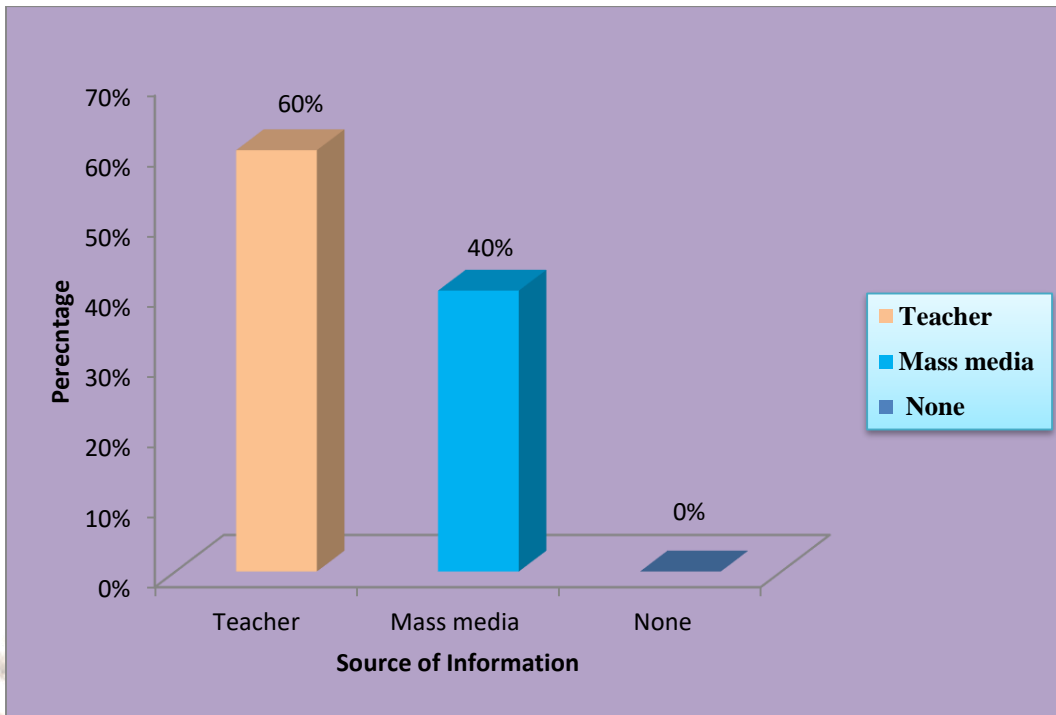
4.1.7 Distribution of School going children according to Type of family

Figure 4.1.7 shows that distribution of school going children according to type of family among the students 13(22%) of them were living in joint family, 36(60%) of them were living to nuclear family and 11(18%) of them were living in blended family.



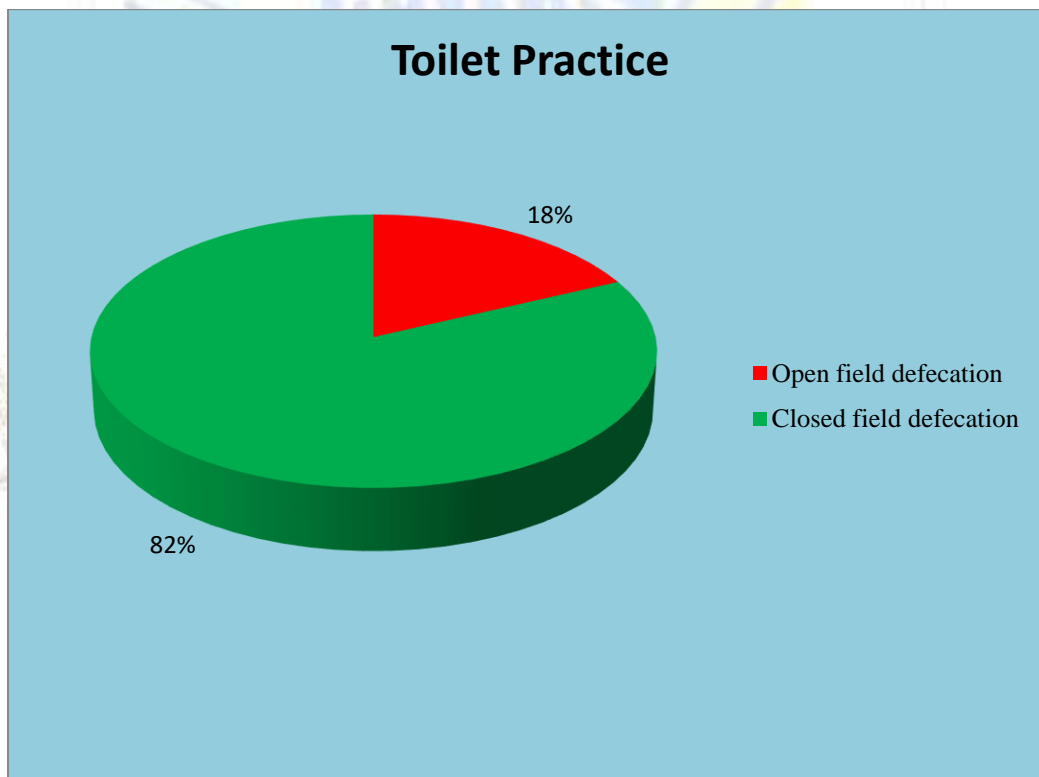
4.1.8 Distribution of School going children according to Siblings

Figure 4.1.8 shows that distribution of school going children according to number of siblings, Among the students 34(57%) of them were having one siblings ,15(25%) of them were having two siblings and 11(18%) of them were having more than two siblings.



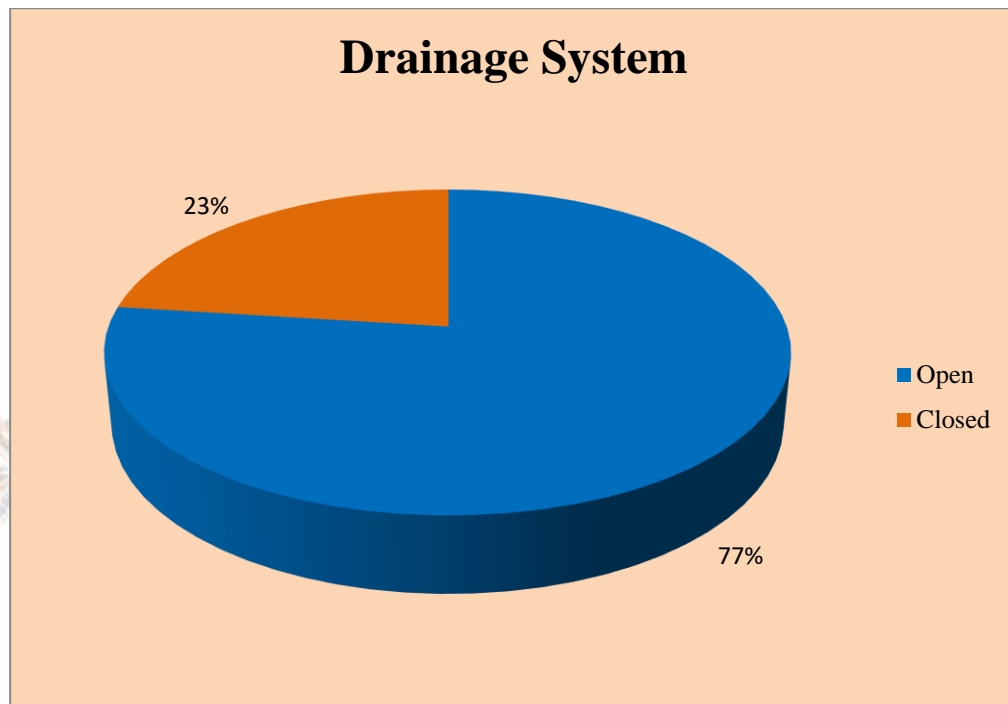
4.1.9 Distribution of School going children according to Previous Source of Knowledge

Figure 4.1.9 shows that distribution of school going children according to source of information, Among the students 36(70%) of them were gathered information from teacher, 24(40%) of them were gathered information from mass media and no one is in the none category.



4.1.10 Distribution of School going children according to Toilet Practice

Figure 4.1.10 shows that distribution of school going children according to toilet practice Among the students 11(18%) of them were having open field defecation and 49(82%) of them were having closed field defecation.



4.1.11 Distribution of School going children according to drainage system

Figure 4.1.11 shows that distribution of school going children according to nature of drainage system, Among the students 46(77%) of them were having open drainage system and 14(23%) of them were having closed drainage system.

SECTION-B

DISTRIBUTION OF SCHOOL GOING CHILDREN TO LEVEL OF KNOWLEDGE REGARDING HANDWASHING TECHNIQUES AND ITS MANAGEMENT IN PRE TEST

Table 4.2.1 Frequency and percentage distribution of School going children according to level of knowledge in pretest.

S.No	Level of knowledge	Frequency	Percentage
1	Inadequate	48	80%
2	Moderate	12	20%
3	Adequate	0	0%

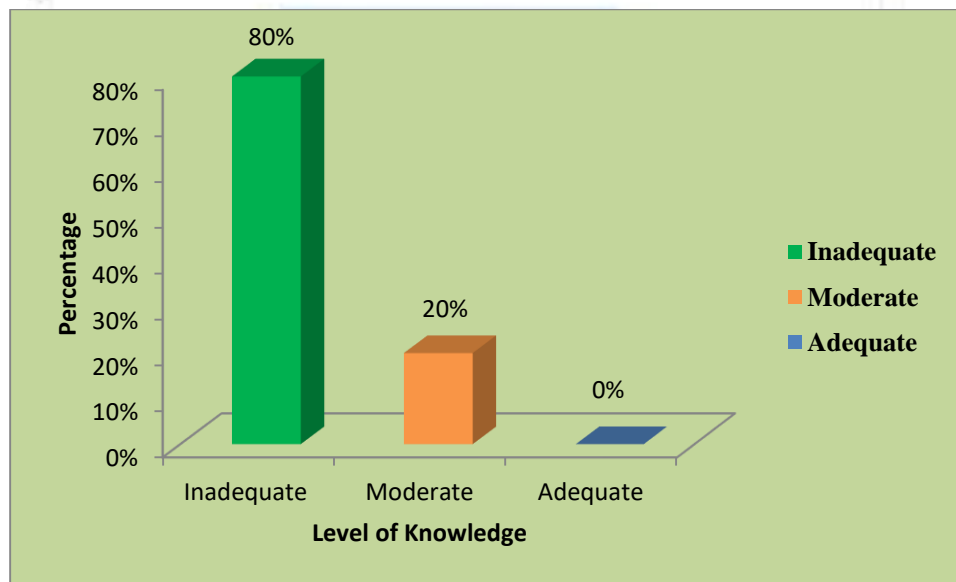


Table & Figure 4.2.1 shows that level of knowledge among school going children in pretest, among the students 48(80%) of them had inadequate knowledge,12(20%) of them had moderate knowledge and none of them in adequate knowledge regarding hand washing techniques and its management.

DISTRIBUTION OF SCHOOL GOING CHILDREN TO LEVEL OF KNOWLEDGE REGARDING HANDWASHING TECHNIQUES AND ITS MANAGEMENT IN POST TEST

Table 4.2.2 Frequency and percentage distribution of School going children according to level of knowledge in posttest.

S.No	Level of knowledge	Frequency	Percentage
1	Inadequate	0	0%
2	Moderate	15	25%
3	Adequate	45	75%

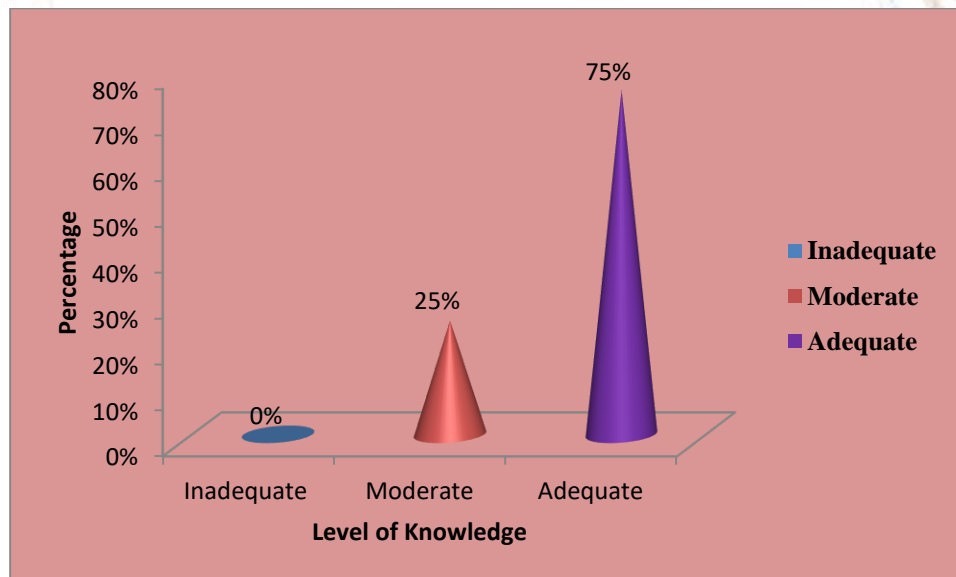
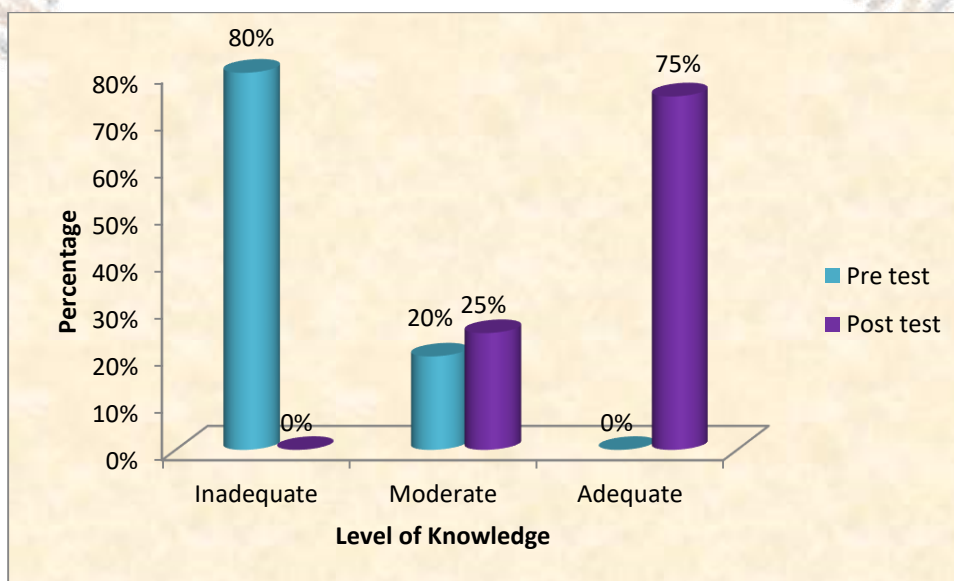


Table & Figure 4.2.2 shows that level of knowledge among school going children in posttest, among the students 45(75%) of them had adequate knowledge,15(25%) of them had moderate knowledge and none of them in inadequate knowledge regarding hand washing techniques and its management

COMPARISON OF PRE AND POST LEVEL OF KNOWLEDGE AMONG SCHOOL GOING CHILDREN

Table 4.2.3 Comparison of pre and post level of knowledge among school going children

S.No	Level of knowledge	Pre test		Post test	
		F	%	F	%
1	Inadequate	48	80%	0	0%
2	Moderate	12	20%	15	25%
3	Adequate	0	0%	45	75%



In pretest, among the students 48(80%) of them had inadequate knowledge,12(20%) of them had moderate knowledge and none of them in adequate knowledge regarding hand washing techniques and its management. In posttest, among the students 45(75%) of them had adequate knowledge,15(25%) of them had moderate knowledge and none of them in inadequate knowledge regarding hand washing techniques and its management.

SECTION-C

COMPARISION OF PRE AND POST LEVEL OF KNOWLEDGE WITH MEAN, STANDARD DEVIATION AMONG SCHOOL GOING CHILDREN

Table 4.3.1 Mean and standard deviation with pre and posttest level of knowledge

S.No	Test	Mean	SD	't'	Table value
1	Pre test	9.03	1.70	19.21**	1.96
2	Post test	15.58	1.85		

Table 4.3.1 shows that, during pretest mean value was 9.03 and standard deviation was 1.70, In posttest mean value was 15.58 and standard deviation was 1.85. The calculated value of t was 19.21 which is greater than table value, it is noted that there was a highly significant between pre and post test score, so there is effectiveness on structured teaching program on knowledge regarding hand washing techniques and its management.

SECTION-D

ASSOCIATION BETWEEN POST TEST LEVEL OF KNOWLEDGE WITH SELECTED DEMOGRAPHY VARIABLES AMONG SCHOOL GOING CHILDREN

Table 4.4.1 Association between posttest level of knowledge with selected demography variables

Demography variables	Freq	%	Df	χ^2	Table value	Level of significance
Age					5.991	P>0.05 Not Significant
6-8 years	17	28	2	2.43		
8-10 years	22	37				
More than10 years	21	35				
Gender					3.841	P>0.05 Not Significant
Male	36	60	1	1.21		
Female	24	40				

Religion					5.991	P<0.05 Significant
Hindu	49	82	2	9.67		
Christian	6	10				
Muslim	5	8				
Occupation					5.991	P>0.05 Not Significant
Coolie	26	43	2	4.04		
Self-employment	21	35				
Government employee	13	22				
Family income					5.991	P>0.05 Not Significant
Below 5000	13	22	2	0.925		
5000-10000	25	42				
Above 10000	22	36				

Domicile					3.841	P>0.05 Not Significant
Urban	22	37	1	0.541		
Rural	38	63				
Type of family					5.991	P>0.05 Not Significant
Joint family	13	22	2	3.321		
Nuclear family	36	60				
Blended family	11	18				
Number of siblings					5.991	P>0.05 Not Significant
One	34	57	2	0.976		
Two	15	25				
Above two	11	18				
Previous Source of knowledge					5.991	P>0.05 Not Significant
Teacher	36	60	2	0.259		
Mass media	24	40				
None	0	0				
Toilet Practice					3.841	P>0.05 Not Significant
Open field defecation	11	18	1	0.965		
Closed field defecation	49	82				

Nature of drainage system						
Open	46	77	1	1.11	3.841	P>0.05 Not Significant
Closed	14	23				

Table 4.4.1 shows that association between level of knowledge with selected demographic variables, for considering the variables age, gender, religion, Occupation, family monthly income, domicile, type of family, Number of siblings, previous source of knowledge, toilet practice and nature of drainage system had no association between level of knowledge & religion had association with level of knowledge.

CHAPTER V

RESULTS AND DISCUSSION

This chapter deals with the discussion which was based on the findings obtained from the statistically analysis & in relation to the objectives of the study, the conceptual work & the related literature.

The aim of the study was evaluated the effectiveness of structured teaching program on knowledge regarding hand washing techniques and its important among school going children's at selected school Namakkal district".

Baseline characteristics of the group

- ❖ Regarding **Age** majority 22 (37%) them were in the group of 8 to 10 years, 21 (35%) them were in more than 10 years, 17 (28%) them were in 6 to 8 years.
- ❖ Regarding **Gender** majority 36 (60%) them were in males, 24 (40%) them were in females.
- ❖ Regarding **Religion** majority 49 (82%) them were Hindu, 6 (10%) them were Christian, 5 (8%) them were Muslim.
- ❖ Regarding **Occupation** majority 26 (43%) them were coolie, 21 (35%) them were self-employment, 13 (22%) them were government employee.
- ❖ Regarding **Income** majority 25 (41%) them were 5000 to 10000, 22 (37%) them were above 15000, 13 (22%) them were below 5000.

- ❖ Regarding **Domicile** majority 38 (63%) them were rural, 22 (37%) them were urban.
- ❖ Regarding **Type of family** majority 36 (60%) them were nuclear family, 13 (22%) them were joint family, 11 (18%) them were blended family.
- ❖ Regarding **sibling's** majority 34 (57%) them were one, 15 (25%) them were two, 11 (18%) them were above two siblings.
- ❖ Regarding **previous source of knowledge** 36 (60%) them were teacher, 15 (25%) them were mass media.
- ❖ Regarding **Toilet practice** 49 (82%) them were closed toilet, 11 (18%) them were open toilet.
- ❖ Regarding **Nature of drainage system** 46 (77%) them were open toilet, 14 (23%) them were closed toilet.

1. The first objectives of the study was to find out to assess the level of knowledge regarding hand washing techniques among school going children's before and after structure teaching program.

This was analyzed by using frequency and percentage distribution

The frequency and percentage distribution of pretest and post test score on the level of knowledge regarding hand washing techniques among school going children's before and after structure teaching programme. It reveals that majority 48 (80%) them were had inadequate knowledge, 12 (20%) them were had moderate knowledge. none of them were have adequate knowledge in the post test.

2 – The second objectives of the study was to implement and evaluate the effectiveness of structured teaching programme regarding hand washing techniques among school going children's.

The effectiveness of structured teaching programme on improving hand washing techniques among school going children's. Children was tested by using paried 't' test and was calculated to analyze the differences in pretest and post test scores on the level of knowledge before and after structured teaching programme on hand washing techniques among school going children's.

Comparison of mean pretest and mean post test scores of structured teaching programme in the group.

This shows that the difference aspect of effectiveness comparison mean scores of pretest and posttest. The knowledge of mean pre test score was 9.03 and mean post test score was 15.85. The obtained test value was 19.21

when compared to table value (1.96) it is high. The statistical paired 't' test indicates that the mean effectiveness found to be significant at $p > 0.05$ revealing that the administration of structured teaching programme was effective in improving knowledge regarding hand washing techniques among school going children.

3. The third objectives of the study was to find out association between level of knowledge school going children and a selected demographic variables Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

The group shows that there was no significant association found between pretest score on the level of knowledge with their demographic variables namely Age Chi square value = 2.43, whereas table value = 5.991, chi-square value = Gender Chi square value = 1.21, whereas table value = 3.841, Religion Chi square value = 9.67 whereas table value = 5.991, Occupation Chi square value = 4.04 whereas table value = 5.991, Family income Chi square value = 0.925 whereas table = 5.991, Domicile Chi square value = 0.541 whereas table value = 3.841, Type of family Chi square value = 3.321 whereas table value = 5.991, Number of siblings Chi square value = 0.976 whereas table value = 5.991, Previous source of knowledge Chi square value = 0.259 whereas table value = 5.991, Toilet practice Chi square value = 0.965 whereas table value = 3.841, Nature of drainage system Chi square value = 1.11, whereas table value 3.841.

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING HAND WASHING TECHNIQUES AND ITS IMPORTANCE AMONG SCHOOL GOING CHILDREN'S AT SELECTED SCHOOL NAMAKKAL DISTRICT".

HYPOTHESIS TESTING

In this section researcher is to evaluate the effectiveness of structured teaching program on knowledge regarding hand washing techniques and its important among school going children's at selected school Namakkal district. The following hypothesis was formulated.

RESEARCH HYPOTHESIS

H1- There will be significant enhancement in the level of knowledge regarding hand washing techniques among school going children's after structure teaching program

H2- There will be significant association between the knowledge of school going children with a selected demographic variable such as Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

H1-There will be significant enhancement in the level of knowledge regarding hand washing techniques among school going children's after structure teaching programme

The paired 't' value between pretest and post test score was compared for effectiveness of structured teaching program on knowledge regarding hand washing techniques and its important among school going children's which indicated that was significant improvement in score from pretest and posttest at $I,c,(p0.05)$. Hence the research hypothesis 1 was accepted and null hypothesis H2 was rejected.

H2- There will be significant association between the knowledge of school going children with a selected demographic variables Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

Chi square analysis was used to test the association between the pretest and levels with socio demographic variables. This indicated that there was not a significant association the pretest score and post test score with the socio demographic variables such as Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

SUMMARY

This chapter deals with analysis and their interpretation of the data collected school going children before and after administration of structured teaching programme.

CHAPTER VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS & RECOMMENDATIONS

The findings of the study have implicated to nursing administration, nursing practice, nursing research, nursing education regarding the effectiveness of structured teaching program on knowledge regarding hand washing techniques and it's important among school going children's. This chapter deals with recommendation for research in future.

SUMMARY

The conceptual frame work of the study was based upon J.W. KENNEYS open system model. The research approach used in this study was Quantitative Educative & Evaluative research approach. 60 school going children were selected for this study using non probability convenient sampling technique. The tool was given to experts for content validity. Pilot study was conducted to find out the feasibility of the study and to plan for data analysis. Data were collected with the help of self-structured knowledge questionnaire. Sample were taken from panchayat union primary school, konnur, at Namakkal. Pretest was conducted on the structured teaching programme was administered in hand washing techniques among school going children for 20 -30 minutes. Descriptive statistical (frequency, percentages, mean & standard deviation) & inferential statistics (chi square, paired 't' test) were used to analyze the data 7 to test the hypothesis.

OBJECTIVES

- To assess the level of knowledge regarding hand washing techniques among school going children's before and after structure teaching program.
- To implement and evaluate the effectiveness of structured teaching programme regarding hand washing techniques among school going children's.
- To find out association between level of knowledge school going children and some selected demographic variables such as Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

HYPOTHESIS

- **H1-** There will be significant enhancement in the level of knowledge regarding hand washing techniques among school going children's after structure teaching program
- **H2-** There will be significant association between the knowledge of school going children with a selected demographic variables Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

MAJOR FINDINGS OF THE STUDY

CONCLUSION

The study was conducted to assess the effectiveness of structured teaching programme regarding hand washing techniques among school going children's.

There was significant improvement in posttest level of knowledge when compared to pretest level of knowledge regarding hand washing techniques among school going children's.

The comparison between pretest and posttest was found to be significant at $p,0.05$ so the structured teaching programme is effective in improving knowledge regarding hand washing techniques among school going children's.

There was no significant association exist between the pretest and posttest level of knowledge of school going children's and their selected demographic variables such as Age, Sex, Education, Domicile, Occupation, Income, Type of family, Number of siblings.

The structured teaching programme was found to be effective to improve the knowledge regarding hand washing techniques among school going children's. The findings of the study provided evidence that the administration of structured teaching programme was effective in improving knowledge.

NURSING IMPLICATIONS

Nursing is a dynamic process, which involves evidence based practice, scientific knowledge & dissemination of research knowledge into practice.

NURSING ADMINISTRATION

- Nurse administrator can organize in service education regarding hand washing techniques among school going children's.
- The nurse administrator should prepare a teaching module for health education regarding hand washing techniques among school going children's.
- The nurse administrator should find factors associated with problems & try to solve them.

NURSING PRACTICE

- To create the awareness in school going children's regarding effectiveness of structured teaching programme on hand washing techniques among school going children's.
- The school going children's should cooperate the structured teaching programme on improve the knowledge among school going children's.

NURSING EDUCATION

- Add the importance of structured teaching programme in improve the knowledge in the curriculum.
- Continuing nursing education will be conducted regarding hand washing techniques on improving knowledge among school going children to make nursing professional competence enough to meet over the changing needs of the society.
- The nursing students need to be educated regarding the hand washing techniques among school going children's. The effectiveness of structured teaching programme in improving the knowledge.

NURSING RESEARCH

- Further research must be conducted to identify several more effective methods for improving knowledge among school going children's.
- This study also brings out the fact that more studies can be done in different settings. The study may be issued for further reference.

RECOMMENDATIONS FOR THE STUDY

Recommendations are

- A similar study can be conducted with control group.
- A similar study can be undertaken for large number of sample to generalize the findings.
- A similar study can be conducted in the school
- A similar study could be conducted for a long duration (longitudinal)

SUMMARY

- Chapter deals with summary, conclusion, implications for nursing practice and recommendations

