A Study on Hygiene Practices among Women and Children in Rural and Urban Areas of Assam

A Report

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FOREWORD

Hygiene refers to certain practices which are essential in day-to-day life in order to maintain good health. According to the World Health Organization (WHO), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." Lack of hygiene on the other hand causes different ailments and diseases. Hygiene practices vary greatly from culture to culture and indeed from family to family. Hygiene is often mentioned in relation to personal hygiene, food hygiene, health hygiene, oral hygiene, etc.

The issues of good hygienic practices have become very pertinent in our country with the launching of the Swachh Bharat Abhiyan. The cleanliness mission will be successful only if individuals and especially women and children from different sections of the communities come forward and acknowledge the good personal hygiene practices. Understanding the day to day behaviour of people particularly, women and children in terms of their knowledge, attitude, practices related to hygiene, the problems faced by the women and children in following hygienic practices, etc. are important so that, appropriate strategies can be developed to imbibe positive practices among the women and children. In this context, the Regional Center Guwahati of the National Institute of Public Cooperation and Child Development carried out A Study on Hygiene Practices among Women and Children in Rural and Urban Areas of Assam.

I hope that the recommendations of the study will provide valuable inputs for promoting personal and environmental hygiene at programme level, community level and individual level.

The present study is the outcome of the efforts of Regional Center Guwahati. I extend my thanks to Dr. P. Krishnamoorthy, Additional Director cum Regional Director (i/c), RC (G) and Dr Ritu Geu Goswami, Assistant Director and her team for carrying out the study.

(L. K. Meena)
Director

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EXECUTIVE SUMMARY

Hygiene refers to certain practices which are essential in day-to-day life in order to maintain good health. According to the World Health Organization (WHO, 1948), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." Lack of hygiene on the other hand causes different ailments and diseases. Hygienic practices normally envelop washing hands, washing body, cleaning teeth, washing hair with soap, cutting nails, washing hands with soap before and after eating food, wearing washed clothes, sun drying washed clothes, etc. Hygiene is often mentioned in relation to personal hygiene, food hygiene, health hygiene, hand hygiene, oral hygiene, menstrual hygiene, household cleanliness, etc. The issues of good hygienic practices have become very pertinent in our country with the launching of the Swachh Bharat Abhiyan and Bal Swachhta Mission (Clean Childhood Mission). The cleanliness mission will be successful only if individuals and especially women and children from different sections of the communities come forward and acknowledge the good personal hygiene practices. In this context, it is important that, the day to day behavior of people particularly, women and children in terms of their knowledge, attitude, practices related to hygiene, the problems faced by the women and children in following hygienic practices, etc. are understood and analyzed so that, appropriate strategies can be developed to imbibe positive practices among the women and children belonging to different sections of people.

The state of Assam is selected for the study since Assam ranks lowest (47.7%) as per NFHS 4 (2015-16) among the eight North Eastern States and also lower than the National Average (48.4%) in terms of percentage of households using improved sanitation facility that can be considered as an important element of hygienic practice. Improved sanitation facility implies use of any kind of toilet. However, the term hygiene practice implies more than only use of toilets.

Some other important practices are washing hands before and after eating food, hand washing after use of toilet, regular bathing, brushing teeth, cutting nails, household cleanliness, garbage disposal, food hygiene, etc. In view of the above, it is proposed to undertake **A Study on Hygiene Practices among Women and Children in Rural and Urban Areas of Assam.**

Objectives

i) to study the hygiene practices of women and children living in rural and urban setting in terms of some selected parameters;
ii) to assess their knowledge and attitudes in respect to hygiene practices;
iii) to identify the factors that impede development of hygienic habits among women and children; and
iv) to suggest measures for promoting hygienic habits among women and children.

Methodology

Assam, also famous as the gateway to North East India, is the largest state in the North-East with a geographical area of 78438 sq. km. The state has got four administrative divisions i.e. Upper Assam, Lower Assam, Barak Valley and Assam Hills. Two districts were selected from each administrative division based on data from NFHS 4 (2015-16) on households using improved sanitation facility with regard to use of toilet. Thus, a total of eight districts viz. Dhemaji, Jorhat, Dhubri, Kamrup (Metro), Hailakandi, Karimganj, Dima Hasao and Karimganj were selected. The respondents of the study were women head of the family or the mother of the selected family and children of different age groups viz. 6 -9 years, 10 – 14 years and 15-18 years. The total respondents in the category of women head of the family/ mother were 50 from one ICDS project. Children were categorized into three age groups viz. 6 to 9 years, 10 to 14 years and 15 to 18 years. From each age group, 10 children were selected from both sexes. Hence,

from each ICDS Project a total of 110 respondents were selected. The study covered eight districts comprising of two ICDS project i.e. Rural and Urban and so the total number of respondents for the study was 1760. Apart from improved sanitation facility, focus of the study was on washing hands before and after eating food, hand washing after use of toilet, regular bathing, brushing teeth, cutting nails, household cleanliness, garbage disposal, food hygiene, etc. Interview schedule for interviewing the women head of family/mother and children was used. Checklist of observation was also used to find out the hygienic practices of the women and children. Community level best practices were also documented.

FINDINGS

Assessment of Knowledge and Attitude towards Hygienic Practices among Women

Hygiene is the process and a set of practices performed in keeping oneself and the environment around clean in order to prevent diseases. The researcher tried to analyze the parameters set for following hygienic habits by women focusing on personal hygiene, culinary hygiene, household hygiene and menstrual hygiene. Oral hygiene includes brushing teeth, flossing, use of agents for cleaning teeth, use of toothbrush, mouth washing, etc. In the study, data revealed that all (100%) women mentioned that they clean their teeth everyday using brush or without brush and some agents. Data reveals that, 93.25 per cent of urban women respondents used toothpaste/powder with brush against 86 per cent of rural women respondents. Almost 84.75 per cent and 83.75 per cent of urban and rural women mentioned of brushing/cleaning the teeth once per day after getting up. Similar percentage of 14.75 per cent and 15 per cent reported of brushing/cleaning the teeth twice per day viz. morning after getting up and before sleeping by urban and rural women respondents. The highest percentage in changing toothbrush after six months was 36.25 per cent

among urban women whereas 27.75 per cent rural women changed their toothbrush for the same duration.

The study found that all (100%) of women from both urban and rural areas took bath every day. Both the respondents from urban and rural areas were reported to be using soap as a major agent in bathing i.e. 99.25 per cent. There was no significant difference reported on cleaning of nose by women respondents of rural and urban areas. The data depicts 67 per cent of urban women and 65.75 per cent of rural women mentioned of cleaning the nose whenever they felt dirty followed by 21.5 per cent of urban women and 25 per cent of rural women reported of cleaning the nose during bath. It was also found that only 65.75 per cent of women, 68 per cent among urban and 63.5 per cent of rural women covered the face/nose while coughing and sneezing. The respondents mentioned that they use either handkerchief, end of the saree, *chador* (Assamese dress), *gamosa* (Assamese towel) or hand to cover the nose and mouth while sneezing and coughing. Data collected reveals that 68 per cent of urban and 63.5 per cent of rural women covered the face/nose while coughing and sneezing. The study also tried to find out hair hygiene practices. It was found that almost all wash their hair frequently and comb their hair regularly. Among urban and rural women, the percentage of washing hair per week was very similar. Regarding washing of comb, among the 800 women respondents, maximum (98.5%) mentioned of washing their comb after hair washing i.e. 99.5 per cent among urban women respondents and 97.5 per cent among rural women respondents respectively.

Apart from interviewing the women respondents, the researchers observed the women on some aspects related to hygiene like tidiness, body odour, etc. while conducting the study. The observation data reveals that majority of the women respondents, 77.75 per cent of urban respondents and 71.75 per cent of rural respondents were looked tidy overall.

Nail hygiene is an important aspect of hygiene among women as they are involved in preparation of food. Hence the study tried to find out frequency of trimming of nails of both hand and toes. It is observed that, about 65.5 per cent of urban women and 61.25 per cent of rural women trim their hand nails weekly. Similarly, data reveals that 71.25 per cent of urban women and 65 per cent of rural women trim their toe nails weekly.

Hand washing or hand hygiene is the act of cleaning hands for the purpose of removing soil, dirt, and other bacteria from hands with soap and water. If soap is not available, hands can be cleaned with ash. Use of soap was 90 per cent among urban and 92.75 among rural women respondents. The study also tried to find out hygienic practices about wearing of chappals while going to toilet and outside the house. Maximum (92.37%) of women respondents mentioned of wearing chappals while going to toilet or outside the house. In urban areas, majority (96%) of women reported whereas 86.75 per cent women of rural areas reported of wearing chappals while going to toilet or outside.

Personal hygiene in terms of changing innerwear, outerwear, washing clothes, sun drying washed clothes, etc. was also assessed among the women respondents of urban and rural areas. Among 800 women respondents, 100 per cent women mentioned about changing innerwear on everyday basis. Regarding sun drying of innerwear, it was found that 87.75 per cent each of women respondents from urban and rural areas reported of sun drying of the inner garments. Regarding outerwear, almost all (98.5%) of women respondents mentioned of changing outerwear regularly. All the women respondents of urban and rural areas mentioned about washing and sun drying the outerwear on regular basis. Data regarding cleaning of armpit, belly button, washing of pubic parts, etc. was collected from women in urban and rural areas of Assam. Data reveals that all (100%) women respondents mentioned of cleaning armpits.

Some of the findings of the study was very satisfactory in relation to washing feet after coming from outside, cleaning anal after defecation, washing pubic parts, etc. only with water. All women respondents on these subjects from both urban and rural reported to be maintaining the hygienic practices.

Menstrual hygiene among women is very important as it keeps a woman healthy and to enjoy the life to fullest potential. Regarding use of material, it was mentioned that two types of material viz. clothes and napkin were generally used during menstruation. It was found that use of sanitary napkin was more in urban (55.98%) than rural (44.95%) and vice versa about use of cloth. Majority (96.56%) of menstruating women reported of washing their hand after changing of sanitary napkins/cloth.

Culinary hygiene are the practices related to food management and cooking to prevent food contamination, prevent food poisoning and minimize the transmission of disease to other food, humans or animals. Data revealed that only 12 per cent of urban women respondents and 14.25 per cent of the rural women respondents mentioned of washing vegetables before cutting and peeling. All the women respondents reported of covering cooked food in both rural and urban areas. The urban women respondents reported of washing the kitchen slaps and potholders was more with 43.25 per cent on weekly basis than the rural respondents with only 37 per cent. The washing of kitchen items on monthly basis was observed higher in rural areas (6.75%) than rural areas (2.5%) respectively. In the study, a total of 235 (58.75%) urban women and 165 (41.25%) rural women respondents used dust bins.

All the study respondents mentioned of washing utensils before eating but 17.75 per cent of urban women and 15.5 per cent of rural women washed their utensils with any soap/bar/detergent, etc. before eating. Majority of the respondents from both urban (90.25%) and rural (89.25%) areas reported of washing their utensils instantly after eating food.

A house with its occupants is regarded as a household. The household must be kept clean through regular brooming, mopping, free from insects and pests, etc. so that the occupants enjoys good health. In the study all respondents mentioned that they broom their houses every day. Similarly, the study tried to find out the number of times of moping the houses. More than half of the respondents, 58.25 per cent among urban and 53.75 per cent among rural women mentioned of moping their houses once per day.

The study also tried to observe the cleanliness of the household, surroundings, etc. The investigators noted the cleanliness in terms of clean, not clean, somewhat clean and super clean. Same percentage of 37.25 per cent each was observed among urban and rural households as clean on household cleanliness. Observation of cleanliness in the toilet of the households were also made. Similar percentage of 20.5 per cent and 20.25 per cent among urban and rural were observed as clean toilets. Regarding source of water, it was found that in the urban areas the source of water was 46 per cent from water supply/running water whereas in rural areas tube well was the main source of drinking water with 33.5 per cent. The other sources were well, river, pond, etc. It was also found that almost 80.25 per cent of urban women either filter or boil or both boil and filter before drinking whereas in rural areas it is only 57.75 per cent.

Assessment of Knowledge and Attitude towards Hygienic Practices among Children

Children six to nine years

Data for the children in the age group of six to nine years revealed that the urban girls were more independent in talking bath and did not take the help of elderly persons while taking bath. It was also observed that the rural girls used charcoal to brush the teeth. In some aspects of hygiene like changing toothbrush within two to three months, use of handkerchief while coughing and sneezing, ear hygiene, hair hygiene, more use of shampoo, weekly trimming of toenails, hand washing and awareness regarding hand

washing were better among urban girls than rural girls. In case of boys, hygienic aspects regarding weekly trimming of hand nails, nasal and ear hygiene and oiling of hair were found better among rural boys than urban boys. In terms of brushing of tooth twice per day and in aspects of hand washing the rural and urban boys had followed the same hygienic practices. The parameters like change of toothbrush in two to three months, use of soap for bathing every day, use of handkerchief while coughing and sneezing, hair hygiene, more use of shampoo, weekly trimming of toe nails and awareness about hand washing were practiced more by urban boys than rural boys. Like the girls the boys were also more independent in talking bath.

Children 10 to 14 years

It was observed that in the age group of 10 to 14 years girls, hygiene related to hair like hair wash and oiling the hair was better among rural girls than urban girls. The other parameters like oral hygiene, brushing teeth in the morning after getting up & before sleeping, change of toothbrush, nasal and ear hygiene, use of handkerchief while coughing and sneezing, weekly trimming hand and toenails, hand washing, wearing chappals to toilet and outside and changing innerwear and outerwear regularly were found to be better among urban girls than rural girls. However, one similarity about use of soap in bathing was same among both urban and rural girls. The data regarding boys was that the rural boys were found to be better than urban boys in the hygienic parameters like brushing teeth twice viz. morning after getting up & before sleeping, nasal hygiene, use of handkerchief, ear and hair hygiene and weekly trimming of hand nails. Again, the study found that frequent change of toothbrush in two to three months, use of soap in bath, use of shampoo, oiling hair, weekly trimming of toe nails weekly, hand washing, wearing chappals to toilet and outside and change of innerwear and outerwear regularly were found to be followed more among urban boys than rural boys.

Children 15 to 18 years

Data in the age group of 15 to 18 years revealed that, the hygienic aspects were far better than the younger age groups. Hence, it may be concluded that with age awareness regarding hygiene improves. Some parameters of hygiene like brushing twice per day, hand washing and wearing chappals while going toilet/outside were found to be same among the rural and urban girls of Assam. Nasal hygiene was found better among rural girls than urban girls. Hygiene related to oral, change of toothbrush in two to three months, covering face/nose while coughing and sneezing, ear hygiene, hair hygiene, trimming hand nails weekly, trimming toe nails weekly, changing innerwear and outerwear regularly and use of sanitary napkins and changing the napkin frequently was found to be better among urban girls than rural girls. Among boys of the same age group, it was found that ear and nasal hygiene were found to be better among rural than urban boys. Some aspects of hygiene like covering face/nose while coughing and sneezing, trimming toenails weekly, hand washing, wearing chappals while going toilet/outside were found to be same among rural and urban boys. Again, the hygienic practices among urban boys regarding oral, brushing twice per day, frequent change of toothbrush, hair hygiene, trimming hand nails weekly, changing innerwear and outerwear regularly and use of soap and water in washing were found to better than rural boys.

Factors Impeding Hygienic Habits among Women and Children

Hygienic habits should be introduced to children at an early stage so that the habits remain with them throughout their life. The women respondents mentioned that for financial problem, lack of time, lack of knowledge or lack of awareness and following traditional methods about personal hygiene is one of another impeding factors reported by 15.87 per cent of women in following hygienic practices. The other impeding factors of women for not able to maintain hygiene were physical factors like sickness, diseased condition, disability (3.75%), large family size (7.25%), lack of water

(4.37%), feeling lazy (5.75%) and pregnancy or childcare (3.87%) respectively.

The study also tried to find out the factors for impeding hygiene among children. It was found that almost all the children from different community and from different age group faces various problems while maintaining hygiene practices. The factors which were found while collecting data on impeding hygiene among girls and boys of six to nine years were physical factors like sickness, disability, medical problem, etc, large family size, lack of water lack of knowledge and awareness about personal hygiene, lack of time or lazy or forget to keep hygiene and either parents were busy or expired and hence no one to take care of the child.

Documentation of community level best practices

The method or technique that is unique and accepted by one and all and has the potential to change the behaviour of people is known as good practice or best practice. As the study was related to hygienic practices among women and children, there was an effort to document the community level good practice observed in the eight districts of Assam.

Suggestions and Recommendations

i) It has been found that cent per cent of women and children in all age groups brushed their teeth, however it was only once in the morning. Hence, awareness may be sought to brush teeth twice per day viz. after getting up and before sleeping and on changing the toothbrush after three months of use.

ii) The present study brought to light that there was lack of awareness regarding nasal hygiene, covering the face/nose while coughing and sneezing, nail hygiene, hand washing, etc. Hence, frequent awareness programmes may be held to change the behavior of women and children.

iii) The study also found that use of dustbins was very less among the study population. Maximum respondents threw their garbage in open spaces of the backyard of the house or nearby ponds thus polluting the land and the water bodies. There is a need of the community, civil society organizations and government sector to come up with some plans so that environment and water bodies can be saved.

iv) The study found that although toilets were present, it was not clean frequently. Again, it is the role of SBM or community to spread awareness about keeping the toilet clean for better health.

v) From the findings of the study, it is highly recommended that intense awareness programmes are required to change the behavior pf the people towards hygiene.

Based on the findings of the study, the following recommendations are made at programme level, community level and individual level.

At Programme Level

Intense training programmes are to be conducted for all stakeholders on the importance of maintaining a high level of hygiene and cleanliness in the area of work. The frontline workers like the AWW, AWH, ANM, ASHA, etc. should repeatedly be made aware about the importance of personal hygiene and its impact on health. The frontline workers should be entrusted to spread awareness among children attending AWCs, adolescents and pregnant and lactating mothers while conducting home visits, organizing NHED and VHSND sessions, community meetings, etc. The children need to learn about personal hygiene and the teachers should be mandated to give awareness at school.

At Community Level

The involvement of every gram panchayat, panchayat samiti and Zila Parishad for spreading awareness on environmental hygiene is required. The Mahila Mandals, Self-help groups, etc. should spread mass awareness on personal as well as environmental hygiene. The community can set up community dustbins or specific area for disposal of waste which can be cleaned at regular intervals.

At Individual Level

Cleanliness is a habit not an act. Hence, the community should make an effort to identify any individual i.e. any man, women or a child who is keen in keeping himself/herself clean, his/her house and the surrounding clean. The identified person may act as champion and can bring changes in the behavior of others about hygiene. The champion may further help in internalizing and inculcating cleanliness as a matter of habit and routine among others.

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CHAPTER I

INTRODUCTION

1.1. Background

Hygiene refers to certain practices which are essential in day-to-day life in order to maintain good health. According to the World Health Organization (WHO, 1948), "Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases." Lack of hygiene on the other hand causes different ailments and diseases. Hygienic practices normally envelop washing hands, washing body, cleaning teeth, washing hair with soap, cutting nails, washing hands with soap before and after eating food, wearing washed clothes, sun drying washed clothes, etc. Hygienic practices along with safe water supply and adequate sanitation protect health and these are the basic human rights. Several simple interventions such as improving the quality of water in the home as well as educating on maintaining hygiene at the household level among people and especially among women and children can improve health and well-being of the family. Hygienic practices vary from culture to culture and indeed from family to family. Hygiene is often mentioned in relation to personal hygiene, food hygiene, health hygiene, hand hygiene, oral hygiene, menstrual hygiene, household cleanliness, etc.

Personal hygiene refers to cleanliness of one's body and clothing to preserve overall health and well-being. It includes a number of different activities related to areas of self-care, bathing, cleansing oneself after using the toilets, taking proper care of the mouth, combing hair, grooming, dressing, etc. which are also considered as Activities of Daily Living (ADL). Personal hygiene focusses on good practices like handwashing with soap and water before and after eating, after using toilet, cleaning children after defecation / urination and safe faecal disposal. The eyes should be washed

and cleaned with water after getting up from bed so that no flies sit and crawl on the eyes. Likewise, brushing and cleaning teeth well every morning and before sleeping is one of the most important oral hygienic habits. Oral hygiene also includes rinsing mouth with clean water after eating. Bathing every day, once or twice, wearing washed clothes, changing under garments, cleaning genitals regularly helps in keeping a person healthy. Along with the body hair and fingernails needs to be kept clean. Fingernails needs to be well trimmed as long and dirty nails harbor filth and germs. Hair hygiene includes washing hair with any cleaning agent, combing hair every day, washing combs and inspect hairs for lice, etc. is also a part of personal hygiene. A person suffering from cough and cold should keep the organs like nose, mouth, throat, clean as it is very unhygienic to spit and blow nose on the ground. Sputum and mucous can spread diseases. A handkerchief should be always used while coughing and sneezing.

Similarly, hygiene must be maintained while cooking food as lack of adequate food hygiene can lead to food borne diseases. Safe food handling refers to precautions taken while storing, preparing, and eating food. Maintaining hygiene during purchasing of any foodstuff, storing, cutting and preparation of food is very important as it reduces the risk of food borne diseases. Apart from maintaining hygiene during food preparation, the kitchen areas, cutting tools, potholders, utensils, etc. used in preparation of food should be washed frequently with suitable detergent as these may carry germs. Culinary hygiene practices during food preparation helps in preventing food contamination, food poisoning and minimize the changes of sickness among family members. The kitchen should be kept in such a manner that it should be well ventilated. The floors of kitchen and the slabs should be cleaned every day before and after the food is cooked and served. It is better to have two garbage bins i.e. one for dry waste and one for wet waste. Washing of hands with soap and water before preparation of food and serving with clean hands is also a part of food hygiene. The cooked food should never be touched with dirty hands. In personal as well as food

hygiene, hand hygiene plays an important role in prevention of spread of infectious diseases in home and everyday life settings.

Over a few years, hand hygiene has got lot of importance. Hand hygiene is defined as hand washing or washing hands and nails with soap and water or using a sanitizer. Washing hands with soap and water should be encouraged among all people as dangerous microorganisms are widely found in soil, animals, garbage and wastes and these microorganisms are carried by hands, clothes, utensils etc. Slightest contact can transfer them to food and cause food borne disease. It is important to wash soap and water after defecation to help protect against illness.

World Health Organization (2014) recommends hand washing with ash if soap is not available in emergencies. Use of ash is common in rural areas and many studies reveal that ash is as effective as soap for removing pathogens. Centre for Disease Control and Prevention (CDC) mentions about eight steps of hand washing which helps in keeping hygiene regularly. The critical times of hand washing includes before and after eating, after going to toilet, after cleaning baby's faeces, before treating an open wound, after playing with pet animal, after handling garbage and wastes, after blowing nose.

Figure 1.1. Steps of Hand Washing

The steps of hand washing start from wetting hands with water, applying soap, rubbing all over the hands for at least 20 seconds, between fingers, back of hands, base of thumbs, back of fingers, finger nails, wrists and then rinsing well with safe water and drying the hands with a clean towel. Use of safe water in washing hands, body, foodstuffs, etc. and also

during cooking is very important for maintaining hygiene and health as water if contaminated with pathogens such as bacteria, viruses, fungi and parasites may lead to infections and diseases. High incidence of vector-borne diseases and intestinal diseases in India are strongly correlated with unsanitary practices and absence of safe drinking water. UNICEF (2013), reports that globally, almost 90 per cent of diarrheal diseases among children are attributed to unsafe drinking water supply and inadequate hygiene.

Hygienic practices help in prevention of infections and diseases. These practices should be inculcated among all members of the family and most importantly among women and children as women are the caregivers in any family and children can adopt the best at an early age. As women have to prepare food for the family, women are at risk of spreading germs and so she should keep herself free from skin diseases, respiratory diseases, gastrointestinal diseases, etc. Some of the factors like washing hands, daily shower, keeping the body free from sweating, tying hair properly, etc. helps in maintaining health. Women as caregivers can influence the way in which children adopt hygienic practices, which will stay with them for life. Some common conditions which arise from poor personal hygiene are like diarrhea, dysentery, cholera, jaundice, vomiting, skin irritation and infection, gum disease, etc. Vcan (2014) reported that around 37.7 million Indians are affected by water-borne diseases annually, 1.5 million children are estimated to die of diarrhoea alone and 73 million working days are lost due to water-borne disease each year.

Awareness of personal hygiene is required to be given to people and more specifically to women and children so that behaviour of the changes and they adopt good hygienic practices. If a woman adopts good hygienic behaviour, then it is very easy to change the behaviour of the whole family. The mother/ women head of the family should know that unhygienic personal as well as food hygiene may create sickness in the family. Henceforth, the women should be given all necessary information and

education about hygiene and its benefits. Focus on personal hygiene, hand hygiene, culinary hygiene, etc. should be given as the women is involved in cooking food for the family. The women should also focus on use of safe drinking water as unsafe water is the leading cause of mortality and morbidity among children.

UNICEF (India, 2012) reported that unclean hands and unsafe disposal of stools lead to germs and worms entering the body of young children, causing diarrhoea and other infections and leading to growth failure and poor development. This indicates the urgent need for safe hygiene practices among children as children are the future of our nation. Therefore, the future of our nation needs utmost care and protection. Thus, educating the children on good hygiene is the best way to avoid the spread of infection and diseases. Teaching the principles of correct hygiene at an early age can help keeping the children healthy in later life. Children adopts all the habits from the mother and hence the mother is responsible for the all the good and bad habits that a child develops. Adequate hygiene should be checked both in home and schools. Children should not play in dirt and unhygienic environment and they should be encouraged to wear sandles or shoes to prevent the contract of bare feet with soil. Contact with unhygienic environment may lead to infections and diseases. WHO (2017) reported that in India, every year 1.7 million children under the age of five years die due to unsafe water, lack of sanitation, inadequate hygiene, etc. Hence, children should be educated and encouraged on wearing clean clothes, cutting nails, washing hands after and before food, washing body everyday so that they remain healthy. Inculcating good hygienic practices among children in the early years is very important as children often learn from the mothers, teachers, family and community in which they are raised.

The consequences of poor hygiene among women and children are body odor, bad breath, dental disease, illness, diarrhea, vomiting, skin irritation, infection, etc. Poor hygiene can be observed in appearance, greasy

hair, dirty fingernails and odour in the clothes which is not sundried, surrounding of households, kitchen, etc.

Though Government of India had tried to improve the situation of women and children with regard to improving the hygienic and sanitation practices yet till now the progress is not so satisfactory. National Sample Survey Office (NSSO, 2015) underlined the abysmal state of sanitation in the country, particularly in rural India. UNICEF (2017) pointed out that that lack of proper sanitation facilities resulted in the death of an estimated 1,00,000 children in India annually. Ministry of Health and Family Welfare (2016) reported that the overall health scenario in India has shown a significant improvement in the 26 years between 1990 and 2016. Diarrhoea, a major disease spurned by unsafe sanitation practices was a major cause of death in India, contributing to an average of 15.5 per cent of total deaths in India from 1990 to 2016. Hashi *et. al* (2017) mentioned that WASH interventions significantly reduce diarrheal morbidity and hand washing with soap reduces it by 44 per cent. About 21 percent of communicable diseases in the country are due to unsafe water and lack of hygiene practices, says a World Bank Report (2018). However, the scenario for the state of Assam regarding sanitation is a bit satisfactory compared to rest of the country. The state of Assam ranks lowest (47.7%) as per NFHS-4 (2015-16) among the NE states and also lowest than the National Average (48.4%) in terms of percentage of households using improved sanitation facility. The advent of the rainy season and flood in Assam makes the hygiene condition worse every year as it brings a plethora of health problems.

Importance of cleanliness in day to day life has become prominent with the launching of Swachh Bharat Abhiyan (SBA or Clean India Campaign) and Bal Swachhta Mission (Clean Childhood Mission). However, cleanliness drive in India was present since 1954 as Rural Sanitation Programme. From 1981-90, India observed International Decade for Drinking water and Sanitation and from 1986 as Central Rural Sanitation Programme. In 1999, the cleanliness drive was through Total Sanitation

Campaign and finally in 2014 it was launched as Swachh Bharat Mission on October 2, 2014 by Honourable Prime Minister Narendra Modi. The mission was introduced mainly to eliminate open defecation, conversion of insanitary toilets to pour flush toilets, to eradicate manual scavenging, scientific processing and disposal and also to bring about a behavioural change in people regarding healthy sanitation practices.

Likewise, to aware our young and future generation, Bal Swachhata Mission (BSM) was launched on Children's Day viz. 14th November 2014. BSM is a venture of Ministry of women and Child Development, an initiative to endorse practice of cleanliness in all children attending anganwadi centres so that the children of AWCs work as ambassadors of promoting cleanliness by means of motivating others to keep their homes, schools and surroundings clean. The activities of the AWC in the Anganwadi Services Scheme revolve around the Swachh Bharat Campaign is clean anganwadi, clean surroundings, clean self (personal hygiene/ child health), clean food, clean drinking water and clean toilets.

The other initiatives taken by GOI to ensure cleanliness is to work as partners with USAID to create healthier urban communities by increasing access to clean water and sanitation. USAID is also working with the community members and school children to promote good hand washing habits and encourage neighbours to stop defecating in the open. In 2017, SBM emphasized with Satyagroh se swachhagrah with reference to Father of the Nation. Swachh Sarvekshan (Ministry of Urban Development) is doing an extensive sanitation survey to check the progress and impact of Swachh Bharat Abhiyan and to foster a spirit of competition by 2019. There are many programmes and schemes of GOI and many NGOs are also working to improve the hygienic practices among women and children. Although these programmes are implemented, there is a need to assess the knowledge and attitudes towards hygienic practices.

1.2. Rationale for the Present Study

The issues of good hygienic practices have become very pertinent in our country with the launching of the Swachh Bharat Abhiyan. The cleanliness mission will be successful only if individuals and especially women and children from different sections of the communities come forward and acknowledge the good personal hygiene practices. In this context, it is important that, the day to day behavior of people particularly, women and children in terms of their knowledge, attitude, practices related to hygiene, the problems faced by the women and children in following hygienic practices, etc. are understood and analyzed so that, appropriate strategies can be developed to imbibe positive practices among the women and children belonging to different sections of people. In view of the above, it is proposed to undertake **A Study on Hygiene Practices among Women and Children in Rural and Urban Areas of Assam.**

The state of Assam is selected since Assam ranks lowest (47.7%) as per NFHS 4 (2015-16) among the eight North Eastern States and also lower than the National Average (48.4%) in terms of percentage of households using improved sanitation facility that can be considered as an important element of hygienic practice. Improved sanitation facility implies use of any kind of toilet.

However, the term hygiene practice implies more than only use of toilets. Some other important practices are washing hands before and after eating food, hand washing after use of toilet, regular bathing, brushing teeth, cutting nails, household cleanliness, garbage disposal, food hygiene, etc. Therefore, the study would invariably incorporate these aspects into consideration.

1.3. Objectives

v) to study the hygiene practices of women and children living in rural and urban setting in terms of some selected parameters;
vi) to assess their knowledge and attitudes in respect to hygiene practices;
vii) to identify the factors that impede development of hygienic habits among women and children; and
viii) to suggest measures for promoting hygienic habits among women and children.

1.4. Review of Literature

Researchers have conducted many studies on hygienic practices across India, in India as well as in Assam. Some of the research studies conducted earlier are reported below.

International Studies

Prisma (2004) in a study on behavioral Study of Hand washing with Soap in seri-urban and Rural Areas of Peru states found that 29 per cent of participants washed their hands after contact with faeces and 14 per cent used soap. Regarding food handling, 20 percent of the individuals washed their hands before coming into contact with food and six per cent used soap. The study also observed that mothers are inclined to better hand washing practices related to feces, mothers washed their hands before coming into contact with food.

Biran (2005) conducted a study on formative research for hygiene promotion in Kyrgyzstan and reported that the frequency of handwashing at critical times is 80 per cent with soap but soap at home was actually seen only among 57 per cent of households visited.

Takannashi *et. al* (2009) conducted a study on food hygienic practices in Vietnam and found that the practice of food-hygiene practices like hand-washing, method of washing utensils, separation of utensils for raw and cooked food, and the location where foods were prepared for cooking has a potential impact in preventing diarrhoea among children in Viet Nam than the children whose mothers prepared food somewhere other than the table (typically on the ground).

Vivas *et. al* (2010) conducted a study on Knowledge, Attitude and Practices (KAP) of Hygiene among School Children in Angolela, Ethiopia and found that approximately 52 per cent of students out of 669 students were having adequate knowledge of proper hygiene. Most students reported hand washing before meals (99%), but only 36. 2 per cent reported using soap. Although 76.7 per cent of students reported that washing hands after defecation was important, only 14.8 per cent reported actually following this practice.

Hossain (2012) conducted a study on study on knowledge, attitude and practice about personal hygiene and disease awareness of East West University of Dhaka city and the study found that most of the students wash their hand with soap after coming from toilet. Cent per cent reported of washing their hand before eating but only 60.24 per cent students used soap.

A study on assessment of personal hygiene knowledge and practices in United Arab Emirates by Afifi and Abushelaibi (2012) concluded that among cent per cent educated population, 70 per cent wash their hands before and after eating, 80 per cent wash hands with warm water and soap after using toilet and 29 per cent were infected with food borne illnesses.

Kadi *et.al* (2012) conducted a study on Hand Hygiene Practices among Medical Students of Qassim College of Medicine, Saudi Arabia and found that the average awareness regarding the positive indications of hand

hygiene was 56 per cent. Rests of the 44 per cent of students were either not sure or unaware of the indications of hygiene. The study concluded that serious efforts are needed to improve the hand hygiene practices among medical students.

Karn *et.al* (2012) conducted a study on personal hygiene and sanitary practices in a rural village of Mornag district of Nepal and concluded that 65 per cent of the respondents were using soap water after defecation and 31 per cent were using water alone and four per cent were using ash/soil water for hand washing.

Ahmadu (2013) conducted a study on the state of personal hygiene among primary school children in Sudan where the findings reported that that among 58 per cent boys and 42 per cent girls, all 100 per cent of the study participants are being taught health education in school as part of educational curriculum.

Jerry and Jabulani (2013) studied knowledge, attitude and practices (KAP) on water, sanitation and hygiene in selected schools in Vhembe District, Limpopo, South Africa and found that 91.40 ± 1.16 per cent of the respondents were concerned about hygiene, of which 53.20 ± 2.07 per cent were always concerned, 40.40 ± 2.03 per cent were sometimes concerned and 6.40 ± 1.01 per cent had no concern at all. In terms of practices, most of the respondents reported that they practiced hand washing, especially before eating and after visiting the toilet. With regard to the behavior of washing fruits before eating them, 81.80 ± 1.60 per cent of the respondents reported that they wash fruits before eating them. In terms of knowledge, about 76.80 ± 1.75 per cent of the respondents knew that there are waterborne diseases, even though they could not differentiate between cholera and diarrhoea.

Mundia (2013) conducted a study on assessment of hygiene knowledge and practices in Namibia and found that personal hygiene, the

facilities for bathing were unhygienic. In addition, children were playing in the stagnant dirty water. Although, majority of the respondents mentioned about regular bathing or brushing their teeth, but personal hygiene was not observed. The study concluded, washing hands at critical times such as after defecation or before preparing food are very important and needs to be focused.

Tan (2013) conducted a study on personal hygiene knowledge and practices among food handlers at selected primary schools in Klang valley area, Selangor, Malaysia found that of 25 respondents interviewed, four per cent of respondents knew to keep tidy hair while four per cent knew to remove ring/ jewellery when handling foods. When the respondents were asked on tidy and clean attire, only 2.67 per cent had knowledge about it.

WHO (2014) reported that in many people in low – income communities, people are not able to afford soap and use ash or soil instead. Ash or soil were more effective than water alone. They were found as effective against bacteria as soap in short – term experiments with bacterial contaminated hands in Bangladesh and India. WHO recommends ash or sand as alternative to soap when needed or during emergencies.

Rayamajhi *et.al (2014)* conducted a study on sanitary hygiene and practices among the residents of Chungwang, Dhankuta District, Eastern Nepal and found that 97.4 per cent of the respondents wash their hands with soap or other detergents and almost all (99.3%) of them had soaps at their home on observation. Similarly, 81.2 per cent of them had toilet at home but only 79.2 per cent used on regular basis. Basic hand washing was practiced by everyone during/after defecation and before meal but the importance of it after cleaning the bottom and nose of children and before preparing the meal was known to few of the participants. The study concluded that there is a need of behavioral change regarding optimum hygiene practices among the participants

Johnson (2015) conducted a study on assessment of water, sanitation, and hygiene practices and associated factors in a Buruli ulcer endemic district in Benin and revealed that more than 49 per cent of the household surveyed used unimproved water sources for their daily needs. Only 8.7 per cent of the investigated households had improved sanitation facilities at home and 9.7 per cent had improved hygiene behavior.

Songa (2015) conducted an observational study on hand washing practices among health care workers in Embu Referral Hospital, Embu County. The observation study reported poor hand washing rates among nurses (28%) and doctors (23%). There was a gap between knowledge and practice. Knowledge of doctors on various aspects of hand washing was inadequate though it was better than nurses.

Ghanim *et. al* (2016) conducted a study on the knowledge and practice of personal hygiene among primary school students in Sharjah-UAE and found 65 per cent of students had adequate perception about personal hygiene, but only 27 per cent mentioned that personal hygiene was important to fight diseases. The ability to define personal hygiene was significantly higher among girls (95%) as compared to boys (82%). The average knowledge related to basic personal hygiene recorded among girls was significantly higher than among boys.

Sultana (2016) conducted a study on hand hygiene knowledge and practice among university students of Bangladesh and found that 43.5 per cent washed their hands only three to five times daily, followed by 28.5 per cent six to ten times. Only 22.5 per cent among the total respondents washed their hands with soap for eleven times or more daily. The main reason to skip hand washing was reported as “keep forgetting”, which was 52 per cent and 37.5 per cent at home and at university, respectively. Approximately 67 per cent of the respondents said that they had separate soap for washing hand at home and 56 per cent replied that they used

instant hand sterilizer for maintaining hand hygiene. About 83 per cent of the students thought that washing hand was important to prevent disease, while 17 per cent of the students did not think so.

Akabanda *et.al* (2017) conducted a study on food safety knowledge, attitudes and practices of institutional food-handlers in Ghana where the researcher finds that Majority of the food-handlers were aware of the critical role of general sanitary practices in the work place, such as hand washing (98.7%), using gloves (77.9%), proper cleaning of the instruments/utensils (86.4%), and detergent use (72.8%).

National Studies

Shanu (2011) conducted a study` to assess the hand hygiene practices among health care workers in Cardiac Surgical Intensive Care Unit, Shree Chitra Tirunal Institute for Medical Science and Technology and revealed that there is a disparity between the opinion and the practices of hand hygiene among health care workers.

Sarkar (2013) in a study on Personal hygiene among primary school children living in a slum of Kolkata, found that the female students were more knowledgeable than the male students regarding the maintenance of personal hygiene. There was a wide gap between practice and knowledge of personal hygiene among the primary school children living in the slum area. Even, misconceptions do exist on certain indicators of personal hygiene among the students. Statistically significant association was observed between practices of personal hygiene among the primary school children and the literacy status of their mother.

Chaudhury *et. al* (2015) conducted a study on personal hygiene of school going and non-school going children in Ahmedabad district, Gujrat. Majority (24.86%) of non-school going urban children have poor personal hygiene followed by 20.79 per cent in non-school going urban children. Poor

personal hygiene was seen in 9.77 per cent of School going children of urban area and 13.43 per cent in rural area. Statistic difference for poor personal hygiene among school going and non-school going children of urban area was highly significant. There were huge differences on overall occurrence of personal hygiene, it was found almost double among non-school children compare to school children.

Reshma *et.al* (2016) in a descriptive study to assess the knowledge and practice regarding water, sanitation and hygiene among women in selected villages of Udupi District concluded that 42 per cent had average knowledge on water, sanitation and hygiene. Majority (88%) of the respondents performed unskilled hand washing.

Veerapu *et.al* (2016) conducted a study on promotion of sanitation and hygiene in a rural area of South India and revealed that 91.3 per cent of the respondents were practicing open air defecation. After intervention, 77.3 per cent and 77.2 per cent were practicing open air defecation. The practice of keeping latrine in a sanitary way was increased from 88.2 per cent to 97.3 per cent and 95.9 per cent after intervention respectively

Rah, *et. al* (2017) in a study on household sanitation and personal hygiene practices in rural India revealed that the prevalence of stunting ranged from 25 per cent to 50 per cent in case of children who goes for open defecation. Household access to improved water supply or piped water was not in itself associated with stunting. The caregiver's self-reported practices of washing hands with soap before meals or after defecation were inversely associated with child stunting. However, the inverse association between reported personal hygiene practices and stunting was stronger among households with access to toilet facility or piped water.

Reddy *et.al* (2017) in a study on water and sanitation hygiene practices for under-five children among households of Sugali Tribe of Chittoor District, Andhra Pradesh, India found that majority of the

households (69%) reported doing nothing at home to make the water safe for drinking. Over 93.8 per cent of the households reported storing water in utensil covered with a lid. Nearly three-quarters (74.2 per cent) of the households reported cleaning the utensils at least once a day. Nearly 90 per cent of the households reported retrieving water by dipping glass in the vessels, which were generally cleaned daily and covered.

State-level Studies

Gogoi (2014) in a study on status of water supply, sanitation and hygiene practices among the Tea Garden population of Assam concluded that hygiene practices before and after toilet practice is generally not followed by most of the people. Majority of the children use open space as toilets and dispose garbage in improper and unscientific manner. The study concluded that lack of education makes them more vulnerable to the sanitation related and some other diseases.

In a study on continuity and change in health and health care practices among the Mishing Tribe of Golaghat District in Assam by Saikia (2014) revealed that 81.96 per cent of males brush their teeth regularly, whereas 87.6 per cent females brush their teeth regularly. Those who brushed their teeth on alternate day are mostly children who belong to below 7 years. Regarding bath habits, the study found that 77.6 per cent take bath once a day whereas 17.2 per cent take bath twice a day and only 5.2 per cent have the habits of bathing on alternate day. On the other hand, in case of men, though 78.43 per cent and 14.51 per cent are found taking bath once and twice a day respectively, 7.06 per cent take bath on alternate day. Thus, the women are found to be a little more conscious on personal hygiene.

Chutia (2015) in a case study on health and hygiene status of Deoris of Assam found that out of total surveyed population, 59.9 per cent takes bath regularly, 64.6 per cent brush teeth daily, 70.8 per cent washes their

hands before any meal, while remaining 29 per cent takes food by dirty hands. Nearly 32 per cent surveyed people cut their nails weekly. Only 15 per cent of the population washes their mattress and cloth regularly. The study also found that most of the families were little conscious of personal hygiene. Use of common towels, and drinking cups/glass, carelessness about handkerchief, imperfectly washed dishes and hand soiled with nasal secretion were prevalent practices. Diffusion of some infectious diseases could possibly be related to such unhygienic habits.

Hazarika, (2015) conducted a study on sanitation and its impact on health in Jorhat, Assam and revealed that 13 per cent of the drains in the slums had covered drains and the rest were uncovered which was a health hazard to the inhabitants.

Talukdar and Baruah (2015) conducted a study on prevalence of skin infection and personal hygiene practices amongst primary school children of Kamrup (Rural) District of Assam and reported that out of all skin disorder, majority of the children suffering from scabies, pityriasis, pediculosis and tinea infection. This association is highly significant as 84.25 per cent reported of washing their hands before eating and 85.5 per cent of hand washing after defecation with soap and water. The study also reported 34.25 per cent of the children were found to wear footwear, 80 per cent practiced daily bath, 82.25 per cent had the habit of brushing their teeth daily while only 47.25 per cent children were found to change their clothes daily.

1.5. Methodology

1.5.1 Selection of Districts

Assam, also famous as the gateway to North East India, is the largest state in the North-East with a geographical area of 78438 sq. km. Presently, the state has 33 districts with 67 Sub-Divisions and 219 blocks. The state

has got four administrative divisions i.e. Upper Assam, Lower Assam, Barak Valley and Assam Hills.

Two districts were selected from each administrative division based on data from NFHS 4 (2015-16) on households using improved sanitation facility with regard to use of toilet (Table 1.1). Thus, a total of eight districts viz. Dhemaji, Jorhat, Dhubri, Kamrup (Metro), Hailakandi, Karimganj, Dima Hasao and Karimganj were selected.

Table: 1.1: Distribution of ICDS projects as per Administrative Division

Administrative Division	District	ICDS Projects
Upper Assam	Dhemaji and Jorhat	1. Dhemaji (U) ICDS Project 2. Mokokseleng ICDS Project 3. Jorhat (U) ICDS Project 4. Kaliapani ICDS Project
Lower Assam	Dhubri and Kamrup (Metro)	1. Gauripur ICDS Project 2. Mankachar ICDS Project 3. Gauhati (U) ICDS Project 4. Dimoria ICDS Project
Barak Valley	Hailakandi and Karimganj	1. Hailakandi (U) ICDS Project 2. South Hailakandi ICDS Project 3. North Karimganj ICDS Project 4. South Karimgang ICDS Project
Assam Hills	Dima Hasao and Karbi Anglong	1. New Sangbar ICDS Project 2. Jatinga Valley ICDS Project 3. Diphu (U) ICDS Project 4. Nilip ICDS Project

1.5.2. Sample

The respondents of the study were women head of the family or the mother of the selected family and children of different age groups i.e. 6-9 years, 10-14 years and 15-18 years.

Table 1.2: Category, Age and Number of Respondents

Category of Respondents	Age Group	Number of Respondents		Total Number of Respondents for the study/ ICDS Project	Total Number of Respondents for the study (16 ICDS Projects)
Women Head/ Mother	19 years and above	50		50	800
Children		**Boys**	**Girls**		
	6 – 9 years	10	10	20	320
	10 – 14 years	10	10	20	320
	15 – 18 years	10	10	20	320
	Total Number of Respondents for the study from 16 ICDS Project				**1760**

Table 1.2 gives the details of the respondents i.e. women and children in the age group of six to 18 years of both sexes. While selecting the respondents, economic condition, educational qualification, religion, caste, tribe, etc. were kept in mind.

The total respondents in the category of women head/ mother were 50 from one ICDS project. Accordingly, children were categorized into three age groups viz. six to nine years, 10 to 14 years and 15 to 18 years. From each age group, 10 children including adolescents were selected from both sexes. Hence, from each ICDS Project a total of 110 respondents were selected. The study covered eight districts comprising of two ICDS project i.e. Rural and Urban and so the total number of respondents for the study was 1760.

Apart from improved sanitation facility, focus of the study was on washing hands before and after eating food, hand washing after use of toilet, regular bathing, brushing teeth, cutting nails, household cleanliness, garbage disposal, food hygiene, etc.

1.5.3. Sampling Procedure

The study was carried out in four administrative divisions of Assam based on the indicator of use of toilet. From each division, two districts, one showing highest score and the other showing lowest score was selected for the study. Altogether, the study included eight districts of four administrative divisions of Assam (Table 1.3).

Table 1.3: Four Administrative Division of Assam along with the Selected Districts

Administrative Divisions	Districts Selected for the Study
Upper Assam	Dhemaji and Jorhat
Lower Assam	Dhubri and Kamrup (Metro)
Barak Valley	Hailakandi and Karimganj
Assam Hills	Dima Hasao and Karbi Anglong

From each district, one rural and one urban ICDS project was selected randomly as unit of study. (Table 1.4).

Table 1.4: ICDS Projects of the Selected Districts

Districts	ICDS Projects
Dhemaji	• Dhemaji (U) ICDS Project • Mokokseleng ICDS Project
Jorhat	• Jorhat (U) ICDS Project • Kaliapani ICDS Project
Dhubri	• Gauripur ICDS Project • Mankachar ICDS Project
Kamrup (Metro)	• Gauhati (U) ICDS Project • Dimoria ICDS Project
Hailakandi	• Hailakandi (U) ICDS Project • South Hailakandi ICDS Project
Karimganj	• North Karimganj ICDS Project • South Karimgang ICDS Project
Dima Hasao	• New Sangbar ICDS Project • Jatinga Valley ICDS Project
Karbi Anglong	• Diphu (U) ICDS Project • Nilip ICDS Project

Rural and Urban ICDS Projects are being selected with the presumption that there may be rural urban differential in the pattern of hygienic practices among women and children. From each ICDS projects, 50 women head of the family or the mother and 60 children from age groups i.e. 6-9 years, 10-14 years and 15-18 years were selected by purposive random sampling. Efforts were made to ensure representations from different socio-economic categories.

1.5.4.Research Tools and Techniques

Interview schedule for interviewing the women head of family/mother and children was used. Checklist of observation was also used to find out the hygienic practices of the women and children.

1.5.5.Methods of Data Collection

The main method of data collection used for the study was Interview schedule and observation check list. Home visits were conducted to collect data from women head of the family or the mother. In case of children, both home visit and school visit were made to collect data from children because during the daytime, majority of the children were found in the school. Home visit were made to collect data from the drop out children as the study covered both school going and out of school. After interviewing the women, the observation check list was used for checking and observing household cleanliness, food hygiene and personal hygiene. Keen observation was made to re-check their responses on hygiene practices. Observation was used to gather knowledge about their hygiene practices apart from their view and knowledge.

Apart from Interview and Observation, community level good practices were also documented.

1.5.6.Data Processing and Analysis

Before analysis, a code book was prepared for coding the interview schedule. Columns and Rows were made in excel sheet accordingly and Indicators were added. The survey data were inserted into the rows. Separate excel sheet was prepared to note the specific reasons mentioned during the interview. Statistical techniques used were averages and percentages. Interpretation was done both by using statistical tools and descriptive illustration.

Plate 1: Snapshots of Data Collection








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CHAPTER II

PROFILE OF DISTRICTS OF WOMEN AND CHILDREN OF RURAL AND URBAN AREAS OF ASSAM

Assam, the land of red rivers and blue hills is a state among the seven North Eastern states of India. Situated south of the eastern Himalayas along the Brahmaputra and Barak River valleys, Assam covers an area of 78,438-kilometre square. The state is bordered by Bhutan and the states of Arunachal Pradesh to the north, Nagaland and Manipur to the east, Meghalaya, Tripura, Mizoram and Bangladesh to the south and West Bengal to the west.

The inhabitants of Assam comprise of tribes and non-tribes and therefore the state is having a multi-ethnic, multi-linguistic and multi-religious society. The tribes included are Ahom, Khamti, Koch, Rajbongshi, Misings, Sonowal Kacharis, Rabha, Chutias, Kalita, Meitei people, Keot (Kaibarta), Boro people, Tea tribes, Tiwa, Mech Kachari, Thengal-Kacharis, Sarania Kacharis, Deoris, etc. The non-tribals included are Muslims, Sikhs, Bengali, Biharis, Marwaris, Christians, Buddhists, etc. speaking Assamese or any other tribal dialect of Assam as their mother tongue.

Assam is famous for mighty Brahmaputra, one horned Rhino, Assam Tea and Assam Silk. The greenery of Assam is due to the rainfall it receives all year round. Brahmaputra along with the tributaries forms oxbow lakes and makes the region with a hydro-geomorphic environment.

2.1. Administrative Division of Assam

The state of Assam is divided into four administrative divisions, each comprising of a number of districts. The study was carried out in two districts from each of the administrative division so that the entire state

could be covered. Table 2.1 depicts the four administrative division along with the districts.

Table 2.1: Four Administrative Division of Assam along with the Districts

Administrative Division	Districts
Upper Assam	Dhemaji, Dibrugarh, Golaghat, Jorhat, Lakhimpur, Sivasagar, Tinsukia, Morigaon, Nagaon, Biswanath, Hojai, Sonitpur, Majuli and Charaideo
Lower Assam	Baksa, Barpeta, Bongaingaon, Chirang, Dhubri, Goalpara, Nalbari, Kamrup (Metro), Kamrup (Rural), Kokrajhar, Darrang, South Salmara Mankachar and Udalguri
Barak Valley	Cachar, Hailakandi and Karimganj
Assam Hills	Dima Hasao, Karbi Anglong East and Karbi Anglong West

A brief description of the four divisions is given below:

Upper Assam comprises of 14 districts namely Dhemaji, Dibrugarh, Golaghat, Jorhat, Lakhimpur, Sivasagar, Tinsukia, Morigaon, Nagaon, Biswanath, Hojai, Sonitpur, Majuli and Charaideo. Charaideo and Majuli were new districts declared in 2016. Among all the districts of upper Assam, Golaghat and Tinsukia are the biggest districts in terms square kilometer area. Dibrugarh, Golaghat and Jorhat are also the oldest recognized and constantly inhabited urban centers (municipal areas) in the region based on the earliest years of formation of the civic bodies, constituted before the Indian independence of 1947.

Among the 14 districts of upper Assam, Jorhat and Dhemaji were selected based on data from NFHS 4 (2015-16) on households using improved sanitation facility with regard to use of toilet. Jorhat district was showing highest with 64.5 per cent and Dhemaji showing lowest with 41.4 per cent with regard to use of toilet (Table 2.2). Situated at 318 km east from Guwahati, Jorhat was the last capital of Ahom era, as well as the tea capital

of India. Dhemaji district is one of the districts of upper Assam situated in the remote corner of North East India on the North bank of River Brahmaputra. The entire Dhemaji district consist of indigenous tribes like Mising, Sonowal Kachari, Bodo Kachari, Deori and Laloong.

Lower Assam comprised of 13 districts i.e. Baksa, Barpeta, Bongaingaon, Chirang, Dhubri, Goalpara, Nalbari, Kamrup (Metro), Kamrup (Rural), Kokrajhar, Darrang, South Salmara Mankachar and Udalguri. Lower Assam districts are situated in the western part of Assam.

Kamrup Metro and Dhubri were selected among all the districts from Lower Assam based on data from NFHS 4 (2015-16) on households using improved sanitation facility with regard to use of toilet. Kamrup Metro had a higher score with 61.2 per cent per cent against Dhubri showing the lowest score with 33.0 per cent (Table 2.2). Kamrup was the home to the mighty kingdom of Kamarupa and also famous for Kamakhya, ruled by Varman's and Palas. Dhubri is an old town on the bank of River Brahmaputra and Gadadhar river with historical significance.

Figure 2.1: Map of Assam with the Districts

Barak Valley is a valley located in the southern region of Assam. The valley comprises of three districts namely Cachar, Hailakandi and Karimganj. The region is named after the Barak River. Among these three districts, Cachar and Hailakandi belonged to the Kachari kingdom whereas Karimganj belonged to Sylhet district of then Assam province. Karimganj was separated from Sylhet after the 1947 referendum.

Among the three districts, Karimganj and Hailakandi were selected based on survey data of NFHS 4 (2015-16) on households using improved sanitation facility with regard to use of toilet. Karimganj district showed higher percent (39.5%) in comparison to Hailakandi showing the lowest score with 36.0 per cent (Table 2.2). Karimganj district comprised of both hindu and muslim. Apart from Bengali dialect, Meitei dialect was also spoken as Bishnupriya and Meitei communities were also present. Small communities like Kuki and Khasi were also present. Hailakandi was a part of Karimganj and Cachar district. According to 2011 census, Hailakandi is the third least populous district of Assam.

Assam Hills consists of three districts namely Dima Hasao, Karbi Anglong East and Karbi Anglong West. Dima Hasao also known as NC Hills and Karbi Anglong districts are the Autonomous hill districts of the state of Assam. These three districts are famous for its sceneric beauty. Karbi Anglong is the largest district of Assam. The major tribe residing in Karbi Anlong is Karbi. The headquarter of Dima Hasao is Haflong which is the only hill station in Assam, also named the Switzerland of the East. Majority of the population of Dima Hasao district comprised of Dimasa Kachari and Naga.

Dima Hasao and Karbi Anglong were selected from Assam hills as Dima Hasao was showing highest score with 59.0 per cent per cent and Karbi Anglong showing the lowest score with 41.5 per cent with regard to use of improved sanitation facility i.e. use of toilet in the households based

on the data obtained from NFHS 4 (2015-16). The Districts showing households using improved sanitation facility is presented in Table 2.2.

Table 2.2: Districts showing households using improved sanitation facility

Sl. No.	Districts	Households using improved sanitation facility (%)
INDIA		**48.4**
Assam		**47.7**
Upper Assam		
1	Dhemaji	41.4
2	Jorhat	64.5
Lower Assam		
3	Dhubri	33.0
4	Kamrup metro	61.2
Barak Valley		
5	Hailakandi	36.0
6	Karimganj	39.5
Assam Hills		
7	Dima Hasao	59.0
8	Karbi Anglong	41.5
Source: NFHS (2014-15)		

2.2. Profile of Women

For this research study, married women above the age group of 19 years were selected. From each district, two ICDS Project i.e. one representing rural and other representing urban were selected. From each ICDS Project, 50 married women were selected. Altogether, the study covered 16 ICDS Projects from eight districts of Assam. Hence, a total of 800 women were selected from eight districts. The respondents were selected using purposive random sampling method so that the sample represents from different socio-economic categories. Both housewives and employed women were selected for the study upon whom the hygiene factor of the family is dependent.

Table 2.3: Category of Respondents of Women

Category of Respondents	Age Group	Total Number of Respondents from each ICDS Project	Total Number of Respondents for the study (16 ICDS Projects)
Women Head/ Mother	19 years and above	50	800

2.2. Profile of Children

The second category of respondents for the study were children in the age group of six to 18 years including adolescents of both sexes. The children and adolescents were divided into three different age groups viz. six to nine, 10-14 years and 15-18 years. Two ICDS Projects (Rural & Urban) were selected from each district. From each ICDS Project, 10 each girls and boys were selected from three different age groups. Hence, from one ICDS Project, 60 children (30 boys & 30 girls) were selected by purposive random sampling method.

Table 2.4: Category of Respondents of Children

Category of Respondents	Age Group	Number of Respondents		Total Number of Respondents from each ICDS Project	Total Number of Respondents for the study (16 ICDS Projects)
		Boys	**Girls**		
Children	6 – 9 years	10	10	20	320
	10 – 14 years	10	10	20	320
	15 – 18 years	10	10	20	320
				Total	**960**

The selection criterion kept in mind while selecting the respondents were economic condition, educational qualification, religion, caste, tribe, etc. The study covered two ICDS Projects from eight districts of Assam. So, a

total of 960 children including adolescents from both sexes were respondents for the study. Children and adolescents covered were school going as well as school drop-out. Table 2.4 depicts the detail of respondents of children.

Henceforth, the study covered 800 numbers of women respondents and 960 numbers of children and adolescent respondents from three age groups belonging to 16 ICDS Projects of eight districts of Assam. Hence, total number of respondents (women and children) for the study was 1760.

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CHAPTER III

SOCIO-ECONOMIC PROFILE OF WOMEN AND CHILDREN

In social research, explanation of social profile of the respondents is very important as it gives an important bearing on the attitudes, behavior and activities of the individuals. People belonging to different socio-economic background are likely to possess various social aspects and they exhibit their behavior in a different way. Henceforth, an understanding of the social background of the respondents is essential and valuable. This initial step helps in understanding the respondents which will help further in analysis of the study. The socio-economic profile of the respondents included age, educational background, religion, family type, family income, marital status, etc. So, in this chapter an attempt has been made to give a description of socio-economic profile of the study population i.e. women and children of rural and urban areas of Assam.

3.1. Age

Age is an important factor in influencing an individual's psychological and social perceptions. Age determines the status and specifies the role to be performed in the society. For the study, children and adolescents were included from three age groups viz. six to nine years, 10-14 years and 15-18 years. The women group comprised of 19 years and above. The study covered 800 women above the age of 19 years. Likewise, there were 320 children including girls and boys from each age group (Table 3.1).

Table 3.1. Distribution of the Respondents according to Age (n=1760)

Age	Women (<19 years)	Children			Total
		6-9 years	10-14 years	15-18 years	
Number of Respondents	800	320	320	320	**1760**

3.2. Education

Education is considered as a very important factor in present day society. Education induces not simple changes rather brings absolute transformation in attitude of the individuals and helps in modernizing values. Education has a great impact on individual's status in the society. For the children, the education qualification is identified on the basis of going and not going to school as shown in (Table 3.2) to identify the school going children's education qualification, classes were categorised accordingly.

Table 3.2: Percentage Distribution of children according to School Going and School Drop Out (n=960)

Age (years)	**Girls**				**Boys**				**Total (n/%)**
	Going to School		School Drop Out		Going to School		School Drop Out		
	R (n/%)	**U (n/%)**	**R (n/%)**	**U (n/%)**	**R (n/%)**	**U (n/%)**	**R (n/%)**	**U (n/%)**	
6-9	80 (100)	79 (98.75)	-	1 (1.25)	79 (98.75)	80 (100)	1 (1.25)	-	**320 (100)**
10-14	80 (100)	79 (98.75)	-	1 (1.25)	77 (96.25)	77 (96.25)	3 (3.75)	3 (3.75)	**320 (100)**
15-18	57 (71.25)	57 (71.25	23 (28.75)	23 (28.75)	55 (68.75)	65 (81.25)	25 (31.25)	15 (18.75)	**320 (100)**
Total	**217 (90.42)**	**215 (89.58)**	**23 (9.58)**	**25 (10.42)**	**211 (87.92)**	**222 (92.5)**	**29 (12.08)**	**18 (7.5)**	**960 (100)**

The data presented in Table 3.2 revealed that the percentage of boys going to school in urban areas is slightly higher (92.5%) in all the age groups than boys in rural areas (87.92). However, in case of girls, the percentage of girls going to school in all age groups is almost same in rural and urban areas i.e. 90.42 per cent and 89.58 per cent respectively.

Figure 3.1: Percentage Distribution of Children according to School Going and School Drop Out (n=960)

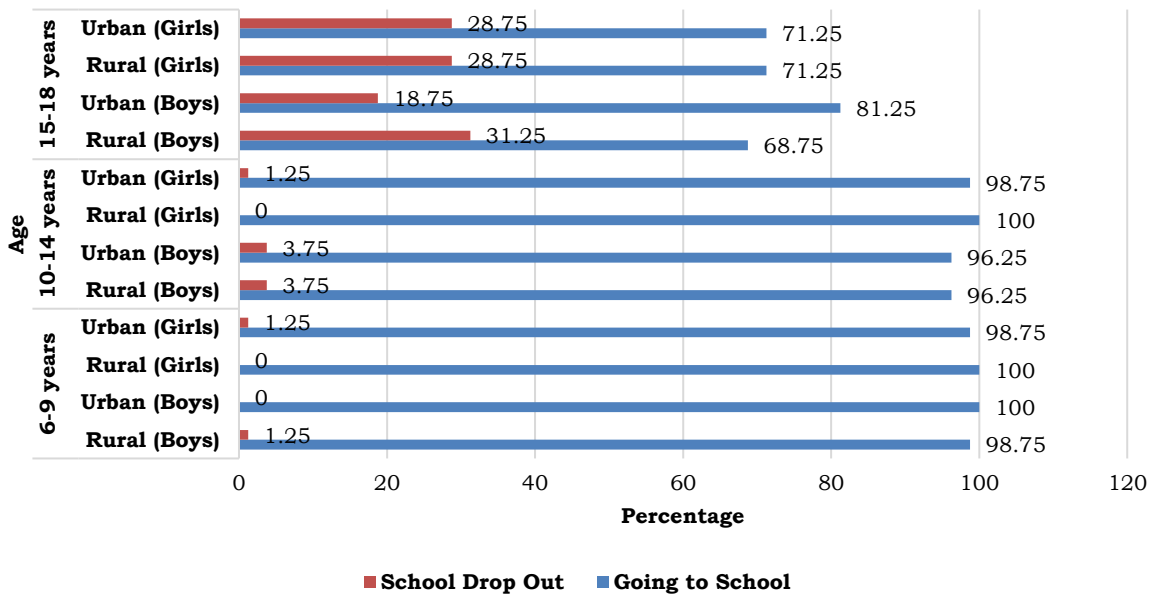


Figure 3.1 gives a clearer assessment of children going to school and school drop-out. Figure depicts that as age increases from 15 to 18 years school drop-out is significant than the lower age group of six to 14 years. The drop out percentage of rural boys in the age group of 15 to 18 years is 31.25 per cent than urban boys which is 18.75 per cent. In case of girls in the age group of 15-18 years of rural and urban areas, 28.75 per cent each is the drop out percentage. The drop-out percentage in the boys in the age group of 10-14 years is also same viz 3.75 per cent each from both rural and urban areas of Assam.

The study also covered the educational level of women which has been classified into nine broad categories for women such as illiterate, primary level, elementary level, high school, matriculate, higher secondary, graduate level, postgraduate/ professionals. The distribution of the women respondents according to qualification is presented in Table 3.3.

Table 3.3: Percentage Distribution of Women according to Educational Qualification (n=800)			
Qualification	**Rural (n/%)**	**Urban (n/%)**	**Total (n/%)**
Illiterate	84 (21)	71 (17.75)	**155 (19.37)**
Primary	54 (13.5)	38 (9.5)	**92 (11.5)**
Elementary	51 (12.75)	26 (6.5)	**77 (9.62)**
High School	90 (22.5)	114 (28.5)	**204 (25.5)**
Matriculate	54 (13.5)	67 (16.75)	**121 (15.12)**
Higher Secondary	45 (11.25)	47 (11.75)	**92 (11.5)**
Graduate	20 (5)	35 (8.75)	**55 (6.87)**
Postgraduate	2 (0.5)	2 (0.5)	**4 (0.5)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The data on educational qualification of women reveals that, most of the respondents from rural and urban areas were high school pass with 22.5 per cent and 28.5 per cent respectively. The second highest percentage seen in rural and urban areas was illiterate viz. 21 per cent and 17.75 percent respectively. Although primary (11.5%), elementary (9.62%), matriculate (15.12%), higher secondary (11.5%) and graduate (6.87%) respondents were present very few respondents (0.5%) were having a post-graduate degree.

3.3. Religion

Religion is the oldest serving social institution of humanity and is related to faith and worship. An individual's belief, faiths and attitudes are normally influenced by religion. The religion of the individuals found in the study were Hindu, Muslim and Christian. The detailed data collected in the study with regard to religion is depicted in Table 3.4. The study found that half of the respondents in all the age groups were Hindu with 58.75 per cent in urban areas and 47.08 per cent in rural areas. The second highest was Muslims with 33.54 per cent in rural areas and 35.42 in urban areas. The study also covered respondents following Christianity with 19.37 per cent from rural areas and 5.83 per cent from urban areas respectively.

Table 3.4: Percentage Distribution of Religion of the Children (n=960)									
Age (Years)	Category	Rural (n/%)				Urban (n/%)			
		Hindu	Muslim	Christian	Total	Hindu	Muslim	Christian	Total
6-9	Boys	45 (56.25)	26 (32.5)	9 (11.25)	**80 (100)**	44 (55)	27 (33.75)	9 (11.25)	**80 (100)**
	Girls	39 (48.75)	29 (36.25)	12 (15)	**80 (100)**	42 (52.5)	29 (36.25)	9 (11.25)	**80 (100)**
10-14	Boys	45 (56.25)	25 (31.25)	10 (12.5)	**80 (100)**	45 (56.25)	30 (37.5)	5 (6.25)	**80 (100)**
	Girls	38 (47.5)	23 (28.75)	19 (23.75)	**80 (100)**	50 (62.5)	29 (36.25)	1 (1.25)	**80 (100)**
15-18	Boys	28 (35)	27 (33.75)	25 (31.25)	**80 (100)**	51 (63.75)	29 (36.25)	0	**80 (100)**
	Girls	31 (38.75)	31 (38.75)	18 (22.5)	**80 (100)**	50 (62.5)	26 (32.5)	4 (5)	**80 (100)**
Total Children (6-18 years, n/%)		**226 (47.08)**	**161 (33.54)**	**93 (19.37)**	**480 (100)**	**282 (58.75)**	**170 (35.42)**	**28 (5.83)**	**480 (100)**

Similarly, in the case of women the respondents following Hinduism was 45 per cent from rural areas and 52.25 per cent from urban areas. The Muslim women respondents were 43.75 per cent from rural areas and 39.5 from urban areas. Christianity was also found with 11.25 per cent in rural areas and 8.25 per cent from urban areas respectively.

Table 3.5: Percentage Distribution of Women according to Religion (n =800)			
Religion	**Rural (n/%))**	**Urban (n/%)**	**Total (n/%)**
Hindu	180 (45)	209 (52.25)	**389 (48.62)**
Muslim	175 (43.75)	158 (39.5)	**333 (41.62)**
Christian	45 (11.25)	33 (8.25)	**78 (9.75)**
Total	**400 (100)**	**400 (100)**	**800 (100)**

3.4. Caste

Caste is also an important social stratification in society which is regarded as one of the most essential factors to know the background of the

individual, their living style and other performance of life. In this study, the castes have been divided into five categories which include General Caste, OBC, SC, ST and an option for other minorities etc for both women and children. In Table 3.6 the percentage distribution of caste among the three age groups is given. The Table depicts that among all the categories, General category children were more with 39.37 per cent in rural areas and 47.92 per cent in urban areas respectively. The second category was ST with 31.46 in rural and 15.42 per cent in urban areas. The percentage of OBC respondents in rural areas was 16.67 per cent and 11.25 per cent and SC was 2.71 in rural and 13.96 per cent in urban areas. The percentage of Minority population was 9.8 per cent and 11.46 per cent respectively. In all the age groups i.e. six to nine years, 10 to 14 years and 15 to 18 years among both boys and girls the highest percentage was Hindu followed by ST and SC.

Table 3.6: Percentage Distribution of Caste of the Children (n=960)

Age (Years)	Category	Rural (n/%)						Urban (n/%)					
		General	OBC	SC	ST	Minority	**Total (n/%)**	General	OBC	SC	ST	Minority	**Total (n/%)**
6-9	**Boys**	24 (30)	11 (13.75)	3 (3.75)	31 (38.75)	11 (13.75)	**80 (100)**	40 (50)	8 (10)	15 (18.75)	11 (13.75)	6 (7.5)	**80 (100)**
	Girls	31 (38.75)	13 (16.25)	3 (3.75)	22 (27.5)	11 (13.75)	**80 (100)**	35 (73.75)	7 (8.75)	14 (17.5)	13 (16.25)	11 (13.75)	**80 (100)**
10-14	**Boys**	43 (53.75)	16 (20)	0	19 (23.75)	2 (2.5)	**80 (100)**	41 (51.25)	10 (12.5)	8 (10)	13 (16.25)	8 (10)	**80 (100)**
	Girls	29 (36.25)	18 (22.5)	4 (5)	19 23.75)	10 (12.5)	**80 (100)**	36 (45)	12 (15)	9 (11.25)	13 (16.25)	10 (12.5)	**80 (100)**
15-18	**Boys**	28 (35)	14 (17.5)	1 (1.25)	30 (37.5)	7 (8.75)	**80 (100)**	43 (53.75)	8 (10)	11 (13.75)	11 (13.75)	7 (8.75)	**80 (100)**
	Girls	34 (42.5)	8 (10)	2 (2.5)	30 (37.5)	6 (7.5)	**80 (100)**	35 (43.75)	9 (11.25)	10 (12.5)	13 (16.25)	13 (16.25)	**80 (100)**
Total Children (6-18 years, n/%)		**189 (39.37)**	**80 (16.67)**	**13 (2.71)**	**151 (31.46)**	**47 (9.8)**	**480 (100)**	**230 (47.92)**	**54 (11.25)**	**67 (13.96)**	**74 (15.42)**	**55 (11.46)**	**480 (100)**

Table 3.7 gives a detailed distribution of women respondents regarding caste in rural and urban areas. The highest respondents (36.87%) belonged to General category with 32 per cent from rural areas and 41.75 from urban areas. The second highest (25.75%) was from ST category with 29 per cent from rural areas and 22.5 per cent from urban areas. The total women respondents from OBC category was 18.25 per cent viz. 22.25 per cent from rural areas and 14.25 from urban areas. There was less (8.37%) women respondents from SC category with 9.25 per cent from rural and 7.5 per cent from urban areas of Assam. The study also covered respondents from Minority community with 10.75 per cent i.e. 7.5 per cent from rural areas and 14 per cent from urban areas.

Table 3.7: Percentage Distribution of Women according to Caste (n =800)

Caste	Rural (n/%)	Urban (n/%)	Total (n/%)
General	128 (32)	167 (41.75)	**295 (36.87)**
OBC	89 (22.25)	57 (14.25)	**146 (18.25)**
SC	37 (9.25)	30 (7.5)	**67 (8.37)**
ST	116 (29)	90 (22.5)	**206 (25.75)**
Minority	30 (7.5)	56 (14)	**86 (10.75)**
Total	**400 (100)**	**400 (100)**	**800 (100)**

3.5. Income

Income is the most important variable in determining the socio-economic status of an individual. The income of an individual influence the quality of life. It is often felt that, the living standard of an individual and the family depends on the household income. In the present study, the respondents have been divided into three categories relating to their income with Rs 5000/- and less, Rs 5000/- to Rs 15000/- and Rs 15000/- and above per month. The data presented in Table 3.8 shows that the highest percentage of children respondents in all the three age groups had a family income of less than Rs 5000/- per month. The percentage is 58.33 per cent in case of rural children and 42.29 per cent in the case of urban children. The percentage of total children respondents from rural and urban areas in

the income group of Rs 5000/- to Rs 15000/- per month is 25.83 per cent and 33.12 per cent respectively. In the income range of more than Rs 15000/- per month, the family income of children in all age groups were more with 24.58 per cent in urban areas and 15.83 per cent in rural areas.

Table 3.8: Percentage Distribution of Family Income/month of the Children (n=960)

Age (Years)	Category	Rural (n/%)				Urban (n/%)			
		<Rs 5000/-	Rs 5000/- to Rs 15000/-	>Rs 15000/-	**Total (n/%)**	<Rs 5000/-	Rs 5000/- to Rs 15000/-	>Rs 15000/-	**Total (n/%)**
6-9	**Boys**	52 (65)	19 (23.75)	9 (11.25)	**80 (100)**	45 (56.25)	24 (30)	11 (13.75)	**80 (100)**
	Girls	49 (61.25)	23 (28.75)	8 (10)	**80 (100)**	37 (46.25)	30 (37.5)	13 (16.25)	**80 (100)**
10-14	**Boys**	46 (57.5)	26 (32.5)	8 (10)	**80 (100)**	30 (37.5)	32 (40)	18 (22.5)	**80 (100)**
	Girls	48 (60)	21 (26.25)	11 (13.75)	**80 (100)**	37 (46.25)	29 (36.25)	14 (17.5)	**80 (100)**
15-18	**Boys**	44 (55)	20 (25)	16 (20)	**80 (100)**	22 (27.5)	22 (27.5)	36 (45)	**80 (100)**
	Girls	41 (51.25)	15 (18.75)	24 (30)	**80 (100)**	32 (40)	22 (27.5)	26 (32.5)	**80 (100)**
Total Children (6-18 years, n/%)		**280 (58.33)**	**124 (25.83)**	**76 (15.83)**	**480 (100)**	**203 (42.29)**	**159 (33.12)**	**118 (24.58)**	**480 (100)**

The family income per month was also studied for women which is presented in Table 3.9.

Table 3.9: Percentage Distribution of Women according to Family Income/month (n=800)

Income/month	Rural (n/%)	Urban (n/%)	Total (n/%)
< Rs 5000/-	185 (46.25)	137 (34.25)	**322 (40.25)**
Rs 5000/- to Rs 15000/-	128 (32)	150 (37.5)	**278 (34.75)**
> Rs 5000/-	87 (21.75)	113 (28.25)	**200 (25)**
Total	**400 (100)**	**400 (100)**	**800 (100)**

The percentage of family income of Rs 5000/- and less was 40.25 per cent among the families of women respondents with 46.25 per cent in rural and 34.25 per cent in urban areas. In the second income group of Rs 5000/ to Rs 15000/-, the percentage was 34.75 per cent viz. 32 per cent in rural areas and 37.5 per cent in urban areas. One-forth of the women respondents had a family income of more than Rs 15000/- per month i.e. 21.75 per cent in case of rural women and 28.25 per cent among urban women responsibility.

3.6. Type of Family

Family is an institution in the socialization process of an individual. The type of family in which an individual live has significant influence on the personal and social life. The various types of families found in our societies are nuclear, joint and extended. Accordingly, the nuclear family consist of one single pair including their children, joint family consists of two or more families living together along with their children and the extended family is the type of family which extends beyond the nuclear family to include Grandparents and other relatives.

In the present study, three categories have been made to identify the type of family the women and children lives. From the data (Table 3.10) it was found that prevalence of nuclear families was more in both urban and rural areas in all the three age groups. In rural areas it was 89.37 per cent and 88.12 per cent in urban areas where children stayed in nuclear families. In joint family system, 6.46 per cent in rural and 8.75 per cent in urban areas was reported. Very few i.e. 4.17 per cent in rural and 3.12 per cent in urban areas found to be staying in extended families.

Table 3.10: Percentage Distribution of Type of Family of the Children (n= 960)									
Age (Years)	Category	Rural(n/%)				Urban(n/%)			
		Nuclear	Joint	Extended	**Total**	Nuclear	Joint	Extended	**Total**
6-9	**Boys**	73 (91.25)	4 (5)	3 (3.75)	**80 (100)**	75 (93.75)	4 (5)	1 (1.25)	**80 (100)**
	Girls	72 (90)	4 (5)	4 (5)	**80 (100)**	69 (86.25)	5 (6.25)	6 (7.5)	**80 (100)**
10-14	**Boys**	66 (82.5)	10 (12.5)	4 (5)	**80 (100)**	73 (91.25)	7 (8.75)	0	**80 (100)**
	Girls	70 (87.5)	3 (3.75)	7 (8.75)	**80 (100)**	63 (78.75)	10 (12.5)	7 (8.75)	**80 (100)**
15-18	**Boys**	74 (92.5)	6 (7.5)	0	**80 (100)**	74 (92.5)	5 (6.25)	1 (1.25)	**80 (100)**
	Girls	74 (92.5)	4 (5)	2 (2.5)	**80 (100)**	69 (86.25)	11 (13.75)	0	**80 (100)**
Total Children (6-18 years, n/%)		**429 (89.37)**	**31 (6.46)**	**20 (4.17)**	**480 (100)**	**423 (88.12)**	**42 (8.75)**	**15 (3.12)**	**480 (100)**

The type of family found among the women respondents of urban and rural areas were same as the children which means that nuclear types of families is much preferred in the societies of today. Table 3.11 gives a detail of the percentage distribution of women respondents according to the type of family.

Table 3.11: Percentage Distribution of Women according to type of family (n = 800)			
Family Type	**Rural (n/%)**	**Urban (n/%)**	**Total (n/%)**
Nuclear	326 (81.5)	329 (82.25)	655 (81.88)
Joint	56 (14)	64 (16)	120 (15)
Extended	18 (4.5)	7 (1.75)	25 (3.12)
Total	**400 (100)**	**400 (100)**	**800 (100)**

In total, 81.88 per cent of women respondents stayed in nuclear families. Comparing rural and urban areas, it was found that almost similar percentage of 81.5 per cent and 82.25 per cent of women respondents of

rural and urban areas stayed in nuclear families respectively. In rural (14%) and urban (16%), women respondents stayed in joint family system. The respondents straying in extended family were 4.5 per cent in rural areas and 1.75 per cent in urban areas (Table 3.11).

3.7. Size of the Family

The size of the family plays an important role as it is felt that as the family size increases sharing on the basic human needs like food, clothing, shelter, uses of land, etc is required. Large family size might hamper in issues related to health, family income and growth. In the present study, the respondents have been divided into four categories, relating to their size of the family. The first group comprised of family size ranging from three to five members, second group with six to eight members, the third group with nine to 12 members and last group with more than 12 family members. The distribution of the respondents for children with regard to family size is presented in Table 3.12. From the table, it is obvious that now-a-days people prefer small families than large families. The data also revealed that the trend is same for rural as well as urban areas. In total, the percentage of families in rural areas having three to five members is 53.12 per cent followed by 36.04 per cent with six to eight members, 9.8 per cent with nine to 12 members and 1.04 per cent with more than 12 members. In urban areas, the children having three to five membered family is 60.21 per cent, 28.12 per cent with six to eight members, 9.59 per cent with nine to 12 members and very less (2.08%) with more than 12 members. From the data, it may be stated that in all the age groups (6-9 years, 10-14 years and 15-18 years), among the boys and girls of rural and urban areas, the percentage of children having three to five members was highest and the least percentage was observed in more than 12 family members. This is in conformity with Table 3.10 which revealed that the percentage of nuclear family system was more than joint and extended family system. The percentage distribution of the age groups among boys and girls is presented in Table 3.12.

Table 3.12: Percentage Distribution of Family Size of the Children (n=960)											
Age	Categor	Rural (n/%)					Urban (n/%)				
		3-5	6-8	9-12	>12	**Total (n/%)**	3-5	6-8	9-12	>12	**Total (n/%)**
6-9	**Boys**	48 (60)	26 (32.5)	5 (6.25)	1 (1.25)	**80 (100)**	50 (62.5)	25 (31.25)	5 (6.25)	0	**80 (100)**
	Girls	43 (53.75)	28 (35)	9 (11.25)	0	**80 (100)**	49 (61.25)	26 (32.5)	3 (3.75)	2 (2.5)	**80 (100)**
10-14	**Boys**	38 (47.5)	28 (35)	12 (15)	2 (2.5)	**80 (100)**	48 (60)	22 (27.5)	7 (8.75)	3 (3.75)	**80 (100)**
	Girls	35 (43.75)	36 (45)	8 (10)	1 (1.25)	**80 (100)**	45 (56.25)	21 (26.25)	11 (13.75)	3 (3.75)	**80 (100)**
15-18	**Boys**	46 (57.5)	25 (31.25)	8 (10)	1 (1.25)	**80 (100)**	54 (67.5)	19 (23.75)	7 (8.75)	0	**80 (100)**
	Girls	45 (56.25)	30 (37.5)	5 (6.25)	0	**80 (100)**	43 (53.75)	22 (27.5)	13 (16.25	2 (2.5)	**80 (100)**
Total Children n/%)		**255 (53.12)**	**173 (36.04)**	**47 (9.8)**	**5 (1.04)**	**480 (100)**	**289 (60.21)**	**135 (28.12)**	**46 (9.59)**	**10 (2.08)**	**480 (100)**

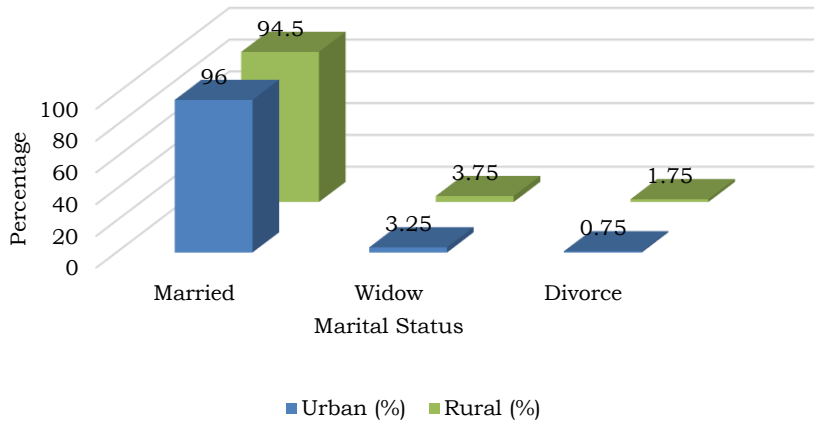
In the case of women respondents, it was found that 61.87 per cent of women had a family size of three to five members, 24.75 per cent had a family size of six to eight members, 11.5 per cent with nine to 12 members and 1.87 per cent with more than 12 family members. The trend was similar to the children respondents of the all the three age groups. Table 3.13 gives a detailed presentation of family members of women respondents in rural and urban areas of Assam.

Table 3.13: Distribution of Women according to Family Size (n =800)			
Family Size	**Rural (n/%)**	**Urban (n/%)**	**Total (n/%)**
3-5 Members	239 (59.75)	256 (64)	495 (61.87)
6-8 Members	104 (26)	94 (23.5)	198 (24.75)
9-12 Members	48 (12)	44 (11)	92 (11.5)
More than 12	9 (2.25)	6 (1.5)	15 (1.87)
Total	**400 (100)**	**400 (100)**	**800 (100)**

3.8. Marital Status

Marriage is one of the oldest social institutions. It is a social recognition as husband and wife. This social recognition or the bonding lasts until death but sometime cut off by a divorce. In this study, the marital status of the women is categorized into three categories viz. married, widow, divorce (Fig. 3.1). In urban and rural areas of Assam, the percentage of married women is 96 per cent and 94.5 per cent respectively. Widow comprised of 3.25 per cent and 3.75 per cent respectively. The percentage of divorce women respondents was very less i.e. 0.75 per cent and 1.75 per cent among urban and rural areas of Assam.

Figure 3.1: Percentage Distribution of Marital Status of Women (> 19 years)



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CHAPTER IV

Assessment of Knowledge and Attitude towards Hygienic Practices among Women

Hygiene is the process and a set of practices performed in keeping oneself and the environment around clean in order to prevent diseases. Many people equate hygiene with cleanliness, but hygiene is a broad term which includes personal cleanliness, hand washing, wearing clean clothing, culinary cleanliness, environmental hygiene, etc. Among women and adolescent girls, hygiene also includes personal cleanliness during menstruation. In this chapter an attempt has been made to assess the knowledge and attitudes in respect to hygiene practices among women living in rural and urban setting in terms of some selected parameters. The researcher tried to analyze the parameters set for following hygienic habits by women focusing on personal hygiene, culinary hygiene, household hygiene and menstrual hygiene.

4.1. Oral Hygiene

Oral hygiene includes brushing teeth, flossing, use of agents for cleaning teeth, use of toothbrush, mouth washing, etc. Maintenance of oral hygiene is important as otherwise it may lead to bad breadth, tooth decay, etc. which may in turn hamper the health of an individual. Some good oral hygiene practices include brushing teeth regularly, mouthwash to help remove germs that may be left behind after brushing, flossing the teeth regularly, washing the mouth regularly after eating.

In the study, data revealed that all (100%) women mentioned that they clean their teeth everyday using brush or without brush and some agents.

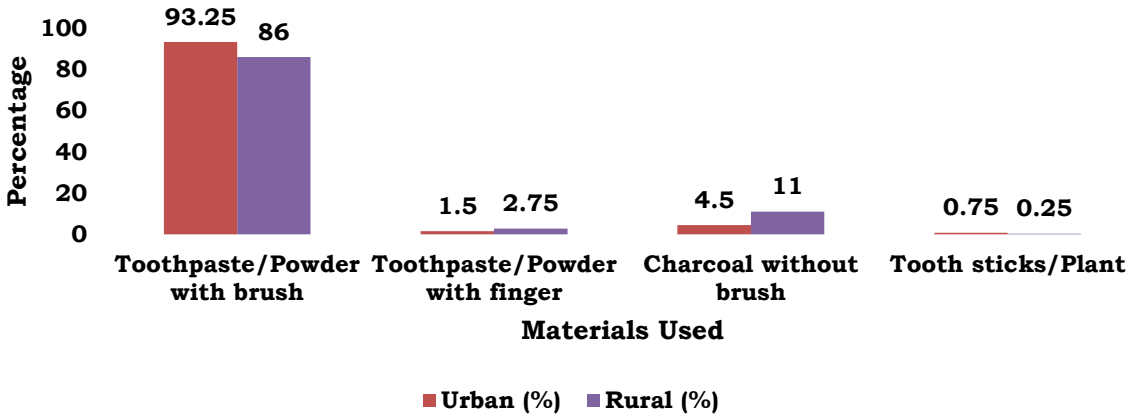
Table 4.1 gives percentage distribution of urban and rural women according to use of material for oral hygiene. Among 800 women, 89.62 per cent of women mentioned of using toothpaste/powder with brush for cleaning teeth. Few (7.75%) of the women respondents mentioned about use of charcoal as a medium of cleaning teeth and with brush. A very less percentage of 2.12 per cent and 0.5 per cent of women respondents reported of using toothpaste/powder with finger and tooth sticks/plant respectively.

Table 4.1: Percentage Distribution of Urban and Rural Women according to use of material for Oral Hygiene (n=800)

Use of Material	Urban (n/%)	Rural (n/%)	Total (n/%)
Toothpaste/Powder with brush	373 (93.25)	344 (86)	717 (89.62)
Toothpaste/Powder with finger	6 (1.5)	11 (2.75)	17 (2.12)
Charcoal without brush	18 (4.5)	44 (11)	62 (7.75)
Tooth sticks/Plant	3 (0.75)	1 (0.25)	4 (0.5)
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Figure 4.1 reveals that, 93.25 per cent of urban women respondents used toothpaste/powder with brush against 86 per cent of rural women respondents. Rural women respondents used more toothpaste/powder with finger (2.75%), charcoal with brush (11%) and tooth sticks/plant (0.25%) than the urban women with 1.5 per cent using toothpaste/powder and finger, 4.5 per cent with charcoal and brush and 0.75 per cent with tooth sticks/ plant. Chaitra *et. al.* (2018) in a study on knowledge, attitude and practice of oral health and adverse pregnancy outcomes among rural and urban pregnant women of Moradabad, UP found that 52.6 per cent of the urban and 47.4 per cent of rural population used tooth brush and tooth paste and 44 per cent of urban and 56 per cent of rural population used tooth brush and tooth powder. It was found that none of the women from the urban area used finger and tooth powder as an aid for tooth cleaning whereas this type of cleaning was used by 1.3 per cent of women in rural area.

Figure 4.1. Percentage Distribution of Urban and Rural Women according to Use of Material for Oral Hygiene (n=800)



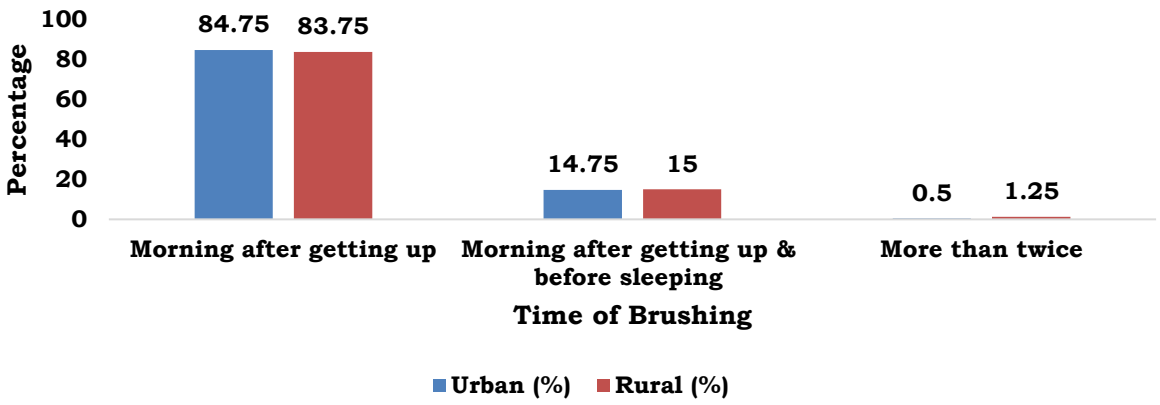
The study also tried to find out the number and time of brushing/ cleaning the teeth with or without brush. It was found that 84.25 per cent of women brushed/ cleaned their teeth only once in the day after getting up and 14.87 per cent brushed/ cleaned twice per day after getting up from bed and before going to sleep. Very few (0.87%) mentioned about brushing/cleaning their teeth more than twice (Table 4.2).

Table 4.2: Percentage Distribution of Urban and Rural Women according to the time of brushing teeth (n=800)

Time of brushing teeth	Urban (n/%)	Rural (n/%)	Total (n/%)
Morning after getting up	339 (84.75)	335 (83.75)	674 (84.25)
Morning after getting up & before sleeping	59 (14.75)	60 (15)	119 (14.87)
More than twice	2 (0.5)	5 (1.25)	7 (0.87)
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The urban and rural differential in cleaning the teeth in the morning or twice in the morning after getting up and before sleeping or more than twice was not much significant. The percentage distribution of urban and rural women according to the time of brushing is presented in Figure 4.2.

Figure 4.2. Percentage Distribution of Urban and Rural Women according to the time of brushing teeth (n=800)



Almost 84.75 per cent and 83.75 per cent of urban and rural women mentioned of brushing/cleaning the teeth once per day after getting up. Similar percentage of 14.75 per cent and 15 per cent reported of brushing/cleaning the teeth twice per day viz. morning after getting up and before sleeping by urban and rural women respondents. Very less. 0.5 per cent and 1.25 per cent women of both urban and rural areas mentioned of cleaning their teeth more than twice per day.

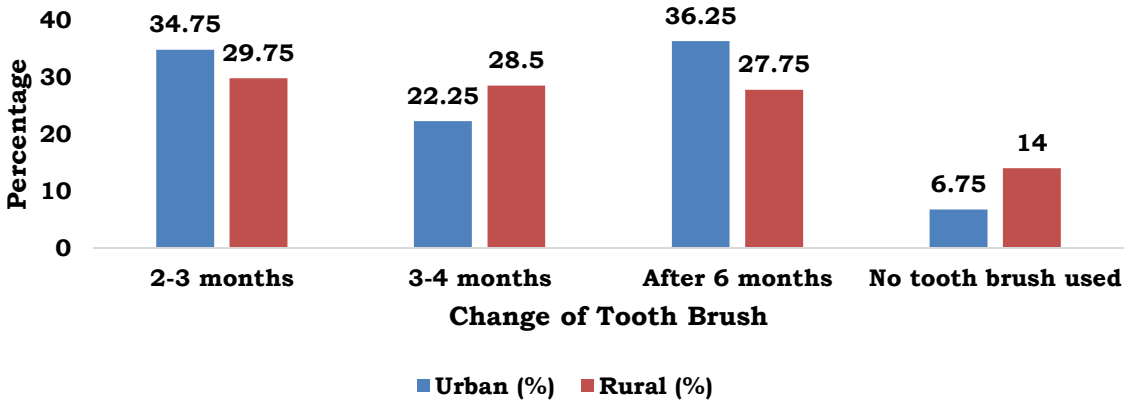
Table 4.3: Percentage Distribution of Urban and Rural Women according to changing of toothbrush (n=800)

Changing toothbrush	Urban (n/%)	Rural (n/%)	Total (n/%)
2-3 months	139 (34.75)	119 (29.75)	**258 (32.25)**
3-4 months	89 (22.25)	114 (28.5)	**203 (25.37)**
After 6 months	145 (36.25)	111 (27.75)	**256 (32)**
No toothbrush used	27 (6.75)	56 (14)	**83 (10.37)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

As changing of the toothbrush is related to oral hygiene, it was found that among 800 women respondents, 32.25 per cent of women changed their toothbrush in two to three months, 25.37 per cent changed in three to four months and 32 per cent changed after six months. Around 10.37 per cent of women did not use toothbrush for brushing/cleaning their teeth's.

The American Dental Association (2009) recommended that individuals should change toothbrushes approximately every three to four months or sooner if the bristles become worn.

Figure 4.3. Percentage Distribution of Urban and Rural Women according to changing of tooth brush (n=800)



The highest percentage in changing toothbrush after six months was 36.25 per cent among urban women whereas 27.75 per cent rural women changed their toothbrush for the same duration. In two to three months, 34.75 per cent of urban and 29.75 per cent of rural women changed their toothbrush. The respondents who changed their toothbrush within three to four months were 22.25 per cent in case of urban women and 28.5 per cent in case of rural women (Figure 4.3).

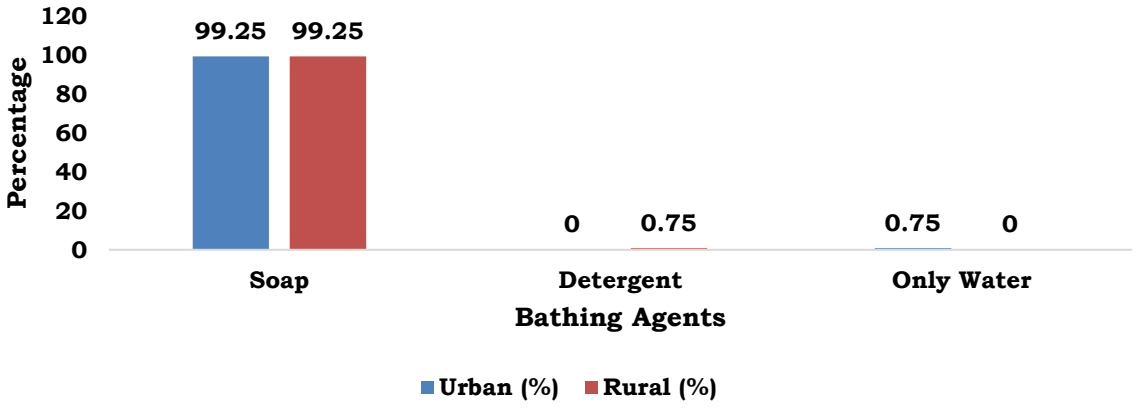
4.2. Personal Hygiene

Personal hygiene can be defined as an act of maintaining cleanliness and grooming of the body. Maintaining good personal hygiene consists of bathing, washing your hands, hair, trimming nails, etc. the study found that all (100%) of women from both urban and rural areas took bath every day. Almost cent per cent (99.25%) mentioned of taking bath with any kind of soap and 0.75 per cent each reported of taking bath by using detergent and only water respectively (Table 4.4).

Table 4.4: Distribution of Women according to the cleaning material used for bathing (n =800)			
Bathing agents used	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Soap	397 (99.25)	397 (99.25)	**794 (99.25)**
Detergent	-	3 (0.75)	**3 (0.75)**
Only Water	3 (0.75)	-	**3 (0.75)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Figure 4.4 gives a detailed description of use of cleaning agents by rural and urban women respondents. Both the respondents from urban and rural areas were reported to be using soap as a major agent in bathing i.e. 99.25 per cent. Very few (0.75%) each of urban women respondents used only water for bathing and rural women respondents used detergents for taking bath respectively.

Figure 4.4. Percentage Distribution of Women according to the cleaning material used for bathing (n =800)

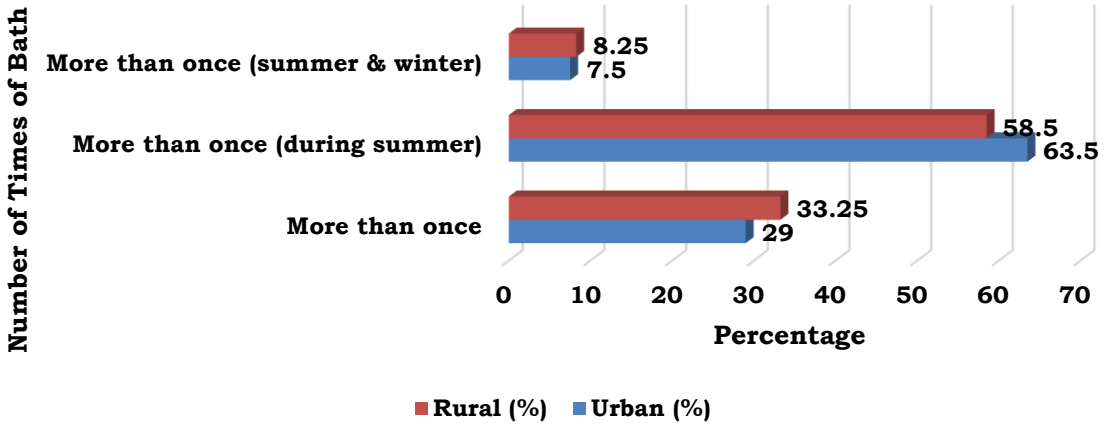


Although all the women respondents mentioned of taking bath regularly, 31.12 per cent of women reported of taking bath more than once, 61 per cent reported of taking bath more than once only during summer and 7.87 per cent mentioned of more than once both in summer and winter (Table 4.5).

Table 4.5: Distribution of Women according to the number of times of bath/day (n =800)			
Number of times of bath	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
More than once	116 (29)	133 (33.25)	**249 (31.12)**
More than once (during summer)	254 (63.5)	234 (58.5)	**488 (61)**
More than once (summer & winter)	30 (7.5)	33 (8.25)	**63 (7.87)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Data presented in Figure 4.5 depicts that the women who took bath more than once per day was 33.25 per cent among the rural women in comparison to 29 per cent among urban women respondents. The percentage of taking bath more than once only during summer in urban area was 63.5 per cent and 58.5 per cent in rural area. The women respondents who took bath more than once per day both in summer and winter was 8.25 per cent in rural areas and 7.5 per cent in urban areas respectively (Figure 4.5).

Figure 4.5. Percentage Distribution of Women according to the number of times of bath/day (n =800)



Almost all the women respondents from both urban and rural areas mentioned of cleaning their nose. On assessing the time of cleaning nose, it was found that more than half (66.37%) of respondents cleaned their nose whenever they feel dirty, 23.25 per cent mentioned of cleaning the nose while taking bath, 7.75 per cent clean only if they suffer from cold/cough

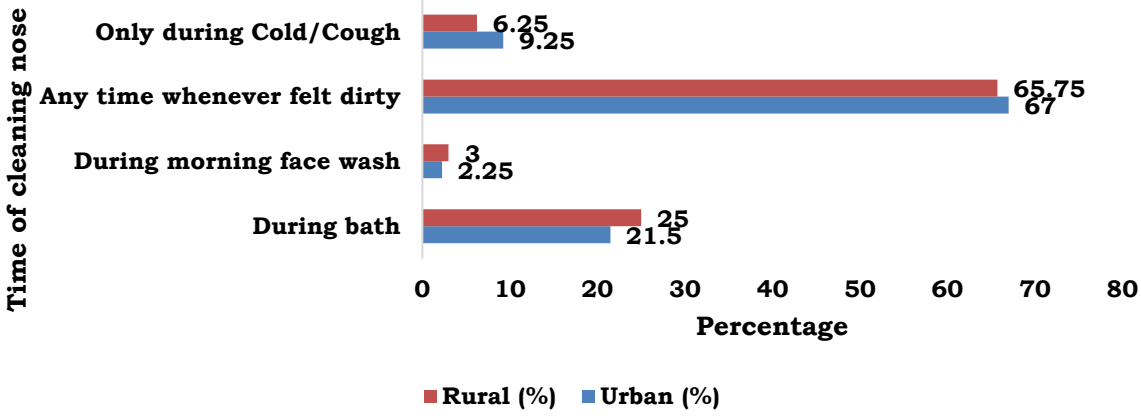
and very less (2.62%) reported of cleaning during morning face wash (Table 4.6).

Table 4.6: Distribution of Women according to the time of cleaning nose (n =800)

Time of cleaning nose	Urban (n/%)	Rural (n/%)	Total (n/%)
During bath	86 (21.5)	100 (25)	**186 (23.25)**
During morning face wash	9 (2.25)	12 (3)	**21 (2.62)**
Any time whenever felt dirty	268 (67)	263 (65.75)	**531 (66.37)**
Only during Cold/Cough	37 (9.25)	25 (6.25)	**62 (7.75)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

There was no significant difference reported on cleaning of nose by women respondents of rural and urban areas. In Figure 4.6, the data depicts 67 per cent of urban women and 65.75 per cent of rural women mentioned of cleaning the nose whenever they felt dirty followed by 21.5 per cent of urban women and 25 per cent of rural women reported of cleaning the nose during bath. About 9.25 per cent and 6.25 per cent of urban and rural women mentioned of cleaning the nose only if they suffer from cold and cough respectively. Very few viz. 3 per cent and 2.25 per cent of rural and urban women respondents reported of cleaning the nose during morning face wash. It was also found that only 65.75 per cent of women, 68 per cent among urban and 63.5 per cent of rural women covered the face/nose while coughing and sneezing.

Figure 4.6. Percentage Distribution of Women according to the time of cleaning nose (n =800)



It may be mentioned here that covering face/nose during coughing or sneezing is very important for the spread of diseases/germs. The respondents mentioned that they use either handkerchief, end of the saree, *chador* (Assamese dress), *gamosa* (Assamese towel) or hand to cover the nose and mouth while sneezing and coughing. Data presented in Table 4.7 illustrates that 68 per cent of urban and 63.5 per cent of rural women covered the face/nose while coughing and sneezing.

Table 4.7: Distribution of Women according to covering the face/nose while coughing and sneezing (n = 800)

Covering the face/nose while coughing and sneezing	Urban (n/%)	Rural (n/%)	Total (n/%)
Yes	272 (68)	254 (63.5)	**526 (65.75)**
No	128 (32)	146 (36.5)	**274 (34.25)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The study also tried to find out hair hygiene practices. It was found that almost all wash their hair frequently and comb their hair regularly. The highest (41.37%) percentage of women respondents reported of washing their hairs twice/week followed by 40.62 per cent reported of washing hair more than twice/week. About 18 per cent of women mentioned of washing their hair once/week (Table 4.8).

Table 4.8: Distribution of Women according to the number of times of washing hair/week (n =800)

Number of times of hair washing	Urban (n/%)	Rural (n/%)	Total (n/%)
Once/week	69 (17.25)	75 (18.75)	**144 (18)**
Twice/week	167 (41.75)	164 (41)	**331 (41.37)**
More than twice/week	164 (41)	161 (40.25)	**325 (40.62)**
Total (n/%)	**400 (100)**	**400 (1000**	**800 (100)**

Among urban and rural women, the percentage of washing hair per week was very similar. The use of shampoo was 83.62 per cent among the women respondents but while comparing urban and rural women, use of shampoo was 90 per cent among urban women respondents against 77.25 per cent among rural respondents. The use of soap as a hair cleaning agent

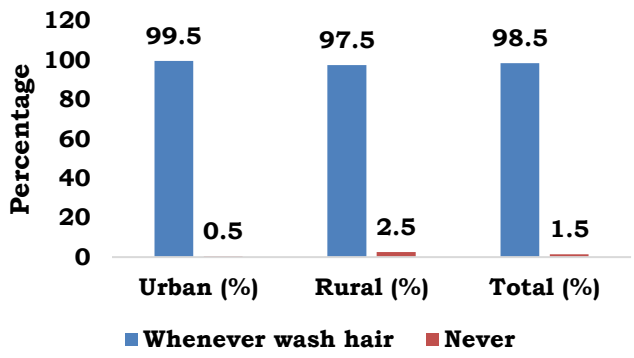
was 22.75 per cent among rural women and only 10 per cent among urban women respectively (Table 4.9).

Table 4.9: Distribution of Women according to the agent used for hair washing (n =800)

Use of agent in hair washing	Urban (n/%)	Rural (n/%)	Total (n/%)
Soap	40 (10)	91 (22.75)	**131 (16.37)**
Shampoo	360 (90)	309 (77.25)	**669 (83.62)**
Total	**400 (100)**	**400 (100)**	**800 (100)**

Regarding washing of comb, among the 800 women respondents, maximum (98.5%) mentioned of washing their comb after hair washing i.e. 99.5 per cent among urban women respondents and 97.5 per cent among rural women respondents respectively.

Figure 4.7. Distribution of Women according to the frequency of washing hair comb (n =800)

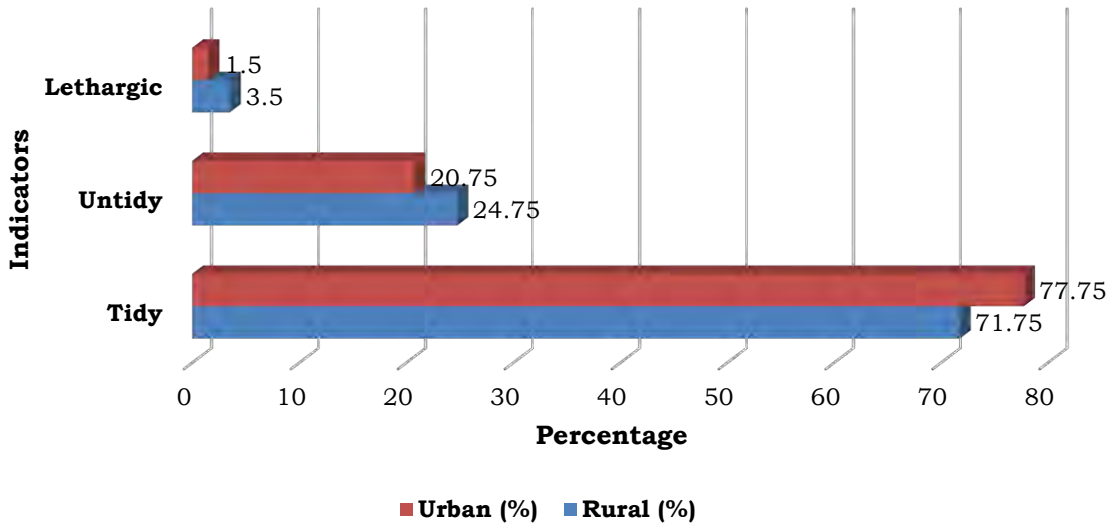


Apart from interviewing the women respondents, the researchers observed the women on some aspects related to hygiene like tidiness, body odour, etc. while conducting the study. Women were observed keenly while interviewing to know whether the women were following the hygienic practices. The observation of the women was made as tidy, untidy and lethargic. Tidy women were those women who were observed based on keeping their hairs properly tied, those who did not carry any greasy skin. Women who had clean nose and ears including their clothes. Women who were wearing washed and clean clothes were observed as tidy women. These women were seen having clean hands and legs. Those women were observed to be clean who did not wear dirty clothes just because they were

staying in home. The women with untied hairs, greasy skin, dirty nose or dirty ears if seen were observed to be untidy women. These women were seen wearing the dirty clothes while staying in home or working in home. Women who seems to be very lethargic in voice with unclean clothes, untied hairs were termed as lethargic.

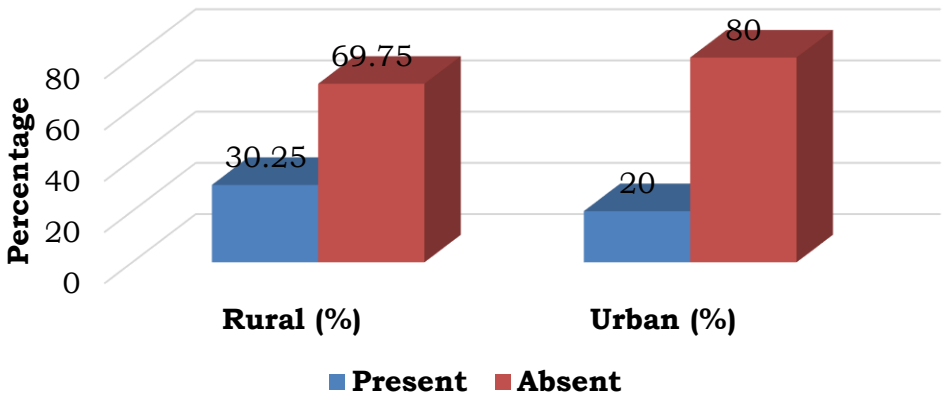
Figure 4.8 gives the detailed of the observation made on the women respondents on overall look of tidiness. The observation data reveals that majority of the women respondents, 77.75 per cent of urban respondents and 71.75 per cent of rural respondents were looked tidy overall. About 20.75 per cent and 24.75 per cent of urban and rural respondents looked untidy as observed respectively. Very less viz 1.5 per cent among urban and 3.5 per cent among rural women were observed as lethargic with the overall looks and dresses.

Figure 4.8: Percentage Distribution of Women on Observation of Tidiness (n=800)



Body odor is the unwanted and awkward smell that emits from one's body either from sweat or from not cleaning the body with soap for a long period of time. Though this can also be a disease yet still it also occurs for not maintaining proper physical cleanliness. It was observed either these women contain this foul stinky smell in their body or not.

Figure 4.9: Percentage Distribution of Observation of Body Odour (n=800)



During data collection, if any unpleasant smell emitted from the body then the observation was recorded as present and absent. It was observed that among 20 per cent of urban women and 30.25 per cent of rural women unpleasant smell was present and was felt during interviewing them (Figure 4.9).

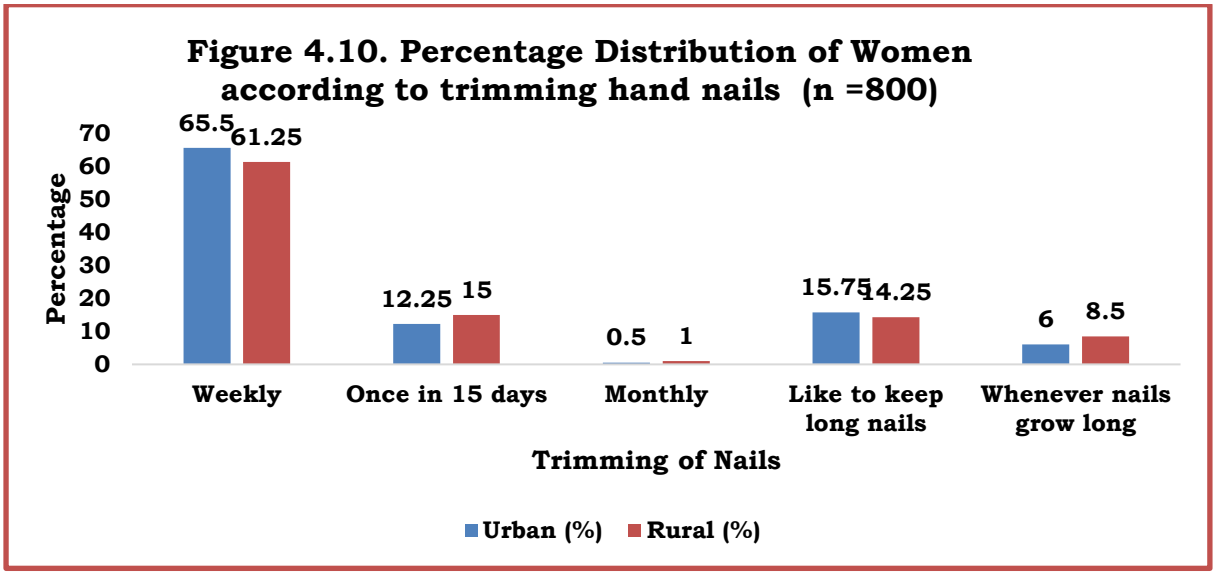
Nail hygiene is an important aspect of hygiene among women as they are involved in preparation of food. Hence the study tried to find out frequency of trimming of nails of both hand and toes. Table 4.10 gives the detailed distribution of trimming of hand and toenails among urban and rural women respondents. Out of 800 women respondents from both urban and rural areas 507 (63.37%) and 545 (68.12%) respondents mentioned of trimming of hand and toenails weekly respectively. About 13.62 per cent and 13 per cent of women mentioned of trimming hand and toenails once in 15 days respectively. The percentage of women who wanted to keep hand and toenails were15 per cent and 11.75 per cent respectively. The women who cut their nails whenever they felt it is long is 7.25 per cent for hand nails and 6.37 per cent for toenails and very few i.e. 0.75 per cent each mentioned of trimming their hand and toenails monthly.

From Table 4.10, it is observed that, about 65.5 per cent of urban women and 61.25 per cent of rural women trim their hand nails weekly.

About 15.75 per cent and 14.25 per cent of urban and rural women liked to keep long nails.

Table 4.10: Distribution of Women according to trimming of hand and toenails (n =800)

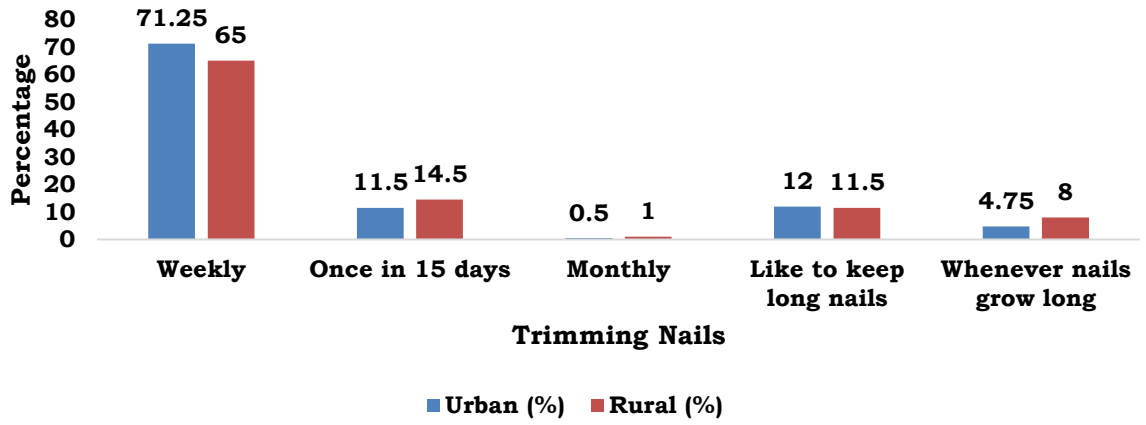
Trimming Nails	Urban (n/%)	Rural (n/%)	Total (n/%)	Urban (n/%)	Rural (n/%)	Total (n/%)
	Hands			Toes		
Weekly	262 (65.5)	245 (61.25)	**507 (63.37)**	285 (71.25)	260 (65)	**545 (68.12)**
Once in 15 days	49 (12.25)	60 (15)	**109 (13.62)**	46 (11.5)	58 (14.5)	**104 (13)**
Monthly	2 (0.5)	4 (1)	**6 (0.75)**	2 (0.5)	4 (1)	**6 (0.75)**
Like to keep long nails	63 (15.75)	57 (14.25)	**120 (15)**	48 (12)	46 (11.5)	**94 (11.75)**
Whenever nails grow long	24 (6)	34 (8.5)	**58 (7.25)**	19 (4.75)	32 (8)	**51 (6.37)**
Total	**400 (100)**	**400 (100)**	**800 (100)**	**400 (1000**	**400 (100)**	**800 (100)**



The women who cut their hand nails once in fortnight is 12.25 per cent among urban and 15 per cent among rural women respectively. Small percentage of women who trim their nails whenever they felt it is long was six per cent among urban and 8.5 per cent among rural women respondents.

Very few viz. 0.5 per cent of urban and one per cent of rural women trim the hand nails monthly (Figure 4.10).

Figure 4.11. Percentage Distribution of Women according to trimming toe nails (n =800)

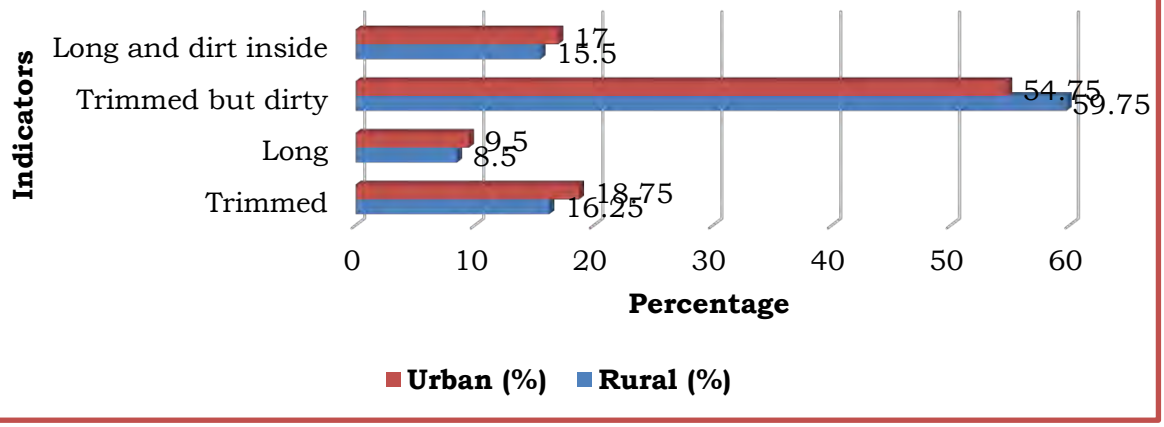


Similarly, data presented in Figure 4.11 reveals that 71.25 per cent of urban women and 65 per cent of rural women trim their toe nails weekly. About 12 per cent and 11.25 per cent of urban and rural women liked to keep long nails. The women who cut their nails once in fortnight is 11.5 per cent among urban and 14.5 per cent among rural women respectively. Small percentage of women who trim their whenever they felt it is long was 4.75 per cent among urban and eight per cent among rural women respondents. Very few viz. 0.5 per cent of urban and one per cent of rural women trim the toe nails monthly.

The study also observed the hand and toenails and recorded the observation as trimmed, long, long and dirty, trimmed and dirty. Trimmed nails were regarded as those women who trimmed their nails whenever nails grow long and do not keep any habit of growing long nails for whatever reason it may be. Those women who had long nails or keep an interest in growing long nails. Women who were fond of keeping long nails but while interviewing it was observed that nails were long but not clean. Women who

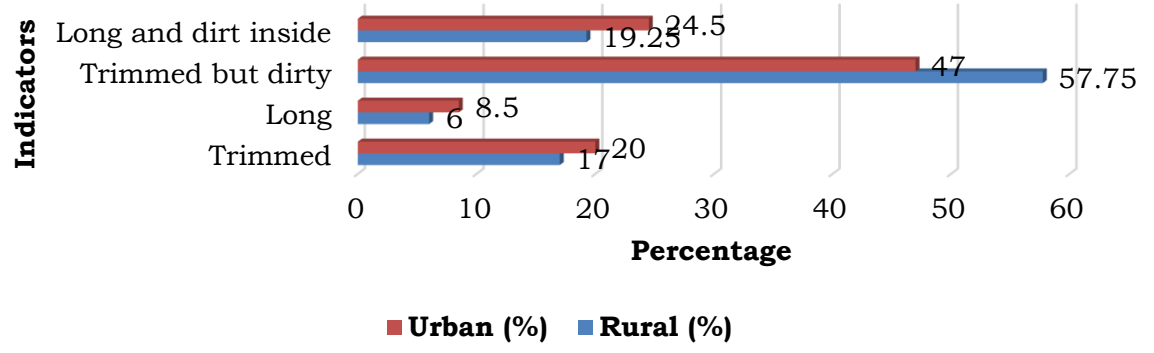
had trimmed their nails, but it was observed that those nails were dirty. The data on trimming of hand nails and long nails was collected but if it is compared with observation on hand nails, it gives a different picture. It was observed that 17 per cent and 15.5 per cent of urban and rural women kept long nails which contained dirt inside. Although 54.75 per cent and 69.75 per cent of urban and rural women kept the nails trimmed but dirt was observed inside.

Figure 4.12 : Percentage Distribution of Observation of Hand Nails (n=800)



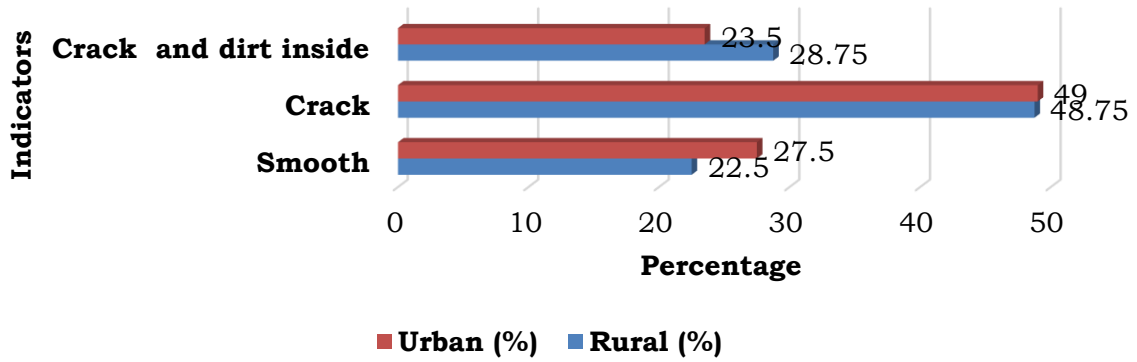
Regarding toenails, it was observed that 24.5 per cent and 19.25 per cent of urban and rural women kept long toenails which contained dirt inside. Although 47 per cent and 57.75 per cent of urban and rural women kept the toenails trimmed but dirt was observed inside. (Figure 4.12).

Figure 4.13: Percentage Distribution of Observation of Toe Nails (n=800)



Observation was also made on heels of the women respondents. Smooth heels were those heels that were washed on daily basis. Women with such washed and clean heels were observed to be having clean heels. Some women were seen with crack heels. These women said that during winter and for loads of work or working with naked legs women gets crack on their heels. They had crack heels but not dirty. Again, some women had cracks on their heels which were not clean. It was seen that those women had dirty and cracks heels. Whole day working was one of the reasons but still they said they manage to clean them during nighttime. It was observed that a small percentage i.e. 27.5 per cent and 22.5 per cent of urban and rural women respondents' heels were observed to be smooth. About similar percentage of 49 per cent and 48.75 per cent among urban and rural women were having crack heels. About 23.5 per cent and 28.75 per cent of urban and rural women respondents were having cracked heels with dirt inside as observed.

Figure 4.14: Percentage Distribution of Observation of Heels (n=800)



4.3. Hand Washing

Hand washing or hand hygiene is the act of cleaning hands for the purpose of removing soil, dirt, and other bacteria from hands with soap and water. If soap is not available, hands can be cleaned with ash. Ash is reported to be a low-cost alternative for soap for hand washing (Mandal,

2014). Hand washing is essential in everyday life. Hand washing with soap consistently at critical moments during the day prevents the spread of diseases like diarrhea, cholera, dysentery, etc. which are transmitted through fecal-oral routes. In order to prevent diseases, hand washing plays a very important as various dirt and germs are removed when we wash our hands. In the study, all women respondents of both urban and rural areas mentioned of hand washing at one or another occasion. Out of 800 women respondents, 385 (96.25%) of urban women and 381 (95.25%) of rural women reported of washing their hands with any kind of washing agents like soap and liquid handwash. Use of soap was 90 per cent among urban and 92.75 among rural women respondents and 6.25 per cent among urban and 2.5 per cent among rural women respondents on use of liquid hand wash for washing hands respectively. Almost similar percentage of 3.75 per cent and 4.75 percent of urban and rural women mentioned of washing their hands only with water.

Table 4.11 gives a detailed distribution of women according to occasions of hand washing. Out of the total of 800 women respondents from rural and urban areas, 96.37 per cent of women respondents mentioned about washing of hands after using toilet and after disposal of human or animal faeces. The second highest percentage observed was 75 per cent for washing hands after eating foods followed by 73.12 per cent for washing hands before eating. About 66.62 per cent of women respondents reported of washing hands after contact with contaminated surfaces/garbage bins/cleaning cloth and about 61.5 per cent mentioned of washing hands after use of urinal. More than one-fourth (36.12%) reported of washing hands before feeding children and 19.62 per cent mentioned of washing hands before preparing/handling cooked /ready-to-eat food. A small percentage of 11.5 per cent of women respondents from both urban and rural areas mentioned of washing hands after touching raw food and non-vegetarian foods. Very few viz. 3.75 per cent and 3.37 per cent of women reported of washing hands after wiping, blowing, sneezing, etc. into the hands and before and after contact with an infected

wound/vomiting/dressing wounds/care to an 'at risk' person/before attending a baby respectively.

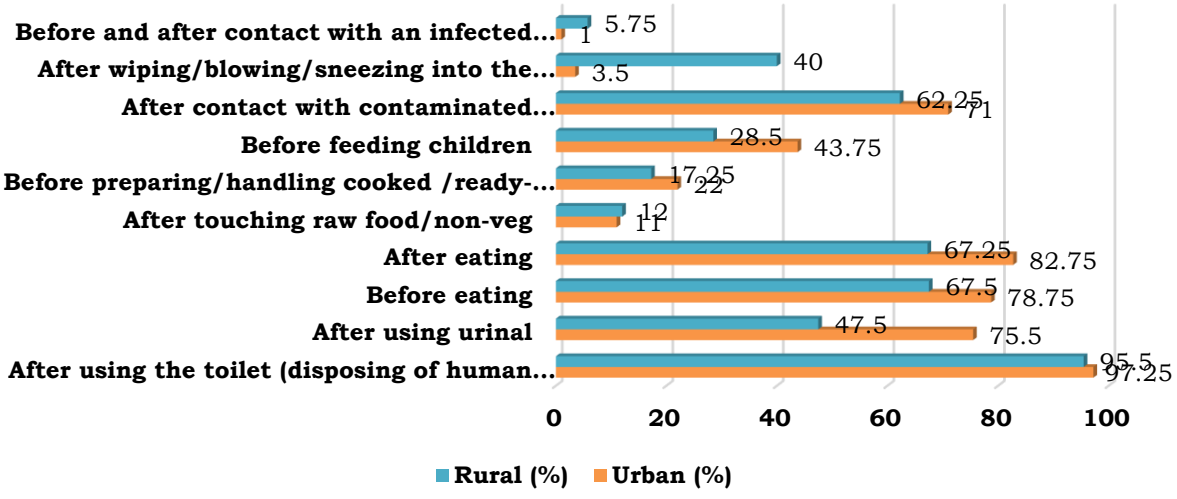
Table 4.11: Distribution of Women according to occasions of hand washing (n =800)

Occasions of hand washing	Urban (n/%)	Rural (n/%)	Total (n/%)
After using the toilet (disposing of human or animal faeces)	389 (97.25)	382 (95.5)	771 (96.37)
After using urinal	302 (75.5)	190 (47.5)	492 (61.5)
Before eating	315 (78.75)	270 (67.5)	585 (73.12)
After eating	331 (82.75)	269 (67.25)	600 (75)
After touching raw food/non-veg	44 (11)	48 (12)	92 (11.5)
Before preparing/handling cooked /ready-to-eat food	88 (22)	69 (17.25)	157 (19.62)
Before feeding children	175 (43.75)	114 (28.5)	289 (36.12)
After contact with contaminated surfaces/garbage bins/cleaning cloth	284 (71)	249 (62.25)	533 (66.62)
After wiping/blowing/sneezing into the hands	14 (3.5)	16 (4)	30 (3.75)
Before and after contact with an infected wound/vomiting/dressing wounds/care to an 'at risk' person/before attending a baby	4 (1)	23 (5.75)	27 (3.37)

From Figure 4.15, it is obvious that urban women washed their hands on many occasions like after using the toilet (97.25%), after using urinal (75.5%), before eating (78.75%), after eating (82.75%), before preparing/handling cooked good (22%), before feeding children (43.75%) and after contact with contaminated surfaces/garbage bins/cleaning cloth (71%) then the rural women respondents. The only two occasions where the rural women showed better hygienic practices than the urban women were before and after contact with an infected wound/vomiting/dressing wounds/care to an 'at risk' person/before attending a baby (5.75%) and washing hands

after wiping, blowing, sneezing, etc. into the hands 3.5%) against one per cent and four per cent respectively.

Figure 4.15. Percentage Distribution of Women according to occasions of hand washing (n =800)



The study also tried to find out hygienic practices about wearing of chappals while going to toilet and outside the house. Maximum (92.37%) of women respondents mentioned of wearing chappals while going to toilet or outside the house. In urban areas, majority (96%) of women reported whereas 86.75 per cent women of rural areas reported of wearing chappals while going to toilet or outside. Table 4.12 gives the detailed data regarding wearing chappals among the urban and rural women respondents.

Table 4.12: Distribution of Women according to wearing chappals while going to toilet and outside (n =800)

Wearing of chappals while going to toilet and outside	Urban (n/%)	Rural (n/%)	Total (n/%)
Yes	384 (96)	347 (86.75)	**731 (92.37)**
No	16 (4)	53 (13.25)	**69 (8.62)**
Total (n/%)	**400 (100)**	**400 (100)**	**800(100)**

Personal hygiene in terms of changing innerwear, outerwear, washing clothes, sun drying washed clothes, etc. was also assessed among the women respondents of urban and rural areas. Among 800 women respondents, 100 per cent women mentioned about changing innerwear on everyday basis. Regarding sun drying of innerwear, it was found that 87.75 per cent each of women respondents from urban and rural areas reported of sun drying of the inner garments. The remaining 12.25 per cent of women mentioned that they don't sun dry their inners as because they feel shame to sundry them in open. Some of the respondents also mentioned that it's for traditional belief that they don't bring the innerwear outside their homes. Few of the respondents mentioned that since they are staying in rented homes, they don't have privacy to sundry the innerwear (Table 4.13).

Table 4.13: Distribution of Women according to either sun drying of innerwear (n =800)

Sun drying of innerwear	Urban (n/%)	Rural (n/%)	Total (n/%)
Yes	351 (87.75)	351 (87.75)	**702 (87.75)**
No	49 (12.25)	49 (12.25)	**98 (12.25)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Regarding outerwear (Table 4.14), almost all (98.5%) of women respondents mentioned of changing outerwear regularly and 1.5 per cent who did not changed regularly mentioned that its only during winter they change their outerwear on alternate days. In urban the percentage of changing outwear was highest (99.75%) than among rural (97.25%) women respondents. All the women respondents of urban and rural areas mentioned about washing and sun drying the outerwear on regular basis.

Table 4.14: Distribution of Women according to the frequency of changing outer wear (n =800)

Frequency of changing outerwear	Urban (n/%)	Rural (n/%)	Total (n/%)
Regularly	399 (99.75)	389 (97.25)	**788 (98.5)**
Any other time, specify	1 (0.25)	11 (2.25)	**12 (1.5)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Data regarding cleaning of armpit, belly button, washing of pubic parts, etc. was collected from women in urban and rural areas of Assam. Data reveals that all (100%) women respondents mentioned of cleaning armpits. The process of cleaning armpit was using soap, liquid soap, shaving and waxing (Table 4.15). More than half (55.37%), 47 per cent among urban and 63.75 per cent among rural mentioned of cleaning the armpit by using soap or liquid soap. Shaving was highest with 51.5 per cent reported by urban women respondents against 36.25 per cent among rural women respondents. Few (1.5%) respondents of urban areas mentioned of waxing the armpits.

Table 4.15: Distribution of Women according to the process of cleaning armpit (n =800)

Cleaning armpit	Urban (n/%)	Rural (n/%)	Total (n/%)
Using soap/liquid soap, etc	188 (47)	255 (63.75)	**443 (55.37)**
By shaving	206 (51.5)	145 (36.25)	**351 (43.87)**
Waxing	6 (1.5)	-	**6 (0.75)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

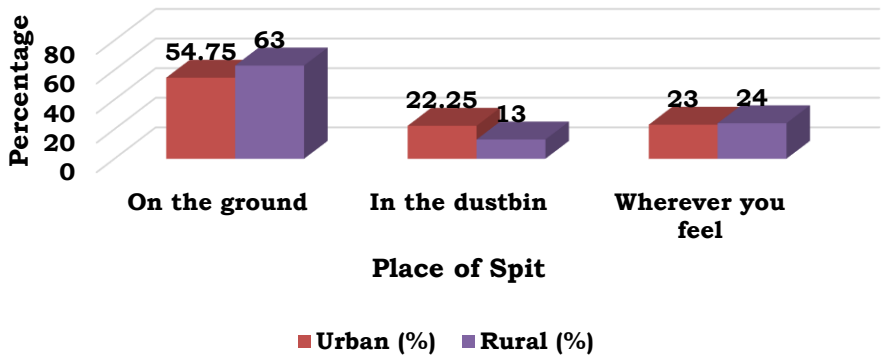
Data on cleaning of belly button among women was satisfactory as all the respondents from both rural and urban areas mentioned of cleaning their belly button regularly. Table 4.16 gives distribution of women according to the place of spitting. It was found that maximum (58.87%) of women spit in the ground followed by 23.5 per cent wherever they feel and 17.62 per cent reported of spitting in the dustbin.

Table 4.16: Distribution of Women according to the place of spitting (n =800)

Place of spit	Urban (n/%)	Rural (n/%)	Total (n/%)
On the ground	219 (54.75)	252 (63)	**471 (58.87)**
In the dustbin	89 (22.25)	52 (13)	**141 (17.62)**
Wherever you feel	92 (23)	96 (24)	**188 (23.5)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The comparative finding of rural-urban respondents in case of place of spitting is presented in Figure 4.16.

Figure 4.16. Percentage Distribution of Women according to place of spit (n =800)



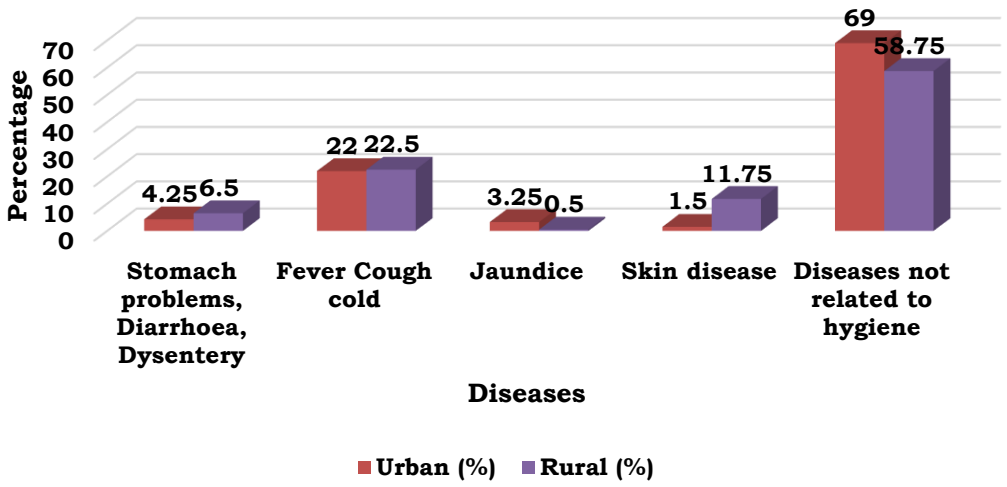
It was found that 63 per cent of rural women spit on the ground whereas 54.75 per cent of urban women spit on the ground followed by 22.25 per cent of urban women and 13 per cent of rural women spit in the dustbin. About similar percentage of 23 per cent and 24 per cent of urban and rural women mentioned of spitting wherever they feel respectively. Among 800 women respondents, about 36.13 per cent of women and their family suffered from one or another kind of disease related to hygiene like stomach problems, diarrhoea, dysentery, fever, cough, cold, jaundice, etc. in the last six months (Table 4.17). The remaining 63.87 per cent of women mentioned that they suffered from health problems, but the diseases were not related to hygiene like headache, operations, blood pressure, etc.

Table 4.17: Distribution of Women according to the diseases suffered by them and family members in the last six months (n =800)

Disease they and their family has suffered from in the last six months	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Stomach problems, Diarrhoea, Dysentery	17 (4.25)	26 (6.5)	**43 (5.37)**
Fever, cough and cold	88 (22)	90 (22.5)	**178 (22.25)**
Jaundice	13 (3.25)	2 (0.5)	**15 (1.87)**
Skin disease	6 (1.5)	47 (11.75)	**53 (6.62)**
Diseases not related to hygiene	276 (69)	235 (58.75)	**511 (63.87)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The diseases like stomach ailments, diarrhoea and dysentery (6.5%) and skin disease (11%) was found more in the rural areas than in urban areas with 4.25 per cent in case of stomach ailments and 1.5 per cent in skin diseases respectively. Almost same percentage of 22 per cent and 22.5 per cent of urban and rural women and their families suffered from fever, cough and cold in the last six months. Jaundice was reported more with 3.25 per cent in urban areas than in rural (0.5%) (Figure 4.11).

Figure 4.17. Percentage Distribution of Women according to Diseases (n =800)



The data (Table 4.18) depicted that women respondents and their family members suffered from diseases like stomach problems, diarrhoea, dysentery, fever, cough, cold, jaundice, etc. in the last six months. The frequency of the diseases was also assessed as once, twice and more than twice in the last six months. Highest (19.5%) response was once/six months followed by twice with 11 per cent. About 5.62 per cent reported for more than twice. The urban and rural women suffered once was almost same i.e. 19.25 per cent and 19.75 per cent respectively. Twice and more than twice was more (13% & 8.5%) in rural than in urban (9% & 2.75%) areas respectively.

Table 4.18: Distribution of Women according to number of times they had suffered in the last six months (n =800)			
Number of times they had suffered in the last six months	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Once	77 (19.25)	79 (19.75)	**156 (19.5)**
Twice	36 (9)	52 (13)	**88 (11)**
More than twice	11 (2.75)	34 (8.5)	**45 (5.62)**
Did not suffer from any disease	276 (69)	235 (58.75)	**511 (63.87)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Some of the findings of the study was very satisfactory in relation to washing feet after coming from outside, cleaning anal after defecation, washing pubic parts, etc. only with water. All women respondents on these subjects from both urban and rural reported to be maintaining the hygienic practices. The percentage of women washing pubic parts with water and soap on every day was 76.75 per cent viz. 80 per cent among urban women and 73.5 per cent among rural women. Occasionally, 20 per cent of urban women and 26.5 per cent of rural women reported of washing pubic parts with soap (Table 4.19).

Table 4.19: Distribution of Women according to washing of pubic parts with soap (n =800)			
Frequency of washing	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Every day with soap	320 (80)	294 (73.5)	**614 (76.75)**
Occasionally with soap	80 (20)	106 (26.5)	**186 (23.25)**
Total	**400 (100)**	**400 (100)**	**800 (100)**

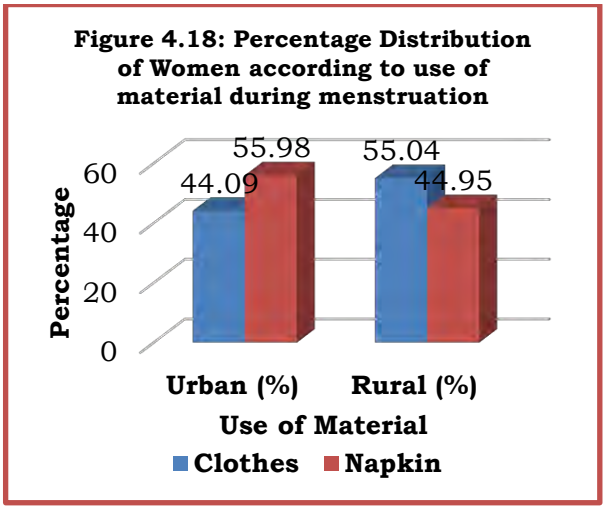
4.4 Menstrual Hygiene

Menstrual hygiene among women is very important as it keeps a woman healthy and to enjoy the life to fullest potential. Washing hands after touching pubic parts, after changing pads, changing pads after regular interval or after heavy flow, not using one single pad the whole day are few of the hygienic aspects one should follow during menstruation. The study tried to analyze the factors related to menstrual hygiene. Out of 800 women, a total of 74 women from both urban and rural areas had attained menopause (Urban 41 & Rural 33). Hence the study covered 326 women

who were menstruating. The remaining 74 women who attained menopause were excluded from interviewing regarding maintenance of hygiene during menstrual period.

Table 4.20: Distribution of Women according to use of material during menstruation (n = 726)

Type of material	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Clothes	158 (44.09)	202 (55.04)	**360 (49.59)**
Napkin	201 (55.98)	165 (44.95)	**366 (50.41)**
Total (n/%)	**359 (100)**	**367 (100)**	**726 (100)**



Regarding use of material, it was mentioned that two types of material viz. clothes and napkin were generally used during menstruation. It was found that use of sanitary napkin was more in urban (55.98%) than rural (44.95%) and vice versa about use of cloth. Use of cloth was 44.05 per cent in urban areas against 55.04 per cent in rural areas respectively (Figure 4.18). Almost half of the respondents from both rural (51.49%) and urban (48.19%) areas reported that changing of the sanitary napkin/cloth depends on the flow of the menstruation. Almost one-fourth of the respondents from urban (23.39%) areas and rural (24.25%) areas change their napkin twice/day. About 28.41 per cent of women respondents from urban and 24.25 per cent from rural areas mentioned of changing the sanitary napkin/cloth more than twice/day. The data is presented in Table 4.21.

Table 4.21: Distribution of Women according to the number of times of changing the napkin/cloth during menstruation (n =726)

Number of times	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Twice	84 (23.39)	89 (24.25)	**173 (23.83)**
More than twice	102 (28.41)	89 (24.25)	**191 (26.31)**
Depends on the flow	173 (48.19)	189 (51.49)	**362 (49.86)**
Total (n/%)	**359 (100)**	**367 (100)**	**726 (100)**

Majority (96.56%) of menstruating women reported of washing their hand after changing of sanitary napkins/cloth. It was 98.06 per cent among urban women and 95.1 per cent among rural women respectively (Table 4.22).

Table 4.22: Distribution of Women according to use of material for washing hands after changing napkin/cloth (n =726)

Materials used	Urban (n/%)	Rural (n/%)	Total (n/%)
Soap & Liquid soap	352 (98.06)	349 (95.1)	**701 (96.56)**
Water	7 (1.94)	18 (4.90)	**25 (3.44)**
Total (n/%)	**359 (100)**	**367 (100)**	**726 (100)**

4.5. Kitchen Hygiene

Culinary hygiene are the practices related to food management and cooking to prevent food contamination, prevent food poisoning and minimize the transmission of disease to other food, humans or animals. Culinary hygiene practices safe ways to handle, store, prepare, serve and eat food. Culinary hygiene also includes practices related to cooking and food management to prevent health hazards. Kitchen is the centre of all preparing and cooking activities. Hygiene must be maintained well in kitchen as it is the breeding house for bacteria and other harmful organisms that cause diseases. As women are mostly responsible from cooking to serving food in a family hence, the women as well as the kitchen surrounding should be hygienic. All women respondents of the study cooked food and all women reported that they wash the vegetables before cooking. To retain the nutrients in the vegetables, the vegetables should be washed properly before cutting and peeling. The data presented in Table 4.23 depicts that only 12 per cent of urban women respondents and 14.25 per cent of the rural women respondents mentioned of washing vegetables before cutting and peeling. More than half of the respondents mentioned from both rural (66.25%) and urban (69.5%) areas wash vegetables after cutting and peeling respectively. Almost similar percentage of respondents from urban (18.5%) and rural (19.5%) areas reported of washing vegetables

depending on the type of vegetable. All the women respondents reported of covering cooked food in both rural and urban areas.

Table 4.23: Distribution of Women according to washing vegetables before cooking (n =800)			
Washing of vegetables	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Before cutting and peeling	48 (12)	57 (14.25)	**105 (13.12)**
After peeling and cutting	278 (69.5)	265 (66.25)	**543 (67.87)**
Depends on the vegetable	74 (18.5)	78 (19.5)	**152 (19)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

To know the kitchen hygiene data on cleaning the kitchen slaps, kitchen tools, potholders, cleaning dustbin, etc. were collected (Table 4.24). Similar percentage of women respondents, 40 per cent in urban and 39 per cent in rural reported of cleaning kitchen slaps, kitchen tools, potholders, etc. every day after cooking. The urban women respondents reported of washing the kitchen slaps and potholders was more with 43.25 per cent on weekly basis than the rural respondents with only 37 per cent. The washing of kitchen items on monthly basis was observed higher in rural areas (6.75%) than rural areas (2.5%) respectively.

Table 4.24: Distribution of Women according to cleaning the kitchen slaps, kitchen tools, potholders, etc. (n =800)			
Cleaning the kitchen slaps, kitchen tools, potholders, etc.	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Every day after cooking	160 (40)	156 (39)	**316 (39.5)**
Alternate day	11 (2.75)	19 (4.75)	**30 (3.75)**
Weekly	173 (43.25)	148 (37)	**321 (40.12)**
Once/15 days	46 (11.5)	50 (12.5)	**96 (12)**
Monthly	10 (2.5)	27 (6.75)	**37 (4.62)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

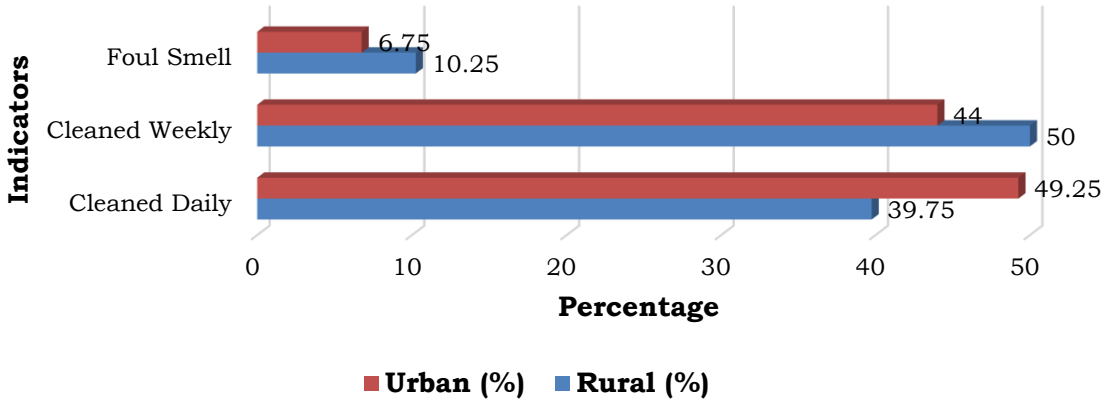
In the study, a total of 235 (58.75%) urban women and 165 (41.25%) rural women respondents used dust bins (Table 4.25). The remaining threw their garbage in open spaces of the backyard of the house or nearby ponds. Among the 235 and 165 urban and rural respondents using dustbin, 26.8

per cent of urban and only 26.06 per cent of rural respondents mentioned of using a wet and a dry dustbin. Again, out of the total respondents using dustbin, 17 per cent of urban women and 15.15 per cent of rural women reported of covering the dustbins respectively.

Table 4.25: Distribution of Women according to using of garbage bin (n =800)			
Use of garbage bin	**Urban (n/%)**	**Rural (n/%)**	**Total (n/%)**
Yes	235 (58.75)	165 (41.25)	**400 (100)**
No	165 (41.25)	235 (58.75)	**400 (100)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The condition of the garbage disposal area whether it was a garbage bin or an area/water bodies, etc. where garbage was disposed was observed while conducting the survey. Further observation made on cleanliness, foul smell, not using any kind of dustbin and throwing outside the house, etc.

Figure 4.19: Percentage Distribution of Observation of Condition of Garbage bin/area (n=800)



It was observed that the garbage bin or area giving foul smell was 6.75 per cent in urban areas and 10.25 per cent in rural areas. About 50 per cent of rural and 44 per cent of rural women mentioned of cleaning the garbage bin/area on weekly basis and 49.25 per cent of urban and 39.75 per cent of rural women reported the cleaning on daily basis respectively (Figure 4.19).

All the study respondents mentioned of washing utensils before eating but 17.75 per cent of urban women and 15.5 per cent of rural women washed their utensils with any soap/bar/detergent, etc. before eating (Table 4.26). The remaining, 82.25 per cent in urban and 84.5 per cent in rural areas washed their utensils with only water as all respondents felt that as they already washed the utensils with any kind of agent after eating so they wash only with water as the utensils were clean.

Table 4.26: Distribution of Women according to using of material for washing the utensils (n =800)

Using of material for washing the utensils before eating	Urban (n/%)	Rural (n/%)	Total (n/%)
Soap/Bars/Detergent	71 (17.75)	62 (15.5)	**133 (16.62)**
Water	329 (82.25)	338 (84.5)	**667 (83.37)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Majority of the respondents from both urban (90.25%) and rural (89.25%) areas reported of washing their utensils instantly after eating food. Table 4.27 depicts in detail about the washing of utensils after eating. The remaining 9.75 per cent of urban women and 10.75 per cent of rural women mentioned of washing utensils afterwards and not instantly after eating. The view on washing the utensils instantly after dinner were different. More than half (51.75%) of the urban women respondents mentioned of washing utensils after dinner at night instantly whereas only 33.5 per cent of rural women washed the utensils after dinner (Table 4.28).

Table 4.27: Distribution of Women according to washing of utensils after eating (n =800)

Washing the utensils	Urban (n/%)	Rural (n/%)	Total (n/%)
Instantly after eating	361 (90.25)	357 (89.25)	**718 (89.75)**
Wash after wards	39 (9.75)	43 (10.75)	**82 (10.25)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

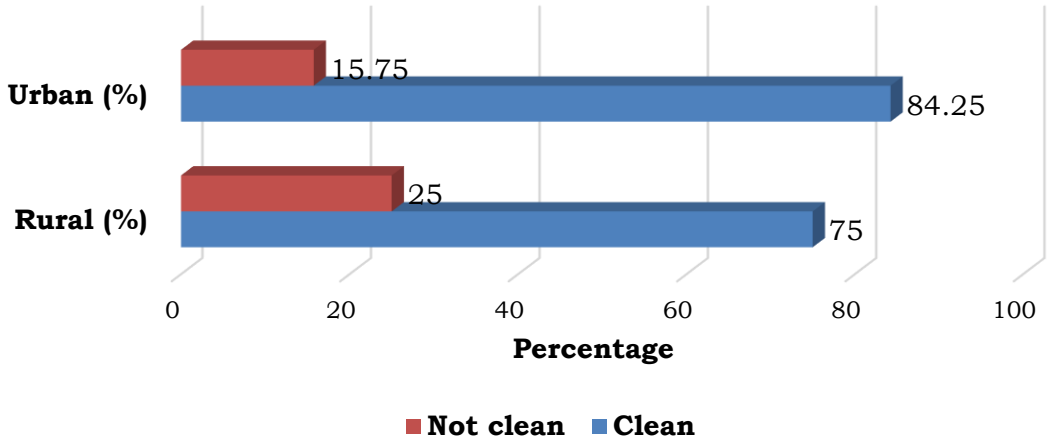
Table 4.28: Distribution of Women according to washing of utensils after dinner (n =800)

Washing the utensils after dinner	Urban (n/%)	Rural (n/%)	Total (n/%)
Wash immediately after dinner	207 (51.75)	134 (33.5)	**341 (42.62)**
Wash with clean water and keep for the next day to clean	193 (48.25)	266 (66.5)	**459 (57.37)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The women respondents who did not washed the utensils mentioned that to keep the hygienic aspects of washing, they wash the utensils with water and keep it covered and wash the next day with any kind of detergent used for washing utensils. The women folk also mentioned that at night they don't want to go outside the house to wash the utensils as it is dark and enough light was not available.

While making home visits, utensils of the houses were observed by making visit to the back yard of the houses or sometimes by drinking water or tea. Clean utensils were those utensils which were found to be clean or not greasy. Utensils which were not stinky and did not emit any awkward smell. Not clean utensils were those utensils which were observed to be dirty and greasy. These dirty utensils also gave foul smell. The observation findings are presented in Figure 4.20. In rural areas the percentage of utensils which were found not clean was high (25%) in comparison to urban areas with 15.75 per cent.

Figure 4.20: Percentage Distribution of Observation of Utensils (n=800)



4.6. Household Hygiene

A house with its occupants is regarded as a household. The household must be kept clean through regular brooming, mopping, free from insects and pests, etc. so that the occupants enjoys good health. In the study all

respondents mentioned that they broom their houses every day. However, there was a difference among the urban and rural respondents on the times of broom (Table 4.29). The urban women respondents broom more once (8.5%), more than twice (16%) and whenever it is dirty (37.5%) than the rural respondents in terms of once (5.25%), more than twice (12%) and whenever it is dirty (35%) respectively. It was found that rural women respondents' broom more twice per day with 47.75 per cent against urban respondents with only 38 per cent.

Table 4.29: Distribution of Women according to the number of broom (n =800)

Number of times of broom the house	Urban (n/%)	Rural (n/%)	Total (n/%)
Once	34 (8.5)	21 (5.25)	**55 (6.87)**
Twice	152 (38)	191 (47.75)	**343 (42.87)**
More than twice	64 (16)	48 (12)	**112 (14)**
Whenever it is dirty	150 (37.5)	140 (35)	**290 (36.25)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Similarly, the study tried to find out the number of times of moping the houses. More than half of the respondents, 58.25 per cent among urban and 53.75 per cent among rural women mentioned of moping their houses once per day. Less than one fourth (22.25% of urban & 18.75% of rural) women respondents mentioned of moping twice per week. About 12.75 per cent and 18.5 per cent of urban and rural respondents mentioned of moping the house whenever it was dirty respectively. Very few numbers of respondents of urban and rural areas viz. 6.75 per cent and nine per cent reported of moping the house thrice/week respectively (Table 4.30).

Table 4.30: Distribution of Women according to the number of times of moping the houses (n =800)

Number of times of moping/week	Urban (n/%)	Rural (n/%)	Total (n/%)
Once	233 (58.25)	215 (53.75)	**448 (56)**
Twice	89 (22.25)	75 (18.75)	**164 (20.5)**
Thrice	27 (6.75)	36 (9)	**63 (7.87)**
Whenever it is dirty	51 (12.75)	74 (18.5)	**125 (15.62)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Regarding use of material for moping the floor, it was found that the urban women respondents used agents like phenyl, dettol, surf, citranala, lizol, etc. more (83%) than rural (61.75%) women respondents. Use of kerosene for moping was 4.75 per cent among urban women and 8.25 per cent among rural women respondents. Cow dung paste was used more among rural (30%) than urban (12.25%) respondents respectively. Table 4.31 gives the detail about use of material for moping the floor.

Table 4.31: Distribution of Women according to the material used for moping the floor (n =800)

Material used for moping the floor	Urban (n/%)	Rural (n/%)	Total (n/%)
Agent	332 (83)	247 (61.75)	**579 (72.37)**
Kerosene	19 (4.75)	33 (8.25)	**52 (6.5)**
Cow dung paste	49 (12.25)	120 (30)	**169 (21.12)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

The study also tried to observe the cleanliness of the household, surroundings, etc. The investigators noted the cleanliness in terms of clean, not clean, somewhat clean and super clean. While observing each household cleanliness, the observation was done based on the condition of the houses which includes the floor either moped or not, the presence of cobwebs in the houses, dust particles found in the tables, chairs, shelves etc. The houses were termed not clean when while visiting the houses, a foul smell was present after entering the house. Floors of some houses were not mopped properly nor swept properly. Curtains were dirty and also tablecloths and sofa covers. Not clean houses were those houses where there were babies in the houses and the floors were messed by their babies and the floors were not clean either. Small babies were seen crawling and eating from such floors. Doors and windows were filled with dust that was not cleaned for a long time including almirah and other cupboards as observed. Some houses had both kitchen and bedroom attached to each other which created a massive dirt and unhygienic condition. Food items from kitchen were found on the bedroom. Bed sheets and clothes shelves were also not clean. Below the bed, lots of dirt was observed which were not cleaned from a long time. Cobwebs were found in such houses which were not cleaned weekly or

monthly. Somewhat clean houses were somewhat clean, but not completely clean. Houses where floors were found to be clean, but corners were found to be dirty. Some houses were somewhat clean, where curtains and clothes were not clean, but floors were mopped and swept daily. The clean was used when the houses when the floor was clean with no dust. There was no dust in the sofa and tables. The floor was also cleaned properly. It was also observed that some houses although had pets in their houses yet still they manage to keep their floor clean. Curtains and other clothes were clean than such houses were observed to be clean. Such houses do not have any cobwebs present in their houses. Super clean houses were those houses which caught the eyes even before entering the houses. From the surrounding to the entrance and after the entering some houses were found to be super clean. Those houses were not any luxurious or beautiful houses but houses simply made of bamboos and mud's or simple brick houses. Such houses had clean mopped floors where one face can be seen without a pin dust. Those houses were super clean with clean corners, clean sofas, tables, etc. some houses observed where one cannot find any dirt nor inside the houses nor outside their houses. These houses were about the cleanliness of everything in the houses. Doors and windows were observed to be without any kind of dirt.

Figure 4.21: Percentage Distribution of Women on Observation of Household Cleanliness (n=800)

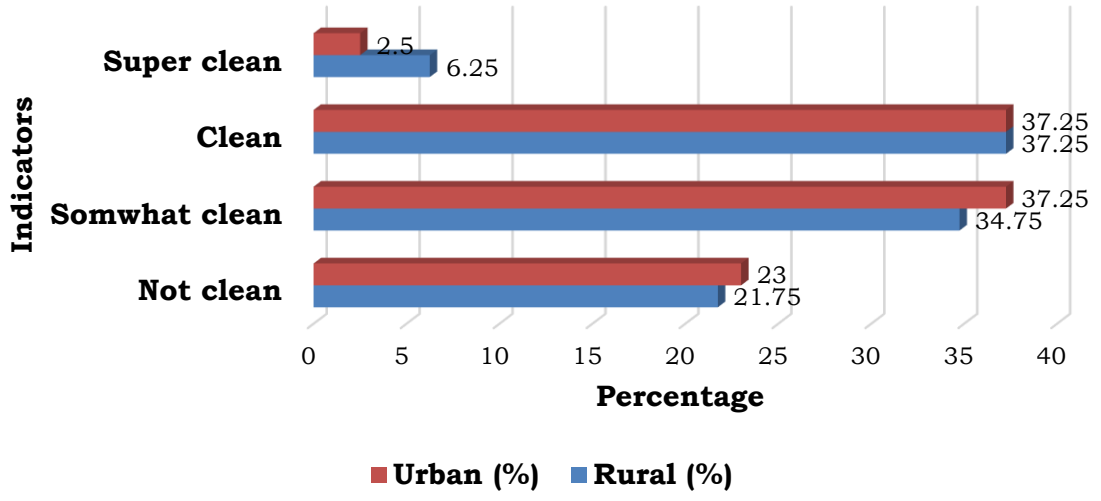


Figure 4.21 gives a picture on observation of household cleanliness. Same percentage of 37.25 per cent each was observed among urban and rural households as clean on household cleanliness. Not clean households were observed more (23%) in urban areas than rural (21.75%) areas. Likewise, somewhat clean households were observed more with 37.25 per cent in urban areas and 34.75 per cent in urban areas. Super clean houses were more observed in rural (6.25%) areas than urban (2.5%) areas.

During home visits, the surrounding of the houses was observed. While observing the surrounding of the houses, complete surrounding of each houses from the entrance was observed. Presence of cow dung's, dustbin, animal excretion, etc. were found in the surrounding. Some household surroundings were observed to be dirty and not clean. Many houses had open spaces in their backyard to throw their daily wastes and other dirt's which were dumped from a long time and not cleaned. Such open spaces were left open and not covered which gave foul smell as many families domesticated cows, goats, and poultry. Homes made for cows and goats were not cleaned daily which totally created a dirty environment. Poultry farming in many houses were common. Some houses did not give much attention in cleaning messed made by such ducks and hens which made the whole surrounding dirty and smelly. Many families collected daily garbage's and kept them in their household surroundings to burn them weekly which made the environment even more dirty. Some households again on the other hand clean their houses but do not regularly clean their surroundings which made their surrounding looks dirty with dirty water, cow dung's, other animal excretions. Again, few families had to face problems during rainy season where water drainage system in not proper and therefore consequence is that they had to face dirty drain water in their houses. Here again, some families do not clean such water completely which gave birth to various insects and infected the whole surrounding and environment. Somewhat clean houses had clean surrounding, but presence of cow dung's or other animal excretions were observed. Few houses had

clean surroundings but had open spaces to throw dustbins were observed as somewhat clean surroundings. Clean household surroundings were observed among those houses which had clean area surrounding the house. These houses had open areas in their household surroundings where they burn their daily wastes. Again, few houses were found where they make homemade bamboo dustbins and hang them in front of the houses as well in different places outside the houses to throw wastes like papers, candy wrappers, etc. the areas where domesticated animals were kept observed to be very neat and clean. Super clean household surroundings mean household surroundings which were super clean. They did have any dirt neither outside their houses nor inside their houses. Not even a dry leaf was seen in the surroundings.

Figure 4.22: Percentage Distribution on Observation of Cleanliness of Surrounding (n=800)

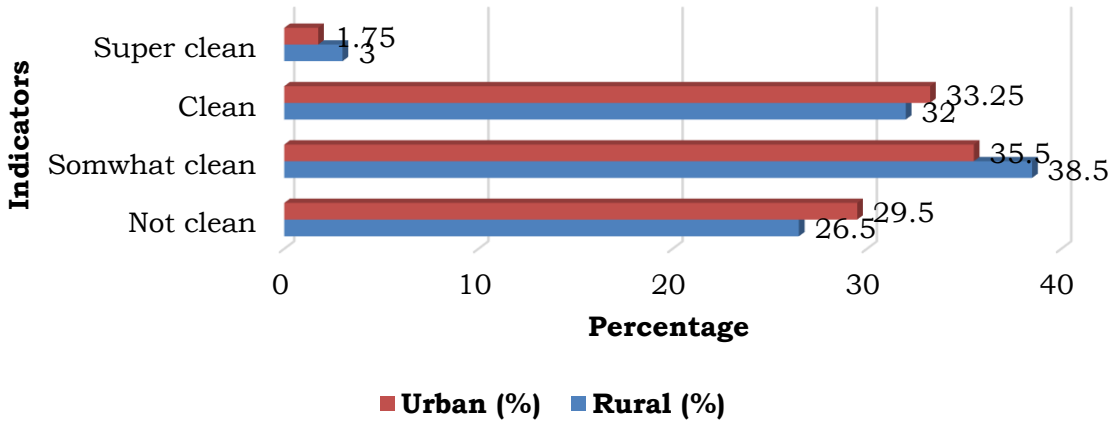


Figure 4.22 gives a picture on observation of cleanliness in the surrounding. Similar percentage of 33.25 per cent and 32 per cent among urban and rural were observed as clean on household cleanliness. Not clean households were observed more (29.5%) in urban areas than rural (26.5%) areas. Likewise, super clean household surrounding was observed more with three per cent in rural areas and 1.75 per cent in urban areas.

The urban women respondents used cleaning agents like harpic, etc. more than rural women respondents (Table 4.32). Use of water was observed more in rural areas as compared to urban areas.

Table 4.32: Distribution of Women according to the material used to clean the toilet (n =800)

Material used to clean toilet	Urban (n/%)	Rural (n/%)	Total (n/%)
Only water	198 (49.5)	255 (63.25)	**453 (56.62)**
Cleaning agent, Harpic, etc.	201 (50.25)	121 (30.25)	**322 (40.25)**
No Toilet	1 (0.25)	24 (6)	**25 (3.12)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Toilet was also observed as a part of the study during home visits. Observation were made based on pacca or kaccha toilets and cleanliness by use of water or any agents. Not clean toilets were those toilets which were not cleaned daily. Pans of such toilets were found to be stained as they are not cleaned daily. Toilets were also dirty with cobwebs and dirty floor. Some toilets were found to be somewhat clean. Those toilets were pacca toilet or Government toilets. They manage to clean those toilets with surf water or sometimes with Harpic. There were cobwebs present sometime in the toilets. They had almost clean floor but not as clean as needed. Clean toilets were those toilets which are clean. These toilets were cleaned properly with Harpic and Phynyl or other market products. Toilets that were cleaned from the floor to the wall and which did not emit any foul smell. The toilets even do not have any water blockage problems. Super clean toilets were properly cleaned. These toilets are super clean as observed. From floor to ceiling theses toilets were cleaned and also not strain present in the floor. Some toilets also added various fragrances to make it more convenient for the members and other people to enter the toilets. Super clean toilets had super clean pans.

Figure 4.23: Percentage Distribution of Observation on Toilet Cleanliness (n=800)

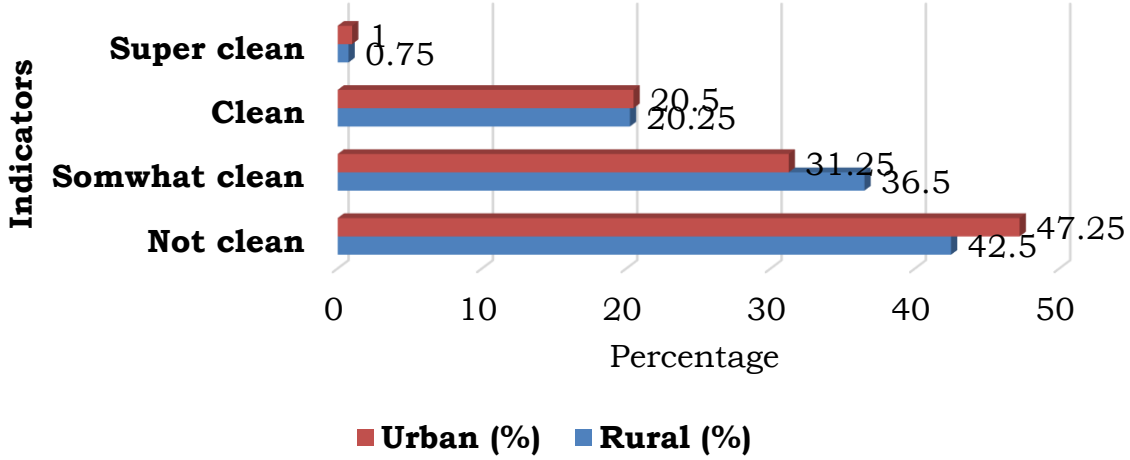


Figure 4.23 gives a picture on observation of cleanliness in the toilet of the households. Similar percentage of 20.5 per cent and 20.25 per cent among urban and rural were observed as clean toilets. Not clean toilets were observed more (47.5%) in urban areas than rural (42.5%) areas. About 31.25 per cent and 36.5 per cent of urban and rural toilets were observed as somewhat clean. Likewise, super clean toilets were observed more with one per cent in urban areas and 0.75 per cent in rural areas.

The study also tried to find out about the precautions taken for control of insects and cockroaches. About 37.5 per cent of urban women and 25.25 per cent of rural women reported of taking precautions regarding insects and cockroaches and the respondents mentioned of using market products like hit, etc. the others reported of using sandals or sticks to kill cockroaches, some mentioned of not having any insects/ cockroaches in their house or even they have they don't take any steps to kill them (Table 4.33).

Table 4.33: Distribution of Women according to precautions taken to combat insects and cockroaches (n = 800)

Precautions for insects & cockroaches	Urban (n/%)	Rural (n/%)	Total (n/%)
Yes	150 (37.5)	101 (25.25)	**251 (31.37)**
No	250 (62.5)	299 (74.75)	**549 (68.62)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Regarding source of water, it was found that in the urban areas the source of water was 46 per cent from water supply/running water whereas in rural areas tube well was the main source of drinking water with 33.5 per cent. The other sources were well, river, pond, etc. (Table 4.34).

Table 4.34: Distribution of Women according to the sources for collection of drinking water (n =800)

Sources of drinking water	Urban (n/%)	Rural (n/%)	Total (n/%)
Well	79 (19.75)	119 (29.75)	**198 (24.75)**
River	7 (1.75)	-	**7 (0.87)**
Tube well	103 (25.75)	134 (33.5)	**237 (29.62)**
Pond	27 (6.75)	63 (15.75)	**90 (11.25)**
Other sources/ running water/Urban Water/Supply	184 (46)	84 (21)	**268 (33.5)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

Table 4.35: Distribution of Women according to the process of drinking water after collection from various sources (n =800)

Process of drinking water after collection from various sources	Urban (n/%)	Rural (n/%)	Total (n/%)
Filter/Boil/Both	321 (80.25)	231 (57.75)	**552 (69)**
Keep it for drinking	79 (19.75)	169 (42.25)	**248 (31)**
Total (n/%)	**400 (100)**	**400 (100)**	**800 (100)**

It was also found that almost 80.25 per cent of urban women either filter or boil or both boil and filter before drinking whereas in rural areas it is only 57.75 per cent.

To summarize, hygiene is the process and a set of practices performed in keeping oneself and the environment around clean in order to prevent diseases. Among women of urban and rural areas, some aspects of hygiene were satisfactory among urban than rural, some were better in rural than urban and some aspects were similar. The results revealed that oral hygiene regarding use of brush and toothpaste, overall look of tidiness, trimming of hand and toenails were satisfactory than the rural women. Again, handwashing after using the toilet, after using urinal, before eating, after eating, before preparing/handling cooked good, before feeding children and after contact with contaminated surfaces/garbage bins/cleaning cloth, etc.

were better than the rural women respondents. Majority of urban women reported of wearing chappals while going to toilet or outside. Among urban women the percentage of changing outwear was highest. Regarding spitting on the ground, it was observed that urban women spitted less on the ground and hence the percentage of suffering from one or another kind of disease related to hygiene like stomach problems, diarrhoea, dysentery, fever, cough, cold, jaundice, etc. in the last six months was less in urban families than rural. The percentage of women washing pubic parts with water and soap on every day, use of sanitary napkin, changing the sanitary napkin/cloth more than twice/day, washing of hands after changing of sanitary napkins/cloth, etc. was observed more among urban women respondents than rural women respondents. Culinary and kitchen hygiene with regard to washing the kitchen slaps and potholders, use of dustbin (wet and dry), covering the dustbins, etc were observed more in rural kitchens and homes. It was also observed that the garbage bin or area giving foul smell in urban areas was less than in rural areas. The urban women reported of taking more precautions regarding insects and cockroaches and the respondents mentioned of using market products like hit, etc.

Some aspects of hygiene related behavior among rural women respondents like change of toothbrush within three to four months, handwashing practices before and after contact with an infected wound/vomiting/dressing wounds/care, before attending a baby and washing hands after wiping, blowing, sneezing, etc. into the hands was better followed than the urban women respondents. Personal hygiene related to cleaning the armpit by using soap or liquid soap was satisfactory among rural women. Clean, super clean and use of water in households' chores were observed more in rural areas as compared to urban areas.

In the study, some of the data relating to oral hygiene, bathing with soap, nasal cleaning, washing hair per week, washing of comb after hair wash, liking to keep long nails, changing innerwear on everyday basis, sun drying of innerwear, sun drying the outerwear on regular basis were same

among the rural and urban women respondents. Some other aspects of hygiene like cleaning of belly button, washing feet after coming from outside, cleaning anal after defecation, washing pubic parts, etc. were also found to be same among rural and urban women. Culinary hygiene regarding washing vegetables, covering cooked food, cleaning kitchen slaps, kitchen tools, potholders, etc. every day after cooking, washing their utensils instantly after eating food were same among the respondents belonging to rural and urban households. The observation made on cleanliness in the surrounding and toilets were reported to be same for both rural and urban areas.

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CHAPTER V

Assessment of Knowledge and Attitude towards Hygienic Practices among Children

Hygienic practices among children in the three age groups viz. six to nine years, 10 to 14 years and 15 to 18 years among both boys and girls were studied. Hence, in this chapter an attempt has been made to assess the knowledge and attitudes in respect to hygiene practices among children living in rural and urban setting in terms of some selected parameters. The researcher tried to analyze the parameters set for following hygienic habits by children focusing on personal hygiene, hand washing and menstrual hygiene.

Children six to nine years

5.1. Oral Hygiene

Oral hygiene comprises of brushing, cleaning mouth, flossing, etc. Unhygienic oral hygiene may lead to bad breadth, tooth decay, etc. which may in turn hamper the health of an individual. Among children, imparting healthy hygienic habits at an early stage is very important. Some good oral hygiene practices include brushing teeth regularly, mouthwash to help remove germs that may be left behind after brushing, flossing the teeth regularly, washing the mouth regularly after eating.

In the study, the data revealed that all (100%) children mentioned that they clean their teeth everyday using brush or without brush and some agents. Table 5.1 gives percentage distribution of urban and rural children according to use of material for oral hygiene.

Table 5.1: Distribution of children (6-9 years) according to use of material for brushing teeth (n = 320)							
Use of material	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Toothpaste/ Powder with brush	65 (81.25)	80 (100)	145 (90.62)	66 (82.5)	69 (86.25)	135 (84.37)	280 (87.5)
Toothpaste/powder with finger	5 (6.25)	-	5 (3.12)	5 (6.25)	6 (7.5)	11 (6.87)	16 (5)
Charcoal with brush	10 (12.5)	-	10 (6.25)	9 (11.25)	5 (6.25)	14 (8.75)	24 (7.5)
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Among 320 children, 87.5 per cent of children mentioned of using toothpaste/powder with brush for cleaning tooth. About five per cent of children respondents reported of using toothpaste/powder with finger. Few (7.5%) of the children mentioned about use of charcoal as a medium of cleaning teeth and with brush.

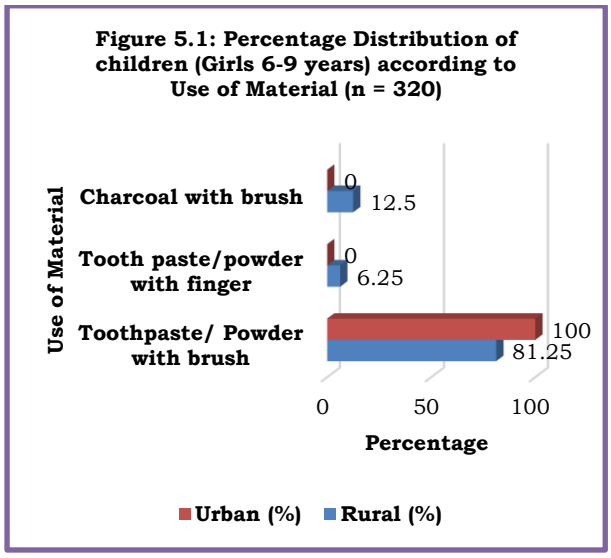


Figure 5.1: Percentage Distribution of children (Girls 6-9 years) according to Use of Material (n = 320)

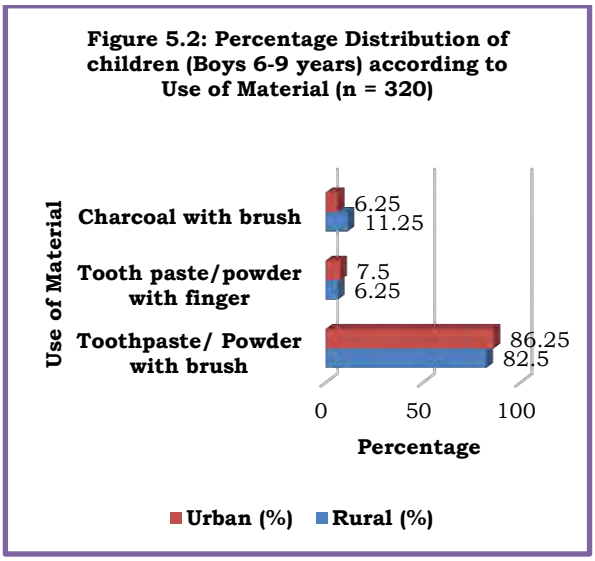


Figure 5.2: Percentage Distribution of children (Boys 6-9 years) according to Use of Material (n = 320)

Figure 5.1 reveals that, cent per cent of urban girls of six to nine years used toothpaste/powder with brush against 81.25 per cent of rural girls. None of the urban girls used fingers and charcoal to brush their teeth whereas 12.5 per cent and 6.25 per cent of rural girls used toothpaste/powder with finger and charcoal with brush respectively.

Figure 5.2 reveals that, 86.25 per cent of urban boys of six to nine years used toothpaste/powder with brush against 82.5 per cent of rural boys. About 7.5 per cent and 6.25 per cent of the urban and rural boys used fingers and charcoal to brush their teeth respectively. The number of boys using charcoal with brush is less (6.25%) among urban boys than rural (11.25%) boys respectively.

Table 5.2: Distribution of children (6-9 years) according to time of brushing teeth (n = 320)

Time of brushing teeth	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Morning after getting up	58 (72.5)	61 (76.25)	**119 (74.37)**	65 (81.25)	65 (81.25)	**130 (81.25)**	**249 (77.81)**
Morning after getting up & before sleeping	22 (27.5)	19 (23.75)	**41 (25.62)**	15 (18.75)	15 (18.75)	**30 (18.75)**	**71 (22.18)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The data presented in Table 5.2 gives percentage distribution of urban and rural children according to number of times of brushing teeth. Among 320 children, 77.81 per cent of children mentioned of brushing their teeth with brush or fingers once in the morning after getting up and 22.18 per cent children mentioned of brushing their teeth twice viz. in the morning after getting up and before going to sleep with brush or use of fingers.

Figure 5.3: Percentage Distribution of children (Girls 6-9 years) according to Time of Brushing (n = 320)

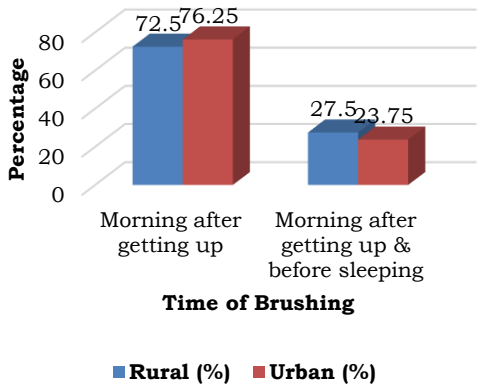
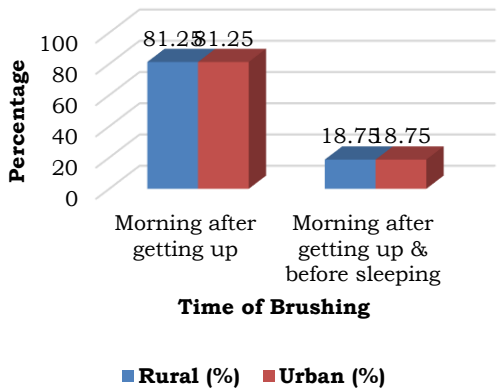


Figure 5.4: Percentage Distribution of children (Boys 6-9 years) according to Time of Brushing (n = 320)

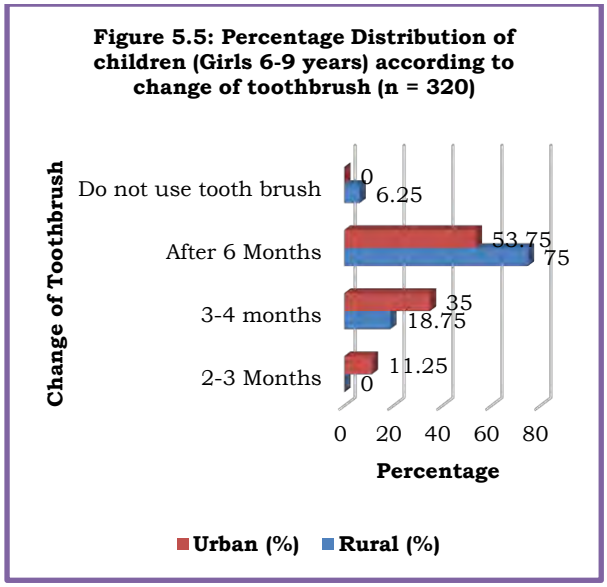


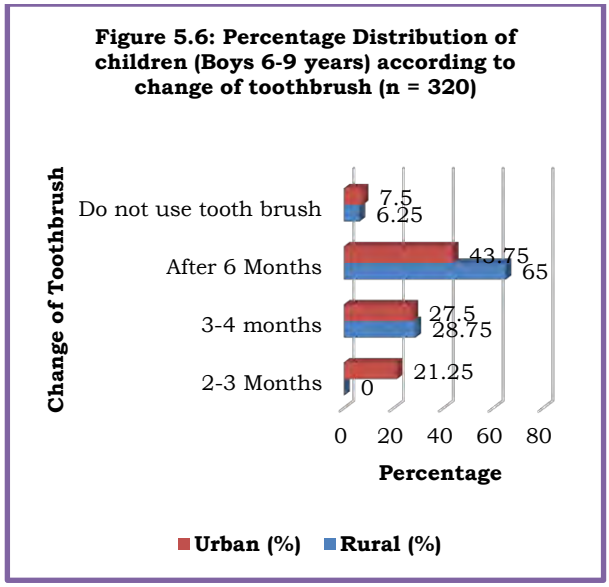
The percentage distribution on time of brushing is presented in Figure 5.3 and Figure 5.4. Data (Figure 5.3) reveals that 76.25 per cent of urban and 72.5 per cent of rural girls in the age group of six to nine years brushed their teeth once after getting up in the morning. About 23.75 per cent of urban and 27.5 per cent of rural girls brushed twice viz. after getting up in the morning and before going to sleep. In case of boys, the urban and rural scenario regarding brushing of teeth is same. About 81.25 per cent of both rural and urban boys in the age group of six to nine years mentioned of brushing their teeth once after getting up in the morning and the remaining 18.75 per cent of both urban and rural boys brushed twice viz. after getting up in the morning and before going to sleep (Figure 5.4).

Table 5.3: Distribution of children (6-9 years) according to change of toothbrush (n = 320)

Change of toothbrush	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
2-3 Months	-	9 (11.25)	**9 (5.62)**	-	17 (21.25)	**17 (10.62)**	**26 (8.12)**
3-4 months	15 (18.75)	28 (35)	**43 (26.87)**	23 (28.75)	22 (27.5)	**45 (28.12)**	**88 (27.5)**
After 6 Months	60 (75)	43 (53.75)	**103 (64.87)**	52 (65)	35 (43.75)	**87 (54.37)**	**190 (59.37)**
Do not use toothbrush	5 (6.25)	-	**5 (3.12)**	5 (6.25)	6 (7.5)	**11 (6.87)**	**16 (5)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Replacement of used toothbrush after a certain period is related to oral hygiene, it was found that among 320 children respondents in the age group of six to nine years, 8.12 per cent of children changed their toothbrush in two to three months, 27.5 per cent changed in three to four months and 59.37 per cent changed after six months. Around five per cent of children did not use toothbrush instead used fingers for brushing/cleaning their teeth's.





The highest percentage in changing toothbrush after six months in the age group of six to nine years was 53.75 per cent among urban girls whereas 75 per cent rural girls changed their toothbrush for the same duration. In two to three months, 11.25 per cent of urban girls and none of the rural girls changed their toothbrush. The respondents who changed their toothbrush within three to four months were 35 per cent in case of urban children and 18.75 per cent in case of rural children (Figure 5.5). In case of boys of the same age group, 43.75 per cent of urban boys and 65 per cent rural boys changed their toothbrush after using the toothbrush for six months. In two to three months, 21.25 per cent of urban boys and none of the rural boys changed their toothbrush. The respondents who changed their toothbrush within three to four months were 27.5 per cent in case of urban boys and 28.75 per cent in case of rural boys (Figure 5.6). About 6.25 per cent of rural girls and 7.5 per cent and 6.25 per cent of urban and rural boys did not used brush for brushing their teeth instead used fingers in cleaning the teeth's respectively. The reasons for not using brush are ignorant parents or lack of knowledge of using brush from an early age. Children's from minority areas are usually seen to be not using brush. Confonti *et. al.* (2003) revealed in a study on an investigation into the effect of three months' clinical wear on toothbrush revealed that a worn toothbrush is less efficient with respect to plaque removal than a new brush

and therefore be encouraged to replace their toothbrush regularly before bristle wear becomes excessive.

5.2 Personal Hygiene

Personal hygiene among children in the study covered bathing, washing hands, hair, trimming nails, etc. The study found that all (100%) of children in the age group of six to nine years from both urban and rural areas took bath every day. Almost cent per cent (97.5%) mentioned of taking bath with any kind of soap and 2.5 per cent reported of taking bath only by water respectively (Table 5.4). Among girls of both rural and urban areas, all mentioned of taking bath with soap whereas among boys, 93.75 per cent of rural and 96.25 per cent of urban boy mentioned of taking bath with soap. The remaining rural (6.25%) and urban (3.75%) of boys reported of taking bath only with water.

Table 5.4: Distribution of children (6-9 years) according to use of material for bath (n = 320)

Use of Material	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Soap	80 (100)	80 (100)	**160 (100)**	75 (93.75)	77 (96.25)	**152 (95)**	**312 (97.5)**
Only Water	-	-	**-**	5 (6.25)	3 (3.75)	**8 (5)**	**8 (2.5)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Children of six to nine years sometimes less independent in doing some tasks. Hence, they were asked if any family members help the child during bath. About 51.25 per cent of rural girls and 48.75 per cent of urban girls reported of getting help during a bath. Among boys of the same age group, 50 per cent of rural boys and 62.5 per cent of urban boys mentioned of taking any kind of help during bath. Children mentioned that either parents, siblings, aunty or grandparents help them during bath (Table 5.5).

Table 5.5: Distribution of children (6-9 years) according to help required in taking bath (n = 320)							
Help in taking bath	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Yes	41 (51.25)	39 (48.75)	**80 (50)**	40 (50)	50 (62.5)	**90 (56.25)**	**170 (53.12)**
No	39 (48.75)	41 (51.25)	**80 (50)**	40 (50)	30 (37.5)	**70 (43.75)**	**150 (46.87)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Almost all the children respondents from both urban and rural areas in the age group of six to nine years mentioned of cleaning their nose. On assessing the time of cleaning nose, it was found that more than half among the rural (66.25%) and urban (83.75%) girls cleaned their nose whenever they feel dirty and the remaining 33.75 per cent of rural and 16.25 per cent of urban girls mentioned of cleaning the nose while taking bath/face wash. In case of boys, it was found that more than half among the rural (70%) and urban (76.25%) boys cleaned their nose whenever they feel dirty and the remaining 30 per cent of rural and 23.75 per cent of urban boys mentioned of cleaning the nose while taking bath/face wash (Table 5.6).

Table 5.6: Distribution of children (6-9 years) according to nasal hygiene (n = 320)							
Cleaning of nose	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
During bath/face wash	27 (33.75)	13 (16.25)	**40 (25)**	24 (30)	19 (23.75)	**43 (26.87)**	**83 (25.93)**
Any time whenever you feel it's dirty	53 (66.25)	67 (83.75)	**120 (75)**	56 (70)	61 (76.25)	**117 (73.12)**	**237 (74.06)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Nasal hygiene also included use of handkerchief while coughing or sneezing. About 37.5 per cent of rural girls and 42.5 per cent of urban girls in the age group of six to nine years mentioned of using handkerchief while coughing or sneezing. Very less percentage of 13.75 per cent of rural and 6.25 per cent of urban girls reported that they use hands to cover the nose/face while coughing or sneezing. The remaining percentage of rural (48.75%) and urban (51.25%) girls do not use either a handkerchief or hands to cover face/nose and mouth while coughing or sneezing (Table 5.7).

Table 5.7: Distribution of children (6-9 years) according to covering face/nose while coughing and sneezing (n = 320)

Covering face/nose while coughing/sneezing	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Yes (use handkerchief)	30 (37.5)	34 (42.5)	**64 (40)**	30 (37.5)	32 (40)	**62 (38.75)**	**126 (39.37)**
Yes (use hands)	11 (13.75)	5 (6.25)	**16 (10)**	9 (11.25)	6 (7.5)	**15 (9.37)**	**31 (9.69)**
No	39 (48.75)	41 (51.25)	**80 (50)**	41 (51.25)	42 (52.5)	**83 (51.87)**	**163 (50.93)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

In case of boys, 37.5 per cent of rural boys and 40 per cent of urban boys in the age group of six to nine years mentioned of using handkerchief while coughing or sneezing. About 11.25 per cent of rural and 7.5 per cent of urban boys reported that they use hands to cover the nose/face while coughing or sneezing. Almost similar percentage of rural (51.25%) and urban (52.5%) boys do not use either a handkerchief or hands to cover face/nose and mouth while coughing or sneezing (Table 5.7). The children of both sexes mentioned that they do not use handkerchief because none gave them. Few of the children mentioned that even they were given handkerchief by parents, but they forget to carry along every day. Some reported that they were not allowed to carry handkerchief because they frequently lost them all. Children who used handkerchief or hands for covering face and mouth

while sneezing/coughing mentioned that they are taught to cover face/mouth as otherwise some diseases may spread.

Ear hygiene was assessed among the children of six to nine years. All children of both sexes mentioned that they clean the ear either regularly, weekly, once in 15 days, monthly and whenever it is dirty. Among both boys and girls, 38.12 per cent mentioned of cleaning their ears whenever they felt it is dirty, 24.87 per cent cleaned weekly, 16.56 per cent cleaned regularly, 14.06 per cent cleaned once/15 days and 9.37 per cent cleaned monthly respectively (Table 5.8).

Table 5.8 Distribution of children (6-9 years) according to ear hygiene (n = 320)

Cleaning ear	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Regularly	13 (16.25)	17 (21.25)	**30 (18.75)**	15 (18.75)	8 (10)	**23 (14.37)**	**53 (16.56)**
Weekly	9 (11.25)	17 (21.25)	**26 (16.25)**	15 (18.75)	29 (36.25)	**44 (27.5)**	**70 (21.87)**
Once /15 days	12 (15)	13 (16.25)	**25 (15.62)**	11 (13.75)	9 (11.25)	**20 (12.5)**	**45 (14.06)**
Monthly	10 (12.5)	6 (7.5)	**16 (10)**	9 (11.25)	5 (6.25)	**14 (8.75)**	**30 (9.37)**
Whenever it is dirty	36 (45)	27 (33.75)	**63 (39.37)**	30 (37.5)	29 (36.25)	**59 (36.87)**	**122 (38.12)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.7 and 5.8 gives the percentage distribution of girls and boys in the age group of six to nine years on cleanliness of ears at different intervals like regularly, once/15 days, monthly and whenever the ears are dirty. It was observed that among urban girls of six to nine years they cleaned the ears more regularly (21.25%), weekly (21.25%), once/15 days (16.25%) than rural girls in terms of regularly (16.25%), weekly (11.25%), once/15 days (15%) respectively. Rural girls cleaned their ears on monthly

(12.5%) and whenever the ears are dirty (45%) than urban girls on monthly (7.5%) and whenever it is dirty (33.75%) respectively (Figure 5.7).

Figure 5.7: Percentage Distribution of children (Girls 6-9 years) according to cleaning ear hygiene (n=320)

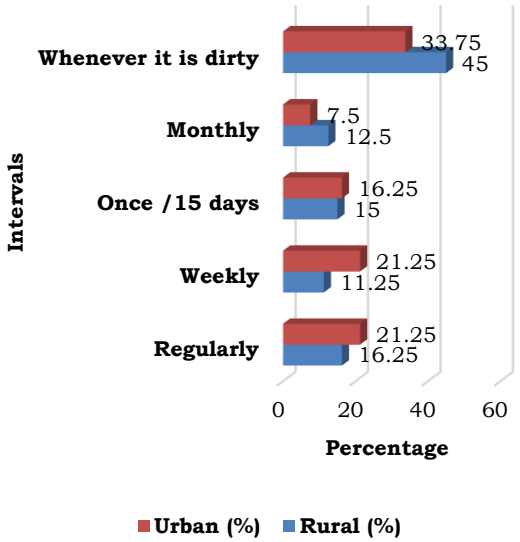
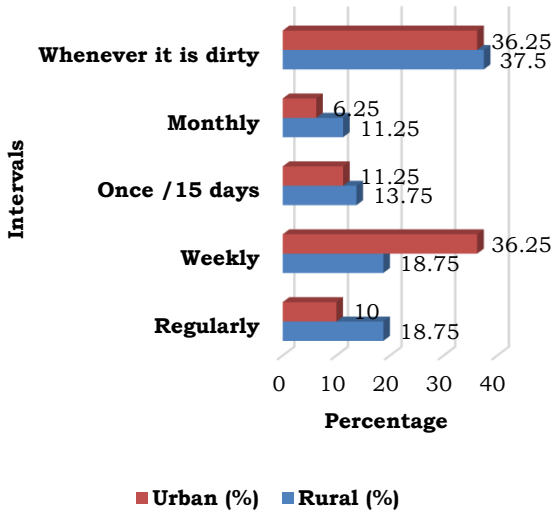


Figure 5.8: Percentage Distribution of children (Boys 6-9 years) according to cleaning ear hygiene (n=320)



However, among boys the rural boys outshined than the urban boys in terms of cleanliness of ears (Figure 5.8). It was observed that the rural boys of six to nine years cleaned the ears more regularly (18.75%), once/15 days (13.75%), monthly (11.25%) and whenever the ears are dirty (37.5%) than rural boys in terms of regularly (10%), once/15 days (11.25%), monthly (6.25%) and whenever the ears are dirty (36.25%) respectively. Urban boys cleaned their ears on weekly (36.25%) than rural boys with 18.75 per cent.

Among 320 children, all children mentioned of washing hair in a week. About 43.44 per cent of children from both sexes washed their hair more than once in a week, 30.94 per cent twice/week and 25.62 per cent once/week respectively (Table 5.9). With regard to hair washing on weekly basis by girls and boys, it was revealed that there was not much difference among the urban and rural girls and boys on washing their hair once, twice and more than twice per week.

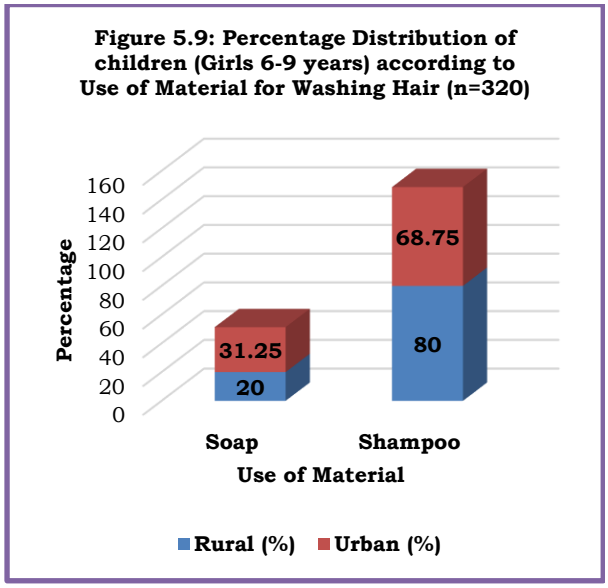
Table 5.9. Distribution of children (6-9 years) according to washing hair/week (n = 320)							
Washing hair/week	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Once	27 (33.75)	27 (33.75)	**54 (33.75)**	14 (17.5)	14 (17.5)	**28 (17.5)**	**82 (25.62)**
Twice	29 (36.25)	30 (37.5)	**59 (36.87)**	22 (27.5)	18 (22.5)	**40 (25)**	**99 (30.94)**
More than twice	24 (30)	23 (28.75)	**47 (29.37)**	44 (55)	48 (60)	**92 (57.5)**	**139 (43.44)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

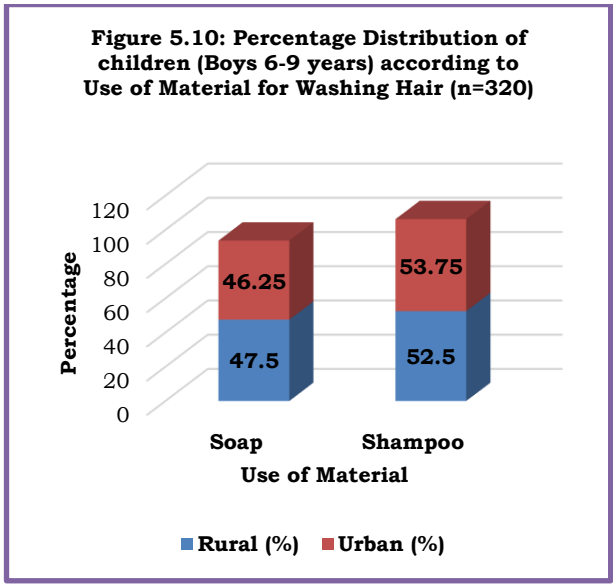
Table 5.10 gives the detailed about the use of material viz. soap and shampoo for washing hair. The use of shampoo was more with 63.75 per cent among both girls and boys than soap with 36.25 per cent respectively.

Table 5.10. Distribution of children (6-9 years) according to material used for washing hair (n = 320)							
Material used for washing hair	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Soap	16 (20)	25 (31.25)	**41 (25.62)**	38 (47.5)	37 (46.25)	**75 (46.87)**	**116 (36.25)**
Shampoo	64 (80)	55 (68.75)	**119 (74.37)**	42 (52.5)	43 (53.75)	**85 (53.12)**	**204 (63.75)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The use of shampoo among girls of six to nine years was observed more in rural (80%) than urban (68.75%) areas. Soap was also used for washing hair by rural (20%) and urban (31.25%) girls respectively (Figure 5.9). The use of soap and shampoo among boys of rural and urban areas was almost same (Figure 5.10). Use of shampoo was 53.75 per cent in urban and 52.5 per cent in rural areas. Similarly use of soap was 46.25 per cent by

urban boys and 47.5 per cent by rural boys. It is to mention here that all the children respondents from both sexes among the age group of six to nine years reported of combing their hair regularly.





Regarding oiling of hair, it was found that among 320 children of both sexes in the age group of six to nine years, 37.19 per cent oil their hair sometimes, 30.94 per cent oil regularly, 24.37 per cent oil once/week and 7.5 per cent mentioned of not oiling their hair at all (Table 5.11).

Table 5.11. Distribution of children (6-9 years) according to oiling hair (n = 320)

Oiling of hair	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Regularly	25 (31.25)	10 (12.5)	**35 (21.87)**	33 (41.25)	31 (38.75)	**64 (40)**	**99 (30.94)**
Once/ week	24 (30)	29 (36.25)	**53 (33.12)**	12 (15)	13 (16.25)	**25 (15.62)**	**78 (24.37)**
Sometimes	28 (35)	38 (47.5)	**66 (41.25)**	26 (32.5)	27 (33.75)	**53 (33.12)**	**119 (37.19)**
Do not oil	3 (3.75)	3 (3.75)	**6 (3.75)**	9 (11.25)	9 (11.25)	**18 (11.25)**	**24 (7.5)**
Total (n/%)	**80 (1000**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Among boys and girls, it was found that the girls oiled their hair more than the boys. Figure 5.11 and 5.12 gives the detailed about the rural and urban girls and boys about oiling of hair. Among girls of six to nine age group, it was found that 31.25 per cent of rural girls oiled their hair regularly than urban girls with only 12.5 per cent. The percentage of urban girls who oiled their hair once/week was 36.25 per cent and sometimes was 47.5 per cent against rural girls with 30 per cent and 35 per cent once/week and sometimes respectively. About same percentage of 3.75 per cent from both urban and rural areas reported of not oiling their hair.

Figure 5.11: Percentage Distribution of children (Girls 6-9 years) according to Oiling of Hair (n=320)

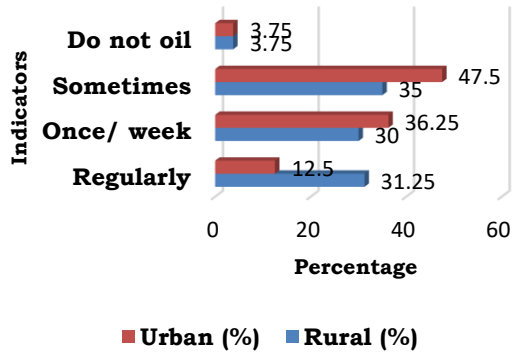
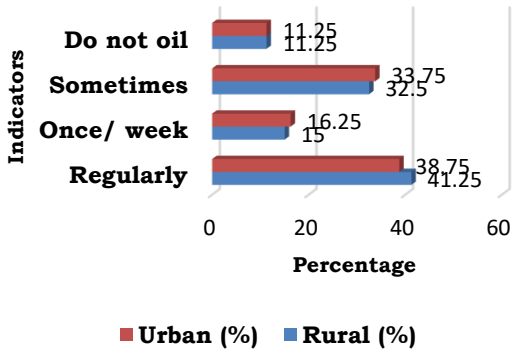


Figure 5.12: Percentage Distribution of children (Boys 6-9 years) according to Oiling of Hair (n=320)



Among boys of six to nine age group, it was found that 41.25 per cent of rural boys oiled their hair regularly than urban boys with only 38.75 per cent. The percentage of urban boys who oiled their hair once/week was 16.25 per cent and sometimes was 33.75 per cent against rural boys with 15 per cent and 32.5 per cent once/week and sometimes respectively. About same percentage of 11.25 per cent of boys from both urban and rural areas reported of not oiling their hair (5.12).

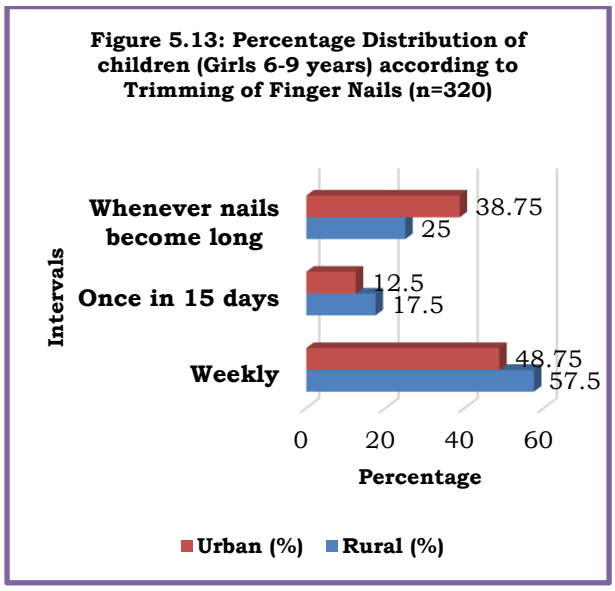
Appropriate hand hygiene is very important to keep the germs away especially among children. Long nails may harbor dirt and germs and can contribute to the spread of some infections. Hence, fingernails as well as toenails should be kept short, and the undersides should be cleaned

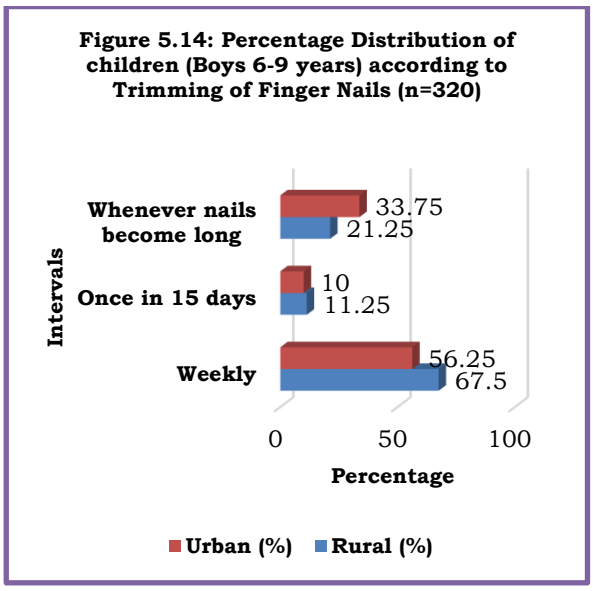
frequently with soap and water. In the study, it was observed that out of 320 children, 57.5 per cent trim their fingernails weekly, 12.81 per cent trim once in 15 days and 29.69 per cent trim their nails whenever nails become long (Table 5.12).

Table 5.12. Distribution of children (6-9 years) according to trimming of hand nails (n = 320)

Trimming of nails	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Weekly	46 (57.5)	39 (48.75)	**85 (53.12)**	54 (67.5)	45 (56.25)	**99 (61.87)**	**184 (57.5)**
Once in 15 days	14 (17.5)	10 (12.5)	**24 (15)**	9 (11.25)	8 (10)	**17 (10.62)**	**41 (12.81)**
Whenever nails become long	20 (25)	31 (38.75)	**51 (31.87)**	17 (21.25)	27 (33.75)	**44 (27.5)**	**95 (29.69)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

From Figure 5.13, it is apparent that 57.5 per cent of rural girls and 48.75 per cent of urban girls trim their finger nails weekly, 12.5 per cent of rural and 17.5 per cent of urban girls trim once in 15 days and 38.75 per cent and 25 per cent of urban and rural girls trim whenever nails become long respectively.





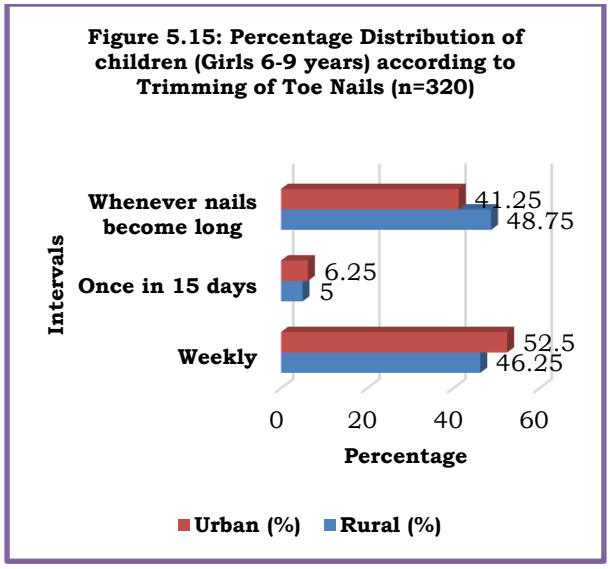
The screnario regarding trimming of nails among boys of rural and urban area is similar with the girls. Among boys, 67.5 per cent of rural and 56.25 per cent of urban boys trim their nails weekly, 11.25 per cent of rural and 10 per cent of urban boys trim once in 15 days and 33.75 per cent and 21.25 per cent of urban and rural boys trim whenever nails become long respectively (Figure 5.14).

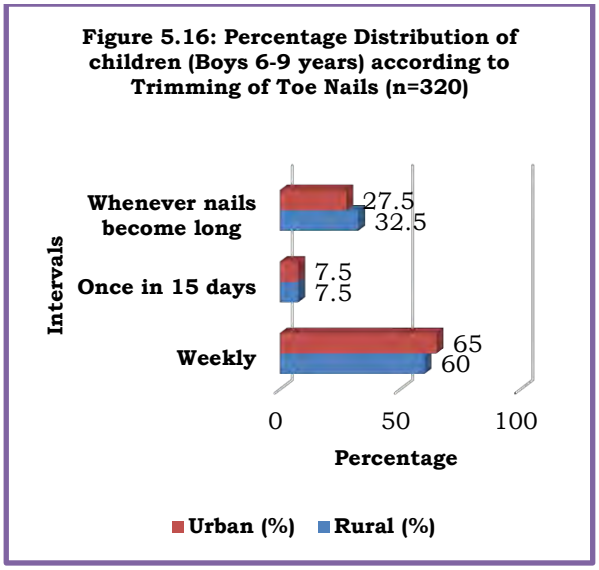
Regarding trimming of toe nails, it was observed that out of 320 boys in the age group of six to nine years, 55.94 per cent trim their toe nails weekly, 6.56 per cent trim once in 15 days and 37.5 per cent trim their nails whenever nails become long (Table 5.13).

Table 5.13. Distribution of children (6-9 years) according to trimming of toenails (n = 320)

Trimming of nails	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Weekly	37 (46.25)	42 (52.5)	**79 (49.37)**	48 (60)	52 (65)	**100 (62.5)**	**179 (55.94)**
Once in 15 days	4 (5)	5 (6.25)	**9 (5.62)**	6 (7.5)	6 (7.5)	**12 (7.5)**	**21 (6.56)**
Whenever nails become long	39 (48.75)	33 (41.25)	**72 (45)**	26 (32.5)	22 (27.5)	**48 (30)**	**120 (37.5)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.15 and 5.16 gives the percentage distribution of children with regard to trimming of toe nails. About 46.25 per cent of rural girls and 52.5 per cent of urban girls trim their finger nails weekly, five per cent of rural and 6.25 per cent of urban girls trim once in 15 days and 41.25 per cent and 48.75 per cent of urban and rural girls trim whenever nails become long respectively.





Among boys of rural and urban area the percentage regarding trimming of toe nails is almost similar. About 60 per cent of rural and 65 per cent of urban boys reported of trimming their nails weekly, 7.5 per cent each of rural and urban boys trim once in 15 days and 27.5 per cent and 32.5 per cent of urban and rural boys trim whenever nails become long respectively (Figure 5.16).

The study also tried to observe the children on some parameters of cleanliness like tidy, untidy, nail hygiene, presence of body odour, etc. The tidy children were those who had done their hairs right, wearing clean clothes or uniform while attending school or at home, eyes, nose and face was clean, etc. The untidy children were categorized on observation with messy hairs, dirty teeth's, running nose, eyes with discharge present, dirty or filthy clothes, dirty hands etc. Among boys and girls from rural and urban areas, there was not much difference observed on the parameters of tidy and untidy. About 65 per cent of rural and 68.75 per cent of urban girls were observed as tidy. In case of boys, 63.75 per cent of rural and 65 per cent of urban boys were observed as tidy. Regarding body odour, it was observed that 50 per cent of rural girls had a body odour which was higher than the urban girls (23.75%). The trend was similar in case of boys as well

with presence of an unwanted smell among rural boys with high percentage of 43.75 per cent than urban boys with 26.25 per cent only.

5.3. Hand Washing

All the children respondents of the study in the age group of six to nine years reported of washing hands with soap or without soap. About 91.25 per cent children mentioned of washing hands with soap and the remaining 8.75 per cent mentioned of washing hands only with water. Among girls, it was found that 91.25 per cent of rural and 96.25 per cent of urban girls washed their hands with soap. In comparison to girls, it was found that only 88.75 per cent each of rural and urban boys washed their hands with soap respectively. Table 5.14 gives a detail about materials used in hand washing by girls and boys of rural and urban areas.

Table 5.14. Distribution of children (6-9 years) according to material used for hand washing (n = 320)

Material used for Hand washing	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Soap	73 (91.25)	77 (96.25)	**150 (93.75)**	71 (88.75)	71 (88.75)	**142 (88.75)**	**292 (91.25)**
Water	7 (8.75)	3 (3.75)	**10 (6.25)**	9 (11.25)	9 (11.25)	**18 (11.25)**	**28 (8.75)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Further, the children respondents were also interviewed on occasions of hand washing. The children reported that they wash their hand after using toilet, before & after eating, after touching dustbins, moping cloths, pets, etc., after wiping/blowing nose/sneezing, after coming from outside and after doing urinal. Table 5.15 give the distribution of children according to occasions of hand washing. Out of 320 children, 91.25 per cent of children reported of washing their hand after using toilet, 90.31 per cent before & after eating, 17.81 per cent after touching dustbins, moping cloths,

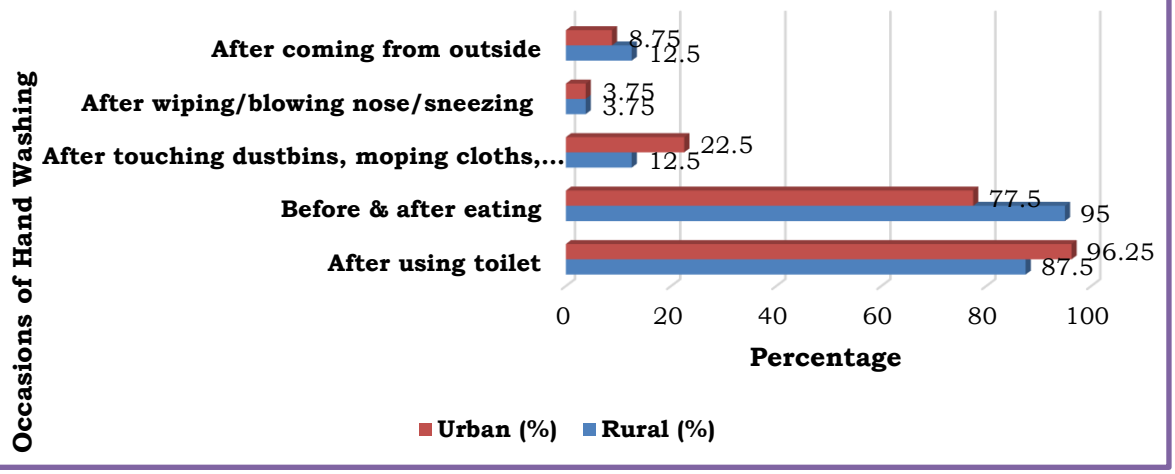
pets, etc., 6.88 per cent after wiping/blowing nose/sneezing and 14.69 per cent after coming from outside respectively.

Table 5.15. Distribution of children (6-9 years) according to occasions of hand washing (n = 320)

Occasions of Hand washing	Girls (n=80)		Total (n/%)	Boys (n=80)		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
After using toilet	70 (87.5)	77 (96.25)	**147 (91.87)**	71 (88.75)	74 (92.5)	**145 (90.62)**	**292 (91.25)**
Before & after eating	76 (95)	62 (77.5)	**138 (86.25)**	75 (93.75)	76 (95)	**151 (94.37)**	**289 (90.31)**
After touching dustbins, moping cloths, pets, etc)	10 (12.5)	18 (22.5)	**28 (17.5)**	17 (21.25)	12 (15)	**29 (18.12)**	**57 (17.81)**
After wiping/blowing nose/sneezing	3 (3.75)	3 (3.75)	**6 (3.75)**	7 (8.75)	9 (11.25)	**16 (10)**	**22 (6.88)**
After coming from outside	10 (12.5)	7 (8.75)	**17 (10.62)**	16 (20)	14 (17.5)	**30 (18.75)**	**47 (14.69)**

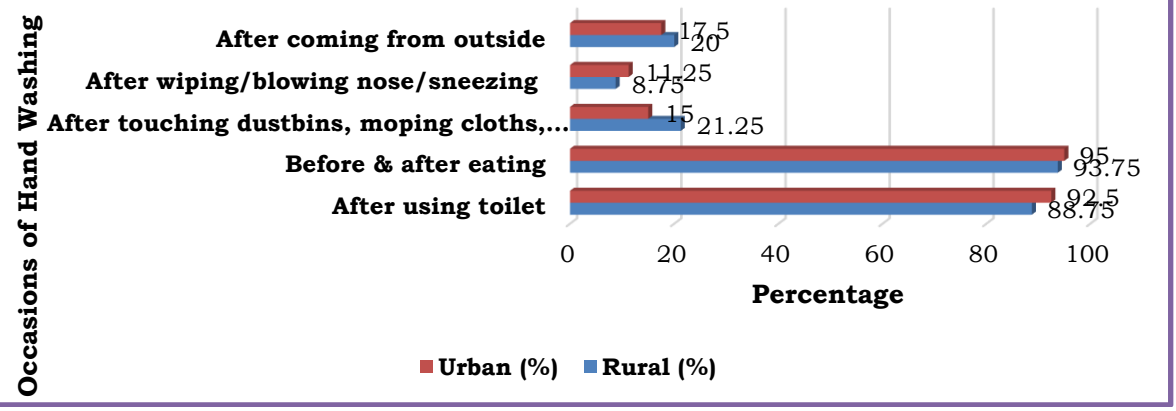
Figure 5.17 and 5.18 gives the percentage distribution of boys and girls belonging to rural and urban areas regarding occasions of hand washing. About 96.25 per cent of urban girls and 87.5 per cent of rural girls mentioned of washing hands after using toilet. Majority (95%) of rural girls mentioned of washing hands before and after eating against 77.5 per cent urban girls. More number (22.5%) of urban girls washed their hands after touching dustbins, moping cloths, pets, etc., in comparison to rural (12.5%) girls. About 3.75 per cent of girls from both urban and rural areas reported of washing hands after wiping, blowing nose and sneezing. Comparing rural and urban girls, it was found that the rural girls washed their hands more (12.5%) after coming from outside than urban (8.75%) girls (Figure 5.17).

Figure 5.17: Percentage Distribution of children (Girls 6-9 years) according to Occasions of Hand Washing (n=320)



The data in Figure 5.18 depicts that, 92.5 per cent of urban and 88.75 per cent of rural boys mentioned of washing hands after using toilet. Majority (95%) of urban and 93.75 per cent of rural boys mentioned of washing hands before and after eating food. More number (21.25%) of rural boys washed their hands after touching dustbins, moping cloths, pets, etc., in comparison to urban (15%) boys. About 11.25 per cent of urban boys and 8.75 per cent rural boys reported of washing hands after wiping, blowing nose and sneezing. Comparing rural and urban boys, it was found that the rural boys washed their hands more (20%) after coming from outside than urban (17.5%) boys (Figure 5.18).

Figure 5.18: Percentage Distribution of Children (Boys 6-9 years) according to Occasions of Hand Washing (n=320)



Regarding awareness about hand washing (Table 5.16), it was found that maximum (96.56%) out of 320 children reported of being aware about benefits of hand washing. Very few (3.44%) were not aware about hygienic aspects of hand washing. The percentage of awareness among girls and boys from rural and urban areas is satisfactory. About 93.75 per cent of rural and 97.5 per cent of urban girls and 96.25 per cent of rural and 98.75 per cent of urban boys reported of being aware of hand washing and its benefits respectively.

Table 5.16. Distribution of children (6-9 years) according to awareness about hand washing (n = 320)

Awareness about Hand washing	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Yes	75 (93.75)	78 (97.5)	**153 (95.62)**	77 (96.25)	79 (98.75)	**156 (97.5)**	**309 (96.56)**
No	5 (6.25)	2 (2.5)	**7 (4.37)**	3 (3.75)	1 (1.25)	**4 (2.5)**	**11 (3.44)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Data presented for the children in the age group of six to nine years for both girls and boys brought to light that on some parameters like brushing teeth twice per day, nasal hygiene, oiling of hair and weekly trimming of hand nails the hygienic aspects were better among the rural girls than urban girls. Moreover, the urban girls of the age group of six to nine years were more independent in talking bath and did not take the help of elderly persons while taking bath. It was also observed that the rural girls used charcoal to brush the teeth. In some aspects of hygiene like changing toothbrush within two to three months, use of handkerchief while coughing and sneezing, ear hygiene, hair hygiene, more use of shampoo, weekly trimming of toenails, hand washing and awareness regarding hand washing were better among urban girls than rural girls.

In case of boys, hygienic aspects regarding weekly trimming of hand nails, nasal and ear hygiene and oiling of hair were found better among rural boys than urban boys. In terms of brushing of tooth twice per day and in aspects of hand washing the rural and urban boys had followed the same hygienic practices. The parameters like change of toothbrush in two to three months, use of soap for bathing every day, use of handkerchief while coughing and sneezing, hair hygiene, more use of shampoo, weekly trimming of toe nails and awareness about hand washing were practiced more by urban boys than rural boys. Like the girls the boys were also more independent in talking bath.

Children 10 to 14 years

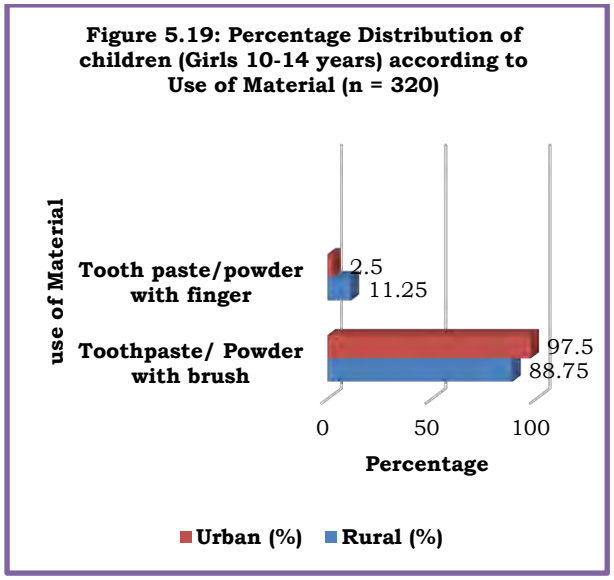
5.4. Oral Hygiene

In the study, the data revealed that all (100%) children mentioned that they clean their teeth everyday using brush or without brush and some agents. Table 5.17 gives percentage distribution of urban and rural children according to use of material for oral hygiene. Among 320 children, 93.44 per cent of children mentioned of using toothpaste/powder with brush for cleaning tooth. About 6.56 per cent of children respondents reported of using toothpaste/powder with finger.

Table 5.17: Distribution of children (10-14 years) according to use of material for brushing teeth (n = 320)

Use of material	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Toothpaste/ Powder with brush	71 (88.75)	78 (97.5)	**149 (93.12)**	73 (91.25)	77 (96.25)	**150 (93.75)**	**299 (93.44)**
Toothpaste/ powder with finger	9 (11.25)	2 (2.5)	**11 (6.87)**	7 (8.75)	3 (3.75)	**10 (6.25)**	**21 (6.56)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.19 reveals that, 97.5 per cent of urban girls of 10 to 14 years used toothpaste/powder with brush against 88.75 per cent of rural girls. About 11.25 per cent of rural girls and 2.5 per cent of urban girls mentioned of using toothpaste/powder with finger respectively.



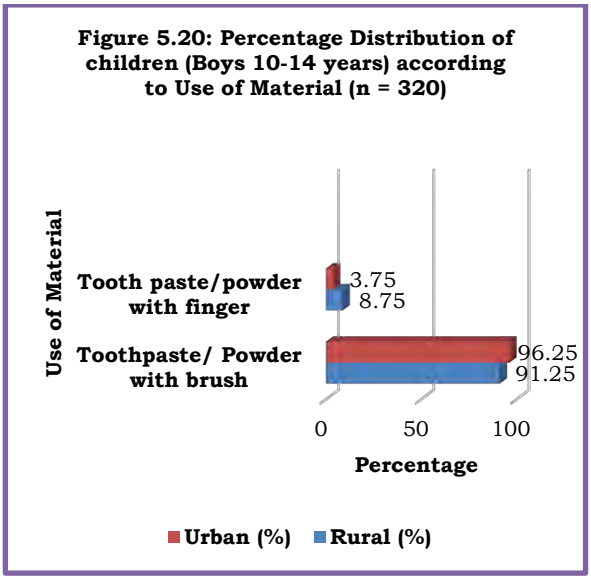


Figure 5.20 reveals that, 96.25 per cent of urban boys of 10 to 14 years used toothpaste/powder with brush against 91.25 per cent of rural boys. About 3.75 per cent and 8.75 per cent of the urban and rural boys used toothpaste/powder with fingers to brush their teeth respectively.

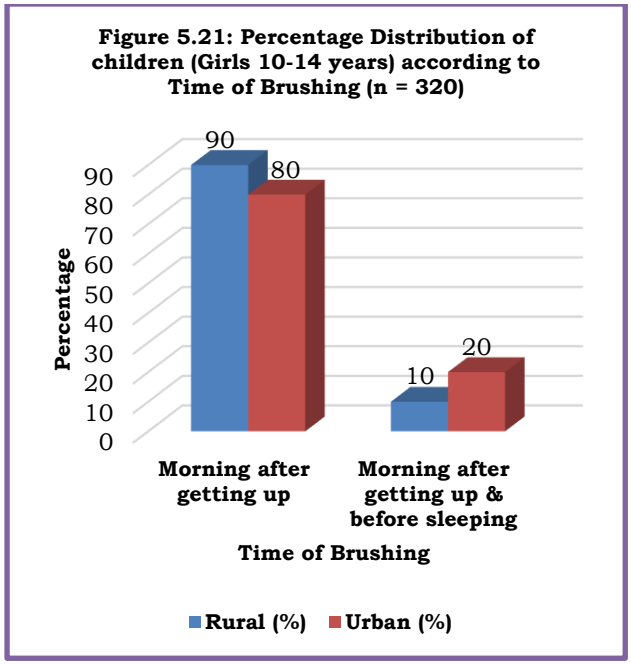
Table 5.18: Distribution of children (10-14 years) according to time of brushing teeth (n = 320)

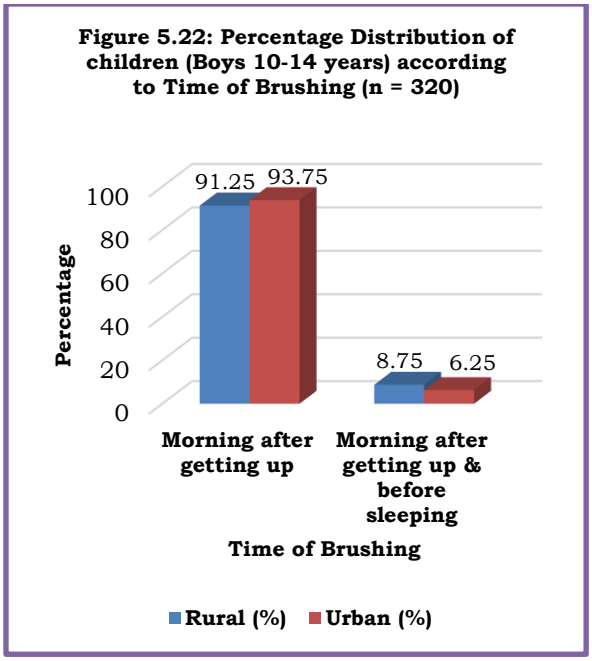
Time of brushing teeth	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Morning after getting up	72 (90)	64 (80)	**136 (85)**	73 (91.25)	75 (93.75)	**148 (92.5)**	**284 (88.75)**
Morning after getting up & before sleeping	8 (10)	16 (20)	**24 (15)**	7 (8.75)	5 (6.25)	**12 (7.5)**	**36 (11.25)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The data presented in Table 5.18 gives percentage distribution of urban and rural children according to number of times of brushing teeth.

Among 320 children, 88.75 per cent of children mentioned of brushing their teeth with brush or fingers once in the morning after getting up and 11.25 per cent children mentioned of brushing their teeth twice viz. in the morning after getting up and before going to sleep with brush or use of fingers.

The percentage distribution on time of brushing is presented in Figure 5.21 and Figure 5.22.





Data reveals that 80 per cent of urban and 90 per cent of rural girls in the age group of 10 to 14 years brushed their teeth once after getting up in the morning. About 20 per cent of urban and 10 per cent of rural girls brushed twice viz. after getting up in the morning and before going to sleep. In case of boys, it was observed that about 93.75 per cent of urban and 91.25 per cent of rural boys in the age group of 10 to 14 years mentioned of brushing their teeth once after getting up in the morning and the remaining 6.25 per cent of urban and 8.75 per cent of rural boys brushed twice viz. after getting up in the morning and before going to sleep.

Table 5.19: Distribution of children (10-14 years) according to change of toothbrush (n = 320)							
Change of toothbrush	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
2-3 Months	9 (11.25)	23 (28.75)	**32 (20)**	17 (21.25)	20 (25)	**37 (23.12)**	**69 (21.56)**
3-4 months	27 (33.75)	30 (37.5)	**57 (35.62)**	21 (26.25)	35 (43.75)	**56 (35)**	**113 (35.31)**
After 6 Months	35 (43.75)	25 (31.25)	**60 (37.5)**	35 (43.75)	22 (27.5)	**57 (35.62)**	**117 (36.56)**
Do not use toothbrush	9 (11.25)	2 (2.5)	**11 (6.87)**	7 (8.75)	3 (3.75)	**10 (6.25)**	**21 (6.56)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The toothbrush should always be replaced after three months as oral hygiene is maintained by brushing and flossing the teeth. It was found that among 320 children respondents in the age group of 10 to 14 years, 21.56 per cent of children changed their toothbrush in two to three months, 35.31 per cent changed in three to four months and 36.56 per cent changed after six months. Around 6.56 per cent of children did not use toothbrush instead used fingers for brushing/cleaning their teeth's (Table 5.19).

Figure 5.23: Percentage Distribution of children (Girls 10-14 years) according to change of toothbrush (n = 320)

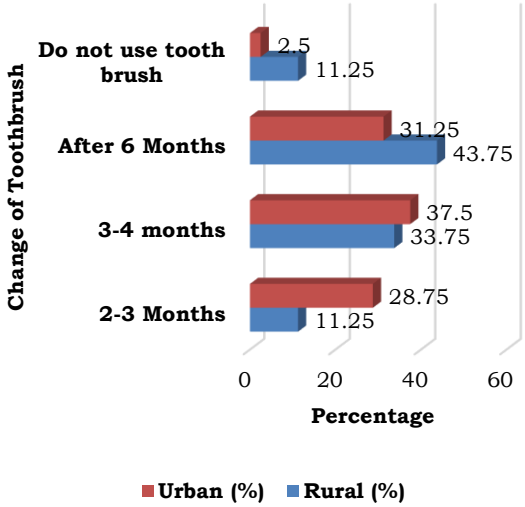
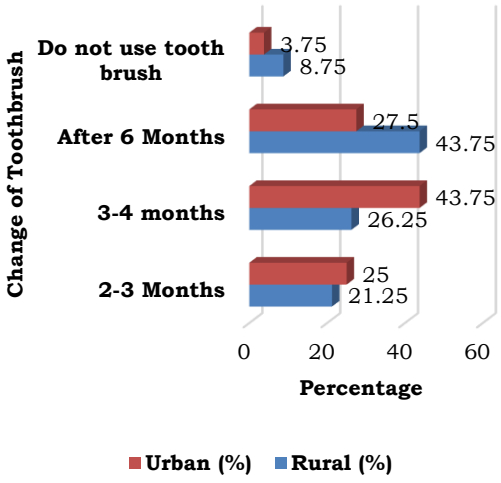


Figure 5.24: Percentage Distribution of children (Boys 10-14 years) according to change of toothbrush (n = 320)



The highest percentage in changing toothbrush after six months in the age group of 10 to 14 years was 43.75 per cent among rural girls whereas 31.25 per cent urban girls changed their toothbrush for the same duration. In two to three months, 28.75 per cent of urban girls and 11.25 per cent of the rural girls changed their toothbrush. The respondents who changed their toothbrush within three to four months were 37.5 per cent in case of urban children and 33.75 per cent in case of rural children (Figure 5.23). In case of boys of the same age group, 27.5 per cent of urban boys and 43.75 per cent rural boys changed their toothbrush after using the toothbrush for six months. In two to three months, 25 per cent of urban boys and 21.25 per cent of the rural boys changed their toothbrush. The respondents who changed their toothbrush within three to four months were 43.75 per cent in case of urban boys and 26.25 per cent in case of rural boys (Figure 5.24). About 11.25 per cent of rural girls and 2.5 per cent of urban girls and 3.75 per cent of urban and 8.75 per cent of rural boys did not used brush for brushing their teeth instead used fingers in cleaning the teeth's respectively. The reasons for not using brush are ignorant parents or lack of knowledge of using brush from an early age. Children's from minority areas are usually seen to be not using brush.

5.5. Personal Hygiene

Hygiene related to bathing, washing hands, hair, trimming nails, etc. were covered in personal hygiene among children in the age group of 10 to 14 years. The study found that all (100%) of children from both urban and rural areas took bath every day. Almost cent per cent (98.75%) mentioned of taking bath with any kind of soap and 1.25 per cent reported of taking bath only by water respectively (Table 5.20). Among girls of both rural and urban areas, all mentioned of taking bath with soap whereas among boys, cent per cent of urban and 95 per cent of rural boys mentioned of taking bath with soap. The remaining rural (5%) boys reported of taking bath with soap once or twice per week but every day with water.

Table 5.20: Distribution of children (10-14 years) according to use of material for bath (n = 320)							
Use of Material	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Soap	80 (100)	80 (100)	**160 (100)**	76 (95)	80 (100)	**156 (97.5)**	**316 (98.75)**
Only Water	-	-	**-**	4 (5)	-	**4 (2.5)**	**4 (1.25)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Almost all the children respondents from both urban and rural areas in the age group of 10 to 14 years mentioned of cleaning their nose. On assessing the time of cleaning nose, it was found that more than half among the rural (80%) and urban (77.5%) girls cleaned their nose whenever they feel dirty and the remaining 20 per cent of rural and 22.5 per cent of urban girls mentioned of cleaning the nose while taking bath/face wash. In case of boys, it was found that more than half among the rural (73.75%) and urban (87.5%) boys cleaned their nose whenever they feel dirty and the remaining 26.25 per cent of rural and 12.5 per cent of urban boys mentioned of cleaning the nose while taking bath/face wash (Table 5.21).

Table 5.21: Distribution of children (10-14 years) according to nasal hygiene (n = 320)							
Cleaning of nose	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
During bath/face wash	16 (20)	18 (22.5)	**34 (21.25)**	21 (26.25)	10 (12.5)	**31 (19.37)**	**65 (20.31)**
Any time whenever you feel it's dirty	64 (80)	62 (77.5)	**126 (78.75)**	59 (73.75)	70 (87.5)	**129 (80.62)**	**255 (79.69)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Hygiene regarding use of handkerchief while coughing or sneezing was also assessed under personal hygiene. About 51.25 per cent of rural girls

and 67.5 per cent of urban girls in the age group of 10 to 14 years mentioned of using handkerchief while coughing or sneezing. Again, it was reported that 32.5 per cent of rural girls and 22.5 per cent of urban girls covered face/nose while sneezing and coughing but with hands if handkerchief is not with them. The percentage of 16.25 per cent of rural and 10 per cent of urban girls reported that they do not cover the mouth or nose while coughing or sneezing (Table 5.22).

Table 5.22: Distribution of children (10-14 years) according to covering face/nose while coughing and sneezing (n = 320)

Covering face/nose while coughing/sneezing	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Yes (use handkerchief)	41 (51.25)	54 (67.5)	**95 (59.37)**	31 (38.75)	28 (35)	**59 (36.87)**	**154 (48.12)**
Yes (use hands)	26 (32.5)	18 (22.5)	**44 (27.5)**	37 (46.25)	41 (51.25)	**78 (48.75)**	**122 (38.12)**
No	13 (16.25)	8 (10)	**21 (13.12)**	12 (15)	11 (13.75)	**23 (14.37)**	**44 (13.75)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

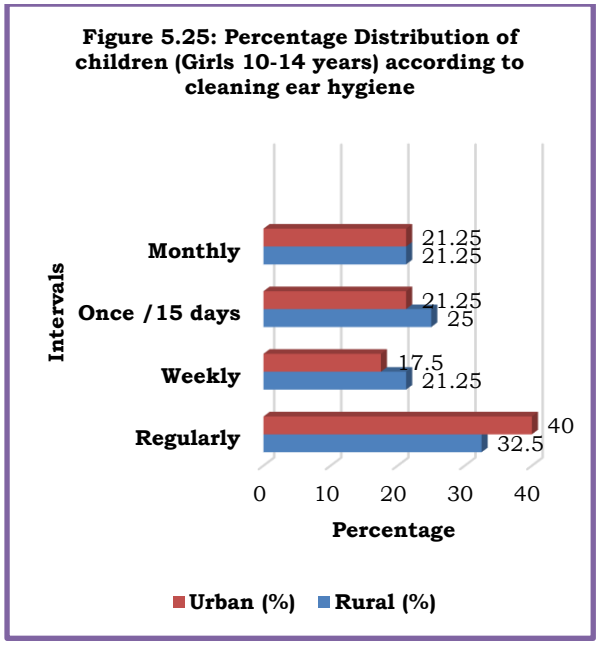
In case of boys, 38.75 per cent of rural boys and 35 per cent of urban boys in the age group of 10 to 14 years mentioned of using handkerchief while coughing or sneezing. About 46.25 per cent of rural and 51.25 per cent of urban boys reported that they use hands to cover the nose/face while coughing or sneezing. Almost similar percentage of rural (15%) and urban (13.75%) boys do not use either a handkerchief or hands to cover face/nose and mouth while coughing or sneezing (Table 5.22). The children of both sexes mentioned they forget to use handkerchief, yet they remember to cover their face while coughing and sneezing. Maximum children were aware of covering their face while coughing. The children also mentioned that they do not use handkerchief as they often loss the handkerchief. Some children also reported that they forget to cover their faces while coughing and sneezing.

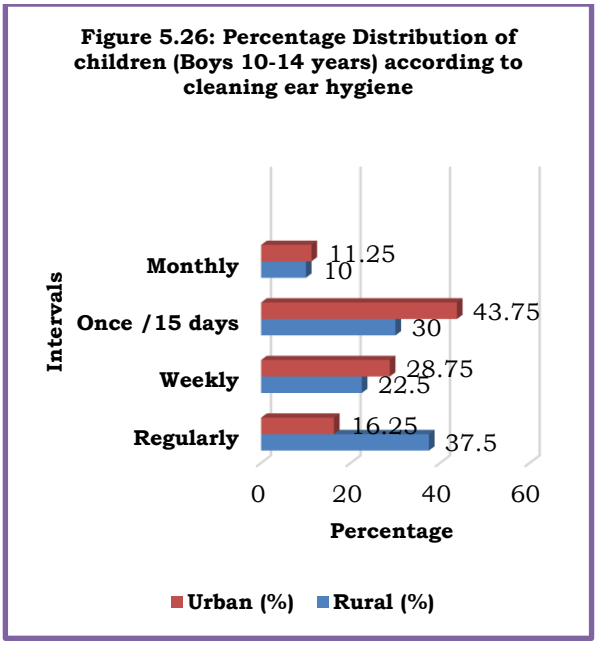
Ear hygiene was assessed among the children of 10 to 14 years. All children of both sexes mentioned that they clean the ear either regularly or weekly, once in 15 days and monthly. Among both boys and girls, 31.56 per cent mentioned of cleaning their ears regularly, 22.5 per cent cleaned weekly, 30 per cent cleaned once/15 days and 15.94 per cent cleaned monthly respectively (Table 5.23).

Table 5.23. Distribution of children (10-14 years) according to ear hygiene (n = 320)

Cleaning ear at different intervals	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Regularly	26 (32.5)	32 (40)	**58 (36.25)**	30 (37.5)	13 (16.25)	**43 (26.87)**	**101 (31.56)**
Weekly	17 (21.25)	14 (17.5)	**31 (19.37)**	18 (22.5)	23 (28.75)	**41 (25.62)**	**72 (22.5)**
Once /15 days	20 (25)	17 (21.25)	**37 (23.12)**	24 (30)	35 (43.75)	**59 (36.87)**	**96 (30)**
Monthly	17 (21.25)	17 (21.25)	**34 (21.25)**	8 (10)	9 (11.25)	**17 (10.62)**	**51 (15.94)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.25 and 5.26 gives the percentage distribution of girls and boys in the age group of 10 to 14 years on cleanliness of ears at different intervals like regularly, once/15 days, monthly and whenever the ears are dirty. It was observed that among urban girls of 10 to 14 years they cleaned the ears more regularly (40%), weekly (17.5%), once/15 days (21.25%) than rural girls in terms of regularly (32.5%), weekly (21.25%), once/15 days (25%) respectively. The same percentage (21.25%) of rural and urban girls cleaned their ears on monthly (Figure 5.25). Among rural boys of 10 to 14 years, it was observed that they cleaned the ears more regularly (37.5%), weekly (22.5%), once/15 days (30%) and monthly (10%) than urban boys in terms of regularly (16.25%), weekly (28.75%), once/15 days (43.75%) and monthly (11.25%) respectively.





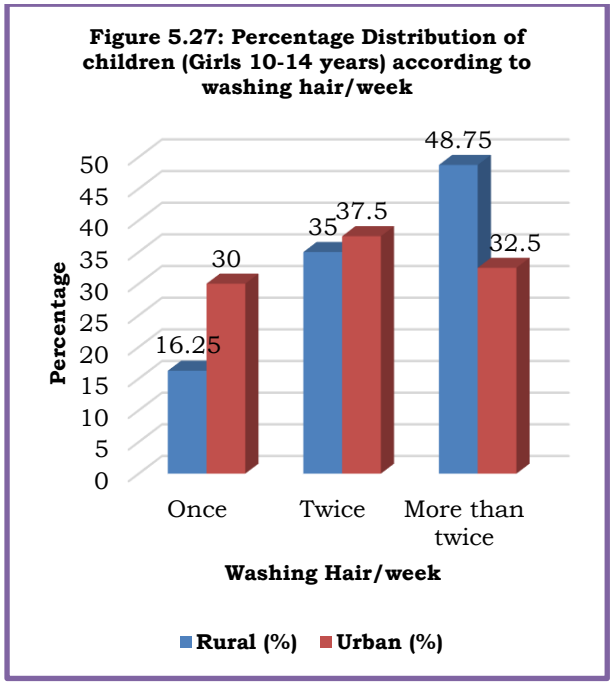
Among 320 children, all children mentioned of washing hair in a week. About 49.37 per cent of children from both sexes washed their hair more than once in a week, 30.94 per cent twice/week and 19.69 per cent once/week respectively (Table 5.24). Regarding hair washing on weekly basis by girls and boys, it was revealed that girls washed their hair more often than boys.

Table 5.24. Distribution of children (10-14 years) according to washing hair/week (n = 320)

Washing hair/week	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Once	13 (16.25)	24 (30)	**37 (23.12)**	10 (12.5)	16 (20)	**26 (16.25)**	**63 (19.69)**
Twice	28 (35)	30 (37.5)	**58 (36.25)**	21 (26.25)	20 (25)	**41 (25.62)**	**99 (30.94)**
More than twice	39 (48.75)	26 (32.5)	**65 (40.62)**	49 (61.25)	44 (55)	**93 (58.12)**	**158 (49.37)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Among girls of rural and urban areas, it was observed that 48.75 per cent of rural girls washed their hairs more than twice/week against 32.5 per cent of urban girls. In case of boys the percentage for rural boys washing

hair more than twice/week is more (61.25%) than urban boys with 55 per cent respectively (Figure 5.27 & 5.28).



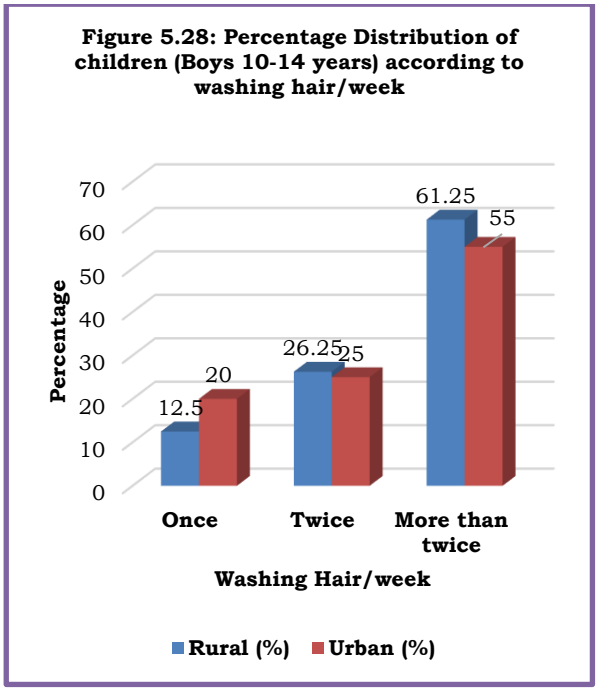
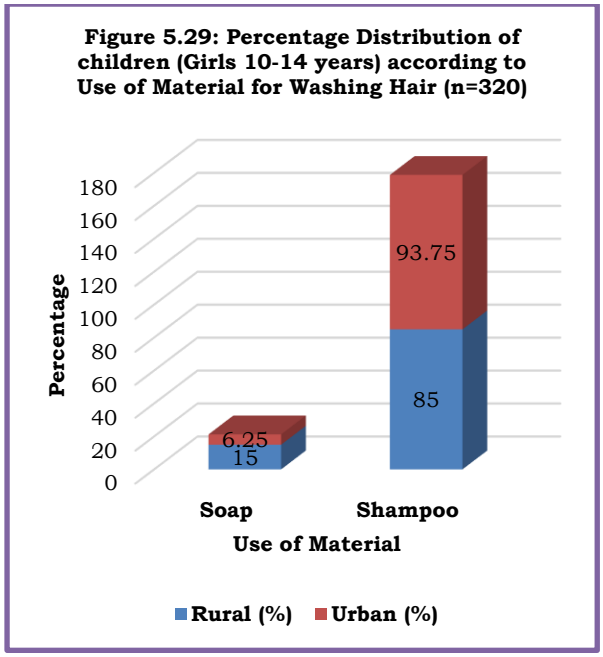
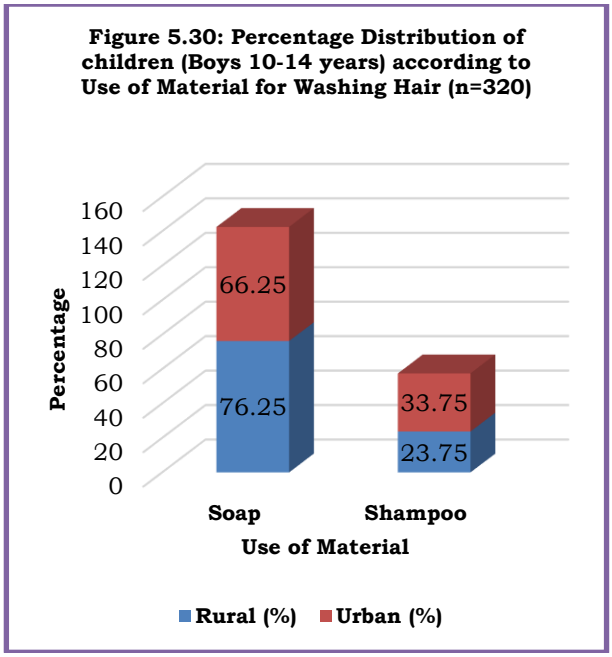


Table 5.25 gives the detailed about the use of material viz. soap and shampoo for washing hair. The use of shampoo was 59.06 per cent among both girls and boys than soap with 40.94 per cent respectively.

Table 5.25. Distribution of children (10-14 years) according to material used for washing hair (n = 320)

Material used for washing hair	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Soap	12 (15)	5 (6.25)	**17 (10.62)**	61 (76.25)	53 (66.25)	**114 (71.25)**	**131 (40.94)**
Shampoo	68 (85)	75 (93.75)	**143 (89.37)**	19 (23.75)	27 (33.75)	**46 (28.75)**	**189 (59.06)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**





The use of shampoo among girls of 10 to 14 years was observed more in urban (93.75%) than rural (85%) areas. Soap was also used for washing hair by rural (15%) and urban (6.25%) girls respectively (Figure 5.29). The use of soap and shampoo among boys of rural and urban areas was different (Figure 5.30). Use of shampoo was 33.75 per cent in urban and 23.75 per cent in rural areas. Similarly use of soap was 66.25 per cent by urban boys and 76.25 per cent by rural boys. It is to mention here that all the children respondents from both sexes among the age group of 10 to 14 years reported of combing their hair regularly.

Table 5.26. Distribution of children (10-14 years) according to oiling hair (n = 320)

Oiling of hair	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Regularly	30 (37.5)	11 (13.75)	**41 (25.62)**	21 (26.25)	26 (32.5)	**47 (29.37)**	**88 (27.5)**
Once/ week	9 (11.25)	23 (28.75)	**32 (20)**	12 (15)	6 (7.5)	**18 (11.25)**	**50 (15.62)**
Sometimes	32 (40)	41 (51.25)	**73 (45.62)**	29 (36.25)	39 (48.75)	**68 (42.5)**	**141 (44.06)**
Only while going outside	9 (11.25)	5 (6.25)	**14 (8.75)**	18 (22.5)	9 (11.25)	**27 (16.87)**	**41 (12.81)**
Total (n/%)	**80 (1000**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.31 and 5.32 gives the detailed about the rural and urban girls and boys about oiling of hair. Among girls of 10 to 14 years, it was found that 37.5 per cent of rural girls oiled their hair regularly than urban girls with only 13.75 per cent. The percentage of urban girls who oiled their hair once/week was 28.75 per cent and sometimes was 51.25 per cent against rural girls with 11.25 per cent and 40 per cent once/week and sometimes respectively. About 6.25mper cent of urban and 11.25 per cent of rural girls reported of oiling their hair while going outside home.

Figure 5.31: Percentage Distribution of children (Girls 10-14 years) according to Oiling of Hair (n=320)

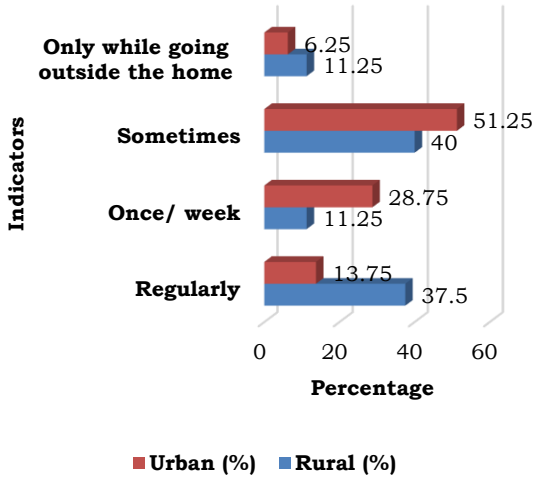
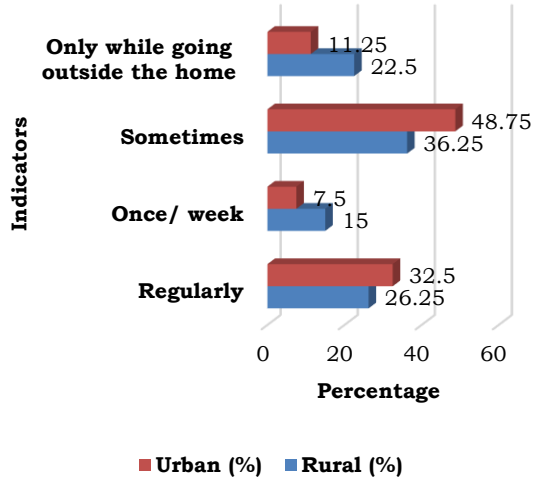


Figure 5.32: Percentage Distribution of children (Boys 10-14 years) according to Oiling of Hair (n=320)



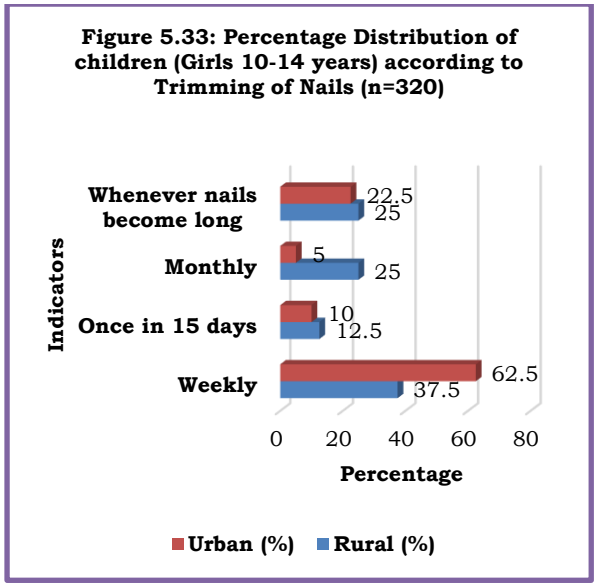
Among boys of 10 to 14 years, it was found that 26.25 per cent of rural boys oiled their hair regularly than urban boys with 32.5 per cent. The percentage of urban boys who oiled their hair once/week was 7.5 per cent and sometimes was 48.75 per cent against rural boys with 15 per cent and 36.25 per cent once/week and sometimes respectively. About 11.25 per cent and 22.5 per cent from urban and rural areas reported of oiling their hair while going outside home (5.32). The boys reported that they have no issue to put oil to the hair than the girls as they felt that putting oil to hair makes the hair difficult in doing any kind of hair style.

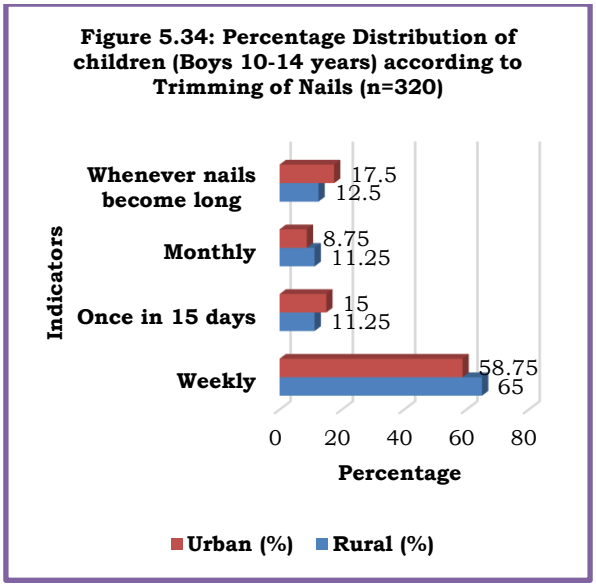
Trimming of nails weekly is very important as nails harbors dirt and germs and can make an individual sick. Hence, fingernails as well as toenails should be kept short, and the undersides should be cleaned frequently with soap and water. In the study, it was observed that out of 320 children, 55.94 per cent trim their fingernails weekly, 12.19 per cent trim once in 15 days, 12.5 trim monthly and 19.37 per cent trim their nails whenever nails become long (Table 5.27).

Table 5.27. Distribution of children (10-14 years) according to trimming of hand nails (n = 320)

Trimming of nails	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Weekly	30 (37.5)	50 (62.5)	**80 (50)**	52 (65)	47 (58.75)	**99 (61.87)**	**179 (55.94)**
Once in 15 days	10 (12.5)	8 (10)	**18 (11.25)**	9 (11.25)	12 (15)	**21 (13.12)**	**39 (12.19)**
Monthly	20 (25)	4 (5)	**24 (15)**	9 (11.25)	7 (8.75)	**16 (10)**	**40 (12.5)**
Whenever nails become long	20 (25)	18 (22.5)	**38 (23.75)**	10 (12.5)	14 (17.5)	**24 (15)**	**62 (19.37)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

From Figure 5.33, it is apparent that 37.5 per cent of rural girls and 62.5 per cent of urban girls trim their finger nails weekly, 12.5 per cent of rural and 10 per cent of urban girls trim once in 15 days, 25 per cent and five per cent of rural and urban girls trim monthly and 22.5 per cent and 22.5 per cent of urban and rural girls trim whenever nails become long respectively. The screnario regarding trimming of nails among boys of rural and urban area is somewhat different than the girls. About 65 per cent of rural boys and 58.75 per cent of urban boys trim their finger nails weekly, 11.25 per cent of rural and 15 per cent of urban boys trim once in 15 days, 11.25 per cent and 8.75 per cent of rural and urban boys trim monthly and 12.5 per cent and 17.5 per cent of urban and rural boys trim whenever nails become long respectively (Figure 5.34).



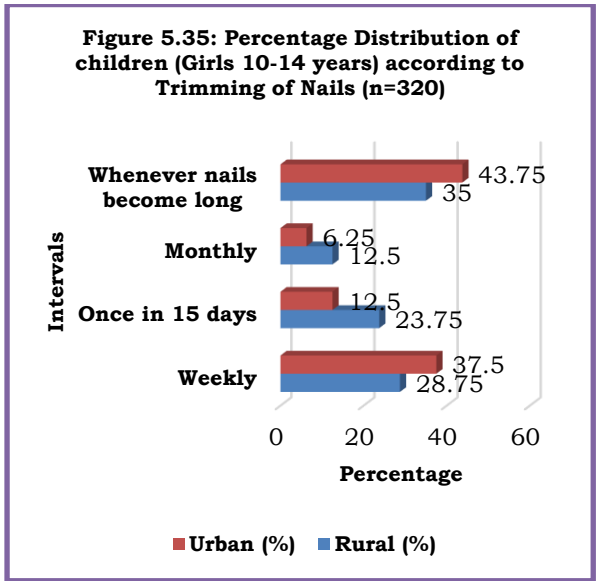


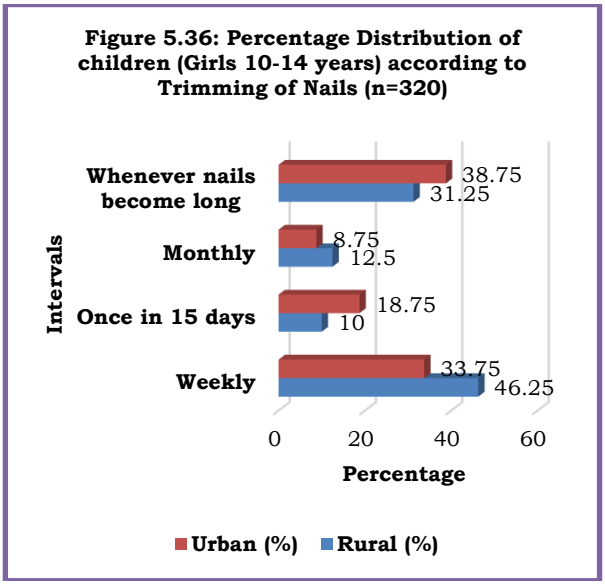
Regarding trimming of toe nails, it was observed that out of 320 boys in the age group of 10 to 14 years, 36.56 per cent trim their toe nails weekly, 16.25 per cent trim once in 15 days, 10 per cent trim monthly and 37.18 per cent trim their nails whenever nails become long (Table 5.28).

Table 5.28. Distribution of children (10-14 years) according to trimming of toe nails (n = 320)

Trimming of nails	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Weekly	23 (28.75)	30 (37.5)	**53 (33.12)**	37 (46.25)	27 (33.75)	**64 (40)**	**117 (36.56)**
Once in 15 days	19 (23.75)	10 (12.5)	**29 (18.12)**	8 (10)	15 (18.75)	**23 (14.37)**	**52 (16.25)**
Monthly	10 (12.5)	5 (6.25)	**15 (9.37)**	10 (12.5)	7 (8.75)	**17 (10.62)**	**32 (10)**
Whenever nails become long	28 (35)	35 (43.75)	**63 (39.37)**	25 (31.25)	31 (38.75)	**56 (35)**	**119 (37.18)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.35 and 5.36 gives the percentage distribution of children with regard to trimming of toe nails. About 28.75 per cent of rural girls and 37.5 per cent of urban girls trim their toe nails weekly, 23.75 per cent of rural and 12.5 per cent of urban girls trim once in 15 days, 12.5 per cent and 6.25 per cent of rural and urban girls trim monthly and 43.75 per cent and 35 per cent of urban and rural girls trim whenever nails become long respectively. The screnario regarding trimming of nails among boys of rural and urban area is somewhat different than the girls. About 46.25 per cent of rural boys and 33.75 per cent of urban boys trim their finger nails weekly, 10 per cent of rural and 18.75 per cent of urban boys trim once in 15 days, 12.5 per cent and 8.75 per cent of rural and urban boys trim monthly and 38.75 per cent and 31.25 per cent of urban and rural boys trim whenever nails become long respectively.





The study also tried to observe the children on some parameters of cleanliness like tidy, untidy, nail hygiene, presence of body odour, etc. The tidy children were those who had done their hairs right, wearing clean clothes or uniform while attending school or at home, eyes, nose and face was clean, etc. The untidy children were categorized on observation with messy hairs, dirty teeth's, running nose, eyes with discharge present, dirty or filthy clothes, dirty hands etc. Among boys and girls from rural and

urban areas, there was not much difference observed on the parameters of tidy and untidy. About 76.25 per cent of rural and 77.5 per cent of urban girls were observed as tidy. In case of boys, 65 per cent each of rural and urban boys were observed as tidy. Regarding body odour, it was observed that 30 per cent of rural girls had a body odour which was higher than the urban girls (13.75%). The trend was similar in case of boys as well with presence of an unwanted smell among rural boys with high percentage of 43.75 per cent than urban boys with 31.25 per cent only.

5.6. Hand Washing

All the children respondents of the study in the age group of 10 to 14 years reported of washing hands with soap or without soap. About 89.69 per cent children mentioned of washing hands with soap, 5.94 washed with liquid soap and the remaining 4.37 per cent mentioned of washing hands only with water. Among girls, it was found that 91.25 per cent of rural and 93.75 per cent of urban girls washed their hands with soap, 1.25 per cent of rural and 6.25 per cent of urban girls washed with liquid soap and 7.5 per cent of girls from only rural areas washed with only water. In comparison to girls, it was found that only 86.25 per cent of rural and 87.5 per cent of urban boys washed their hands with soap, 3.75 per cent of rural and 12.5 per cent of urban boys washed with liquid soap and 10 per cent of rural boys washed with only water. Table 5.29 gives a detail about materials used in hand washing by girls and boys of rural and urban areas.

Table 5.29. Distribution of children (10-14 years) according to material used for hand washing (n = 320)

Material used for Hand washing	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Soap	73 (91.25)	75 (93.75)	**148 (92.5)**	69 (86.25)	70 (87.5)	**139 (86.87)**	**287 (89.69)**
Liquid soap	1 (1.25)	5 (6.25)	**6 (3.75)**	3 (3.75)	10 (12.5)	**13 (8.12)**	**19 (5.94)**
Water	6 (7.5)	-	**6 (3.75)**	8 (10)	-	**8 (5)**	**14 (4.37)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Further, the children respondents were also interviewed on occasions of hand washing. The children reported that they wash their hand after using toilet, before & after eating, after touching dustbins, moping cloths, pets, etc., after wiping/blowing nose/sneezing, after coming from outside and after doing urinal. Table 5.30 give the distribution of children according to occasions of hand washing. Out of 320 children, 94.06 per cent of children reported of washing their hand after using toilet, 91.87 per cent before & after eating, 37.81 per cent after touching dustbins, moping cloths, pets, etc., 25.94 per cent after coming from outside and 66.87 per cent after doing urinal respectively.

Table 5.30. Distribution of children (10-14 years) according to occasions of hand washing (n = 320)

Occasions of Hand washing	Girls (n=80)		Total (n/%)	Boys (n=80)		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
After using toilet	77 (96.25)	72 (90)	**149 (93.12)**	75 (93.75)	77 (96.25)	**152 (95)**	**301 (94.06)**
Before & after eating	77 (96.25)	76 (95)	**153 (95.62)**	74 (92.5)	67 (83.75)	**141 (88.12)**	**294 (91.87)**
After touching dustbins, moping cloths, pets, etc)	37 (46.25)	45 (56.25)	**82 (51.25)**	24 (30)	15 (18.75)	**39 (24.37)**	**121 (37.81)**
After coming from outside	19 (23.75)	13 (16.25)	**32 (20)**	19 (23.75)	32 (40)	**51 (31.87)**	**83 (25.94)**
After doing urinal	60 (75)	60 (75)	**120 (75)**	48 (60)	46 (57.5)	**94 (58.75)**	**214 (66.87)**

Figure 5.37 and 5.38 gives the percentage distribution of boys and girls belonging to rural and urban areas with regard to occasions of hand washing. About 90 per cent of urban girls and 96.25 per cent of rural girls mentioned of washing hands after using toilet. Majority (96.25%) of rural girls mentioned of washing hands before and after eating against 95 per cent urban girls. About 56.25 per cent of urban girls washed their hands after touching dustbins, moping cloths, pets, etc., in comparison to rural (46.25%) girls. About 75 per cent each of rural and urban girls reported of

washing hands after doing urinal and 16.25 of urban girls and 23.75 per cent of rural girls washed their hands after coming from outside (Figure 5.37).

Figure 5.37: Percentage Distribution of children (Girls 10-14 years) according to Occasions of Hand Washing (n=320)

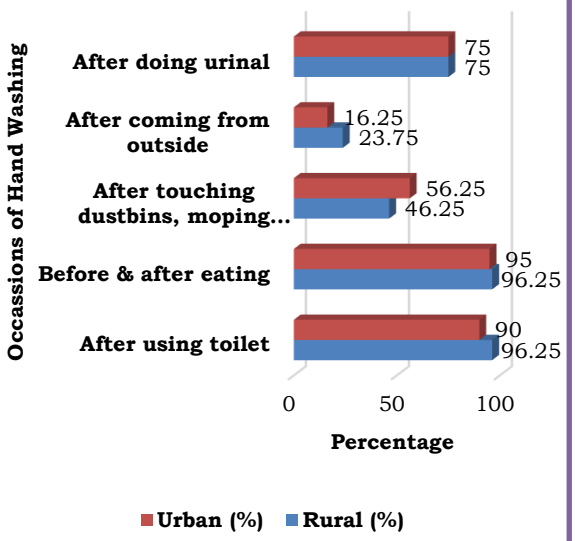
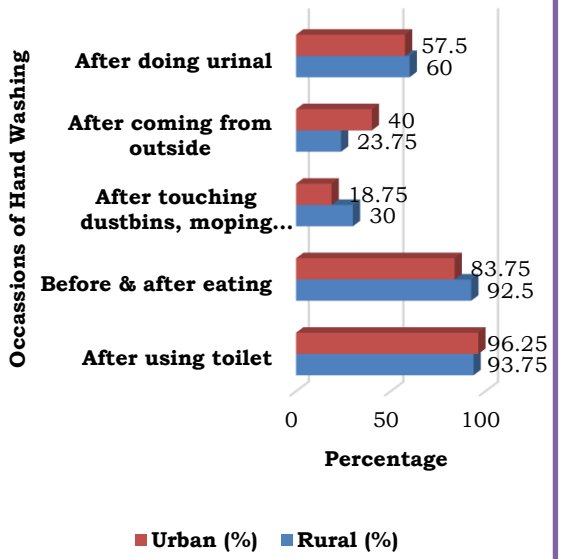


Figure 5.38: Percentage Distribution of children (Boys 10-14 years) according to Occasions of Hand Washing (n=320)



The data in Figure 5.38 depicts that, 96.25 per cent of urban and 93.75 per cent of rural boys mentioned of washing hands after using toilet. Majority (92.5%) of urban and 83.75 per cent of rural boys mentioned of washing hands before and after eating food. About 18.75 per cent of rural boys washed their hands after touching dustbins, moping cloths, pets, etc., in comparison to urban (30%) boys. About 57.5 per cent of urban boys and 60 per cent rural boys reported of washing hands after doing urinal. Comparing rural and urban boys, it was found that the rural boys washed their hands less (23.75%) after coming from outside than urban (40%) boys (Figure 5.38). Regarding awareness about hand washing, it was found that almost all reported of being aware about benefits of hand washing. Children also reported that although they know it is essential to wash hands with soap and water, they do not practice as they are in a hurry either for going to schools or tuitions or play and other activities. Some children of tea

garden areas mentioned that they go with the parents to field, so they don't get to wash their hands properly. Many children also reported that they forget to wash their hands after urinal. Few even said that they didn't even knew that they need to wash their hands after urinal**.**

5.7. Toilet hygiene

Regarding toilet hygiene it was observed that about 89.06 per cent of children in the age group of 10 to 14 years wear chappals while going to toilet or outside and the remaining 10.94 per cent do not wear chappals respectively. Among girls of urban areas, the percentage was high with 97.5 per cent against 83.75 per cent for rural girls. The trend was similar with the boys. The urban boys reported of wearing chappals more with 95 per cent than rural boys with 80 per cent respectively (Table 5.31).

Table 5.31. Distribution of children (10-14 years) according to wearing chappals while going toilet/outside (n = 320)

wearing chappals while going toilet/outside	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Yes	67 (83.75)	78 (97.5)	**145 (90.62)**	64 (80)	76 (95)	**140 (87.5)**	**285 (89.06)**
No	13 (16.25)	2 (2.5)	**15 (9.37)**	16 (20)	4 (4)	**20 (12.5)**	**35 (10.94)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The children in the age group of 10 to 14 years were interviewed regarding change of innerwear, outerwear, sun drying of clothes, etc. It was found that maximum (96.56%) of children changed their inner wear regularly and few (3.44%) changed on alternate days. Among girls of urban areas, it was cent per cent and 95 per cent of rural girls changed regularly. About 97.5 per cent of urban boys changed regularly their innerwear against 93.75 per cent of rural boys respectively.

Table 5.32. Distribution of children (10-14 years) according to change of inner wear (n = 320)							
Frequency of changing innerwear	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Regularly	76 (95)	80 (100)	**156 (97.5)**	75 (93.75)	78 (97.5)	**153 (95.62)**	**309 (96.56)**
Alternate days	4 (5)	-	**4 (2.5)**	5 (6.25)	2 (2.5)	**7 (4.37)**	**11 (3.44)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Regarding change of outerwear (Table 5.34), it was found that among 320 children in the age group of 10 to 14 years, 91.56 per cent of children changed their outer wear regularly and 8.44 per cent changed on alternate days. Among girls of urban areas, it was 90 per cent and 82.5 per cent of rural girls changed regularly. About 97.5 per cent of urban boys changed regularly their innerwear against 96.25 per cent of rural boys respectively.

Table 5.34. Distribution of children (10-14 years) according to change of outer wear (n = 320)							
Frequency of changing outerwear	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Regularly	66 (82.5)	72 (90)	**138 (86.25)**	77 (96.25)	78 (97.5)	**155 (96.87)**	**293 (91.56)**
Alternate days	14 (17.5)	8 (10)	**22 (13.75)**	3 (3.75)	2 (2.5)	**5 (3.12)**	**27 (8.44)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Table 5.35 and 5.36 gives the distribution of children wearing washed clothes regularly. It was observed that 73.75 per cent of children reported of wearing washed clothes every day. Among urban girls it was 82.5 per cent against 72.5 per cent for rural girls. But in case of boys, the rural boys wear washed clothes more (71.25%) than urban boys with 68.75 per cent respectively.

Table 5.35. Distribution of children (10-14 years) according to wearing washed clothes (n = 320)					
Wearing washed clothes	**Girls**		**Boys**		**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**	**Rural (n/%)**	**Urban (n/%)**	
Yes	58 (72.5)	66 (82.5)	57 (71.25)	55 (68.75)	**236 (73.75)**
No	22 (27.5)	14 (17.5)	23 (28.75)	25 (31.25)	**84 (26.25)**
Total (n/%)	**80 (100)**	**80 (100)**	**80 (100)**	**80 (100)**	**320 (100)**

Regarding sun drying (Table 5.33) of under garments it was observed that 89.06 per cent of children reported of sun drying the under garments after washing. Among urban girls it was 88.75 per cent against 81.25 per cent for rural girls. In case of boys, 95 per cent of urban and 91.25 per cent of rural boys reported of sun drying the inner garments after washing. During interaction with the children, they reported that they wear the same innerwear for two days as their parents never informed about changing the outer or inner wear on everyday basis. Some children also reported that they feel lazy to wash their innerwear every day, so they do not change. Girls reported that although they change their panties every day but they do not change their upper wear every day. They wear the same upper wear for two or more days because they thought that changing regularly is not necessary. Regarding sun drying of under garment, the reasons for mentioned by children especially the girls were no private space as there were more men in their families, do not want to display the innerwear, mothers working so someone may steal the innerwear, etc.

Table 5.33. Distribution of children (10-14 years) according to sun drying of under garments (n = 320)					
Sun drying of under garments	**Girls**		**Boys**		**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**	**Rural (n/%)**	**Urban (n/%)**	
Yes	65 (81.25)	71 (88.75)	73 (91.25)	76 (95)	**285 (89.06)**
No	15 (18.75)	9 (11.25)	7 (8.75)	4 (5)	**35 (10.94)**
Total (n/%)	**80 (100)**	**80 (100)**	**80 (100)**	**80 (100)**	**320 (100)**

Majority of children mentioned that they keep the armpit the belly button clean by washing with soap and water during bath. All children mentioned of washing their anal after defecation with water.

Table 5.36 depicts the distribution of children according to place of spitting. Among 320 children, 43.12 per cent mentioned of spitting on the ground, five per cent in the dustbin, 42.5 per cent wherever they feel and 9.37 per cent in the drain of the house respectively. The urban and rural differentiation of girls and boys is given in Table 5.36.

Table 5.36. Distribution of children (10-14 years) according to place of spit (n = 320)

Place of spit	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
On the ground	41 (51.25)	36 (45)	**77 (48.12)**	42 (52.5)	19 (23.75)	**61 (38.12)**	**138 (43.12)**
In the dustbin	2 (2.5)	8 (10)	**10 (6.25)**	3 (3.75)	3 (3.75)	**6 (3.75)**	**16 (5)**
Wherever you feel	30 (37.5)	26 (32.5)	**56 (35)**	31 (38.75)	49 (61.25)	**80 (50)**	**136 (42.5)**
Drain	7 (8.75)	10 (12.5)	**17 (10.62)**	4 (5)	9 (11.25)	**13 (8.12)**	**30 (9.37)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Among girls and boys, the scenario regarding spitting on the ground was same. About 51.25 per cent of rural girls mentioned of spiting on the ground against 45 per cent of urban boys. In case of rural boys, it was 52.5 per cent against 23.75 per cent of urban boys. Very less percentage of children from both rural and urban setting mentioned of use of dustbin for spitting and maximum number of respondents spitted wherever they feel thus having less awareness on hygienic practices.

Table 5.37. Distribution of children (10-14 years) according to diseases suffered in last six months (n = 320)							
Diseases suffered in last six months	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Diarrhoea	1 (1.25)	1 (1.25)	**2 (1.25)**	-	2 (2.5)	**2 (1.25)**	**4 (1.25)**
Dysentery	2 (2.5)	2 (2.5)	**4 (2.5)**	1 (1.25)	1 (1.25)	**2 (1.25)**	**6 (1.87)**
Fever	5 (6.25)	15 (18.75)	**20 (12.5)**	12 (15)	10 (12.5)	**22 (13.75)**	**42 (13.12)**
Cough cold	15 (18.75)	10 (12.5)	**25 (15.62)**	19 (23.75)	15 (18.75)	**34 (21.25)**	**59 (18.44)**
Stomach problems	4 (5)	5 (6.25)	**9 (5.62)**	3 (3.75)	2 (2.5)	**5 (3.12)**	**14 (4.37)**
Jaundice	-	2 (2.5)	**2 (1.25)**	2 (2.5)	2 (2.5)	**4 (2.5)**	**6 (1.87)**
Skin disease	6 (7.5)	13 (16.25)	**19 (11.87)**	13 (16.25)	8 (10)	**21 (13.12)**	**40 (12.5)**
No such diseases in last 6 months	47 (58.75)	32 (40)	**79 (49.37)**	30 (37.5)	40 (50)	**70 (43.75)**	**149 (46.56)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Table 5.37 gives a detail distribution of children (10-14 years) according to diseases suffered in last six months. Among 320 girls and boys from both rural and urban areas, it was observed that 53.44 per cent of the population suffered from hygiene related diseases like diarrhoea (1.25%), dysentery (1.87%), fever (13.12%), cough cold (18.44%), stomach problems (4.37%), jaundice (1.87%) and skin disease (12.5%) respectively. Among girls and boys, there is very less difference in percentages with regard to diseases suffered in the last six months.

To summarize it can be said that it was observed that in the age group of 10 to 14 years girls, hygiene related to hair like hair wash and oiling the hair was better among rural girls than urban girls. The other parameters like oral hygiene, brushing teeth in the morning after getting up & before

sleeping, change of toothbrush, nasal and ear hygiene, use of handkerchief while coughing and sneezing, weekly trimming hand and toenails, hand washing, wearing chappals to toilet and outside and changing innerwear and outerwear regularly were found to be better among urban girls than rural girls. However, one similarity about use of soap in bathing was same among both urban and rural girls.

The data regarding boys was that the rural boys were found to be better than urban boys in the hygienic parameters like brushing teeth twice viz. morning after getting up & before sleeping, nasal hygiene, use of handkerchief, ear and hair hygiene and weekly trimming of hand nails. Again, the study found that frequent change of toothbrush in two to three months, use of soap in bath, use of shampoo, oiling hair, weekly trimming of toe nails weekly, hand washing, wearing chappals to toilet and outside and change of innerwear and outerwear regularly were found to be followed more among urban boys than rural boys.

Children 15 to 18 years

5.8. Oral Hygiene

Data revealed that all (100%) children in the age group of 15 to 18 years mentioned that they clean their teeth everyday using brush or finger and with some agents like toothpaste or toothpowder. Table 5.38 gives percentage distribution of urban and rural children according to use of material for oral hygiene. Among 320 children (Table 5.38), 92.18 per cent of children mentioned of using toothpaste/powder with brush for cleaning tooth. About 7.81 per cent of children respondents reported of using toothpaste/powder with finger.

Table 5.38: Distribution of children (15-18 years) according to use of material for brushing teeth (n = 320)							
Use of material	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Toothpaste/ Powder with brush	71 (88.75)	77 (96.25)	**148 (92.5)**	72 (90)	75 (93.75)	**147 (91.87)**	**295 (92.18)**
Toothpaste/powder with finger	9 (11.25)	3 (3.75)	**12 (7.5)**	8 (10)	5 (6.25)	**13 (8.12)**	**25 (7.81)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.39 reveals that, 96.25 per cent of urban girls of 15 to 18 years used toothpaste/powder with brush against 88.75 per cent of rural girls. About 11.25 per cent of rural girls and 3.75 per cent of urban girls mentioned of using toothpaste/powder with finger respectively.

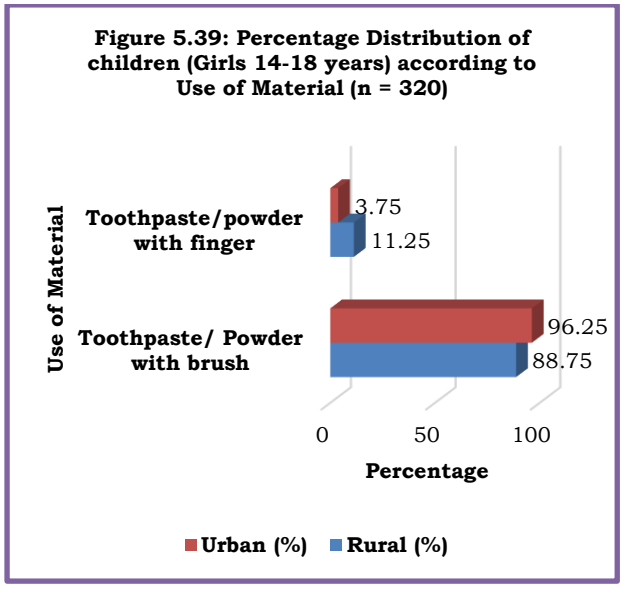


Figure 5.39: Percentage Distribution of children (Girls 14-18 years) according to Use of Material (n = 320)

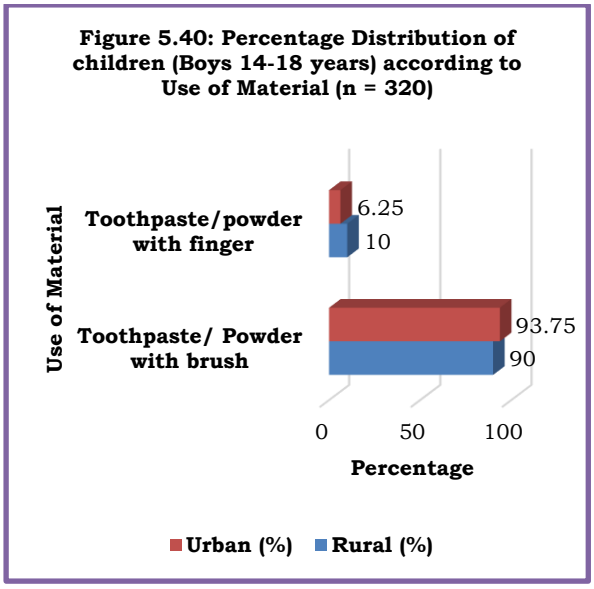


Figure 5.40: Percentage Distribution of children (Boys 14-18 years) according to Use of Material (n = 320)

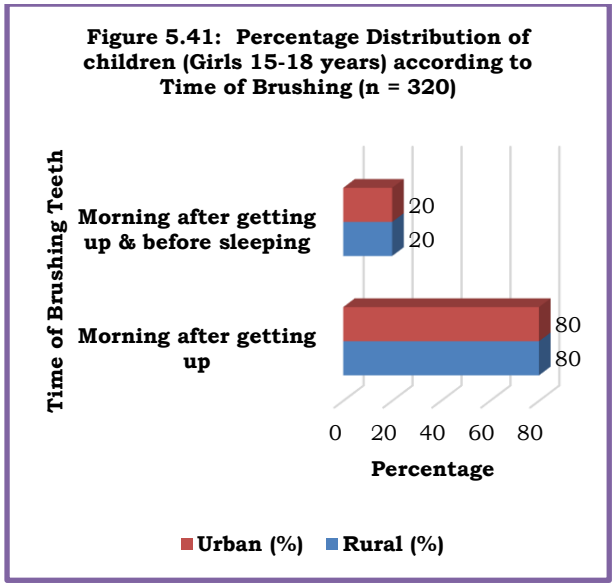
Figure 5.40 reveals that, 93.75 per cent of urban boys of 15 to 18 years used toothpaste/powder with brush against 90 per cent of rural boys. About 6.25 per cent and 10 per cent of the urban and rural boys used toothpaste/powder with fingers to brush their teeth respectively.

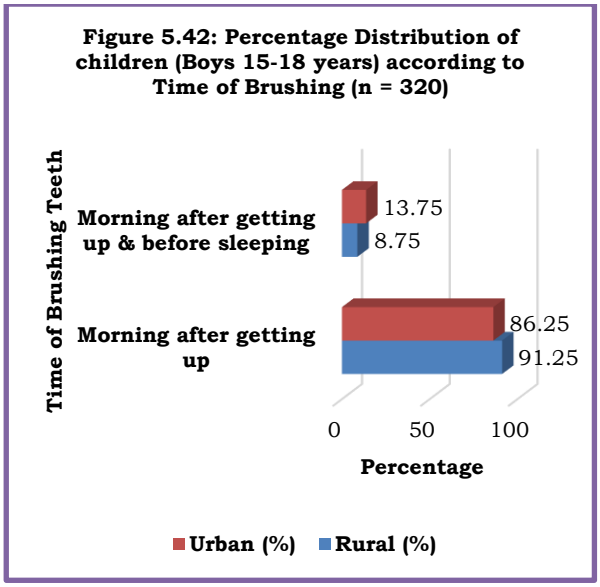
Table 5.39: Distribution of children (15-18 years) according to time of brushing teeth (n = 320)							
Time of brushing teeth	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Morning after getting up	64 (80)	64 (80)	**128 (80)**	73 (91.25)	69 (86.25)	**142 (88.75)**	**270 (84.37)**
Morning after getting up & before sleeping	16 (20)	16 (20)	**32 (20)**	7 (8.75)	11 (13.75)	**18 (11.25)**	**50 (15.62)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The data presented in Table 5.39 gives percentage distribution of urban and rural children according to number of times of brushing teeth. Among 320 children, 84.37 per cent of children mentioned of brushing their teeth with brush or fingers once in the morning after getting up and 15.62 per cent children mentioned of brushing their teeth twice viz. in the morning after getting up and before going to sleep with brush or use of fingers.

The percentage distribution on time of brushing is presented in Figure 5.41 and Figure 5.42. Data reveals that 80 per cent of both urban and rural girls in the age group of 15 to 18 years brushed their teeth once after getting up in the morning and the remaining 20 per cent brushed twice viz. after getting up in the morning and before going to sleep.

In case of boys, it was observed that about 86.25 per cent of urban and 91.25 per cent of rural boys in the age group of 15 to 18 years mentioned of brushing their teeth once after getting up in the morning and the remaining 13.75 per cent of urban and 8.75 per cent of rural boys brushed twice viz. after getting up in the morning and before going to sleep.

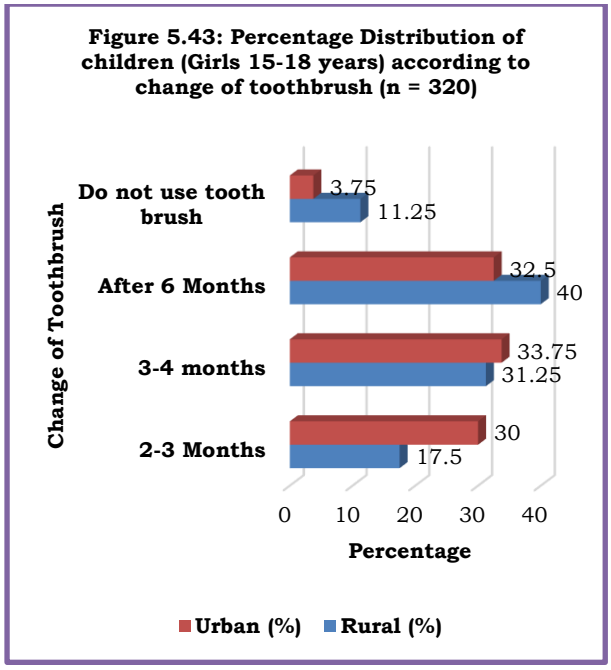


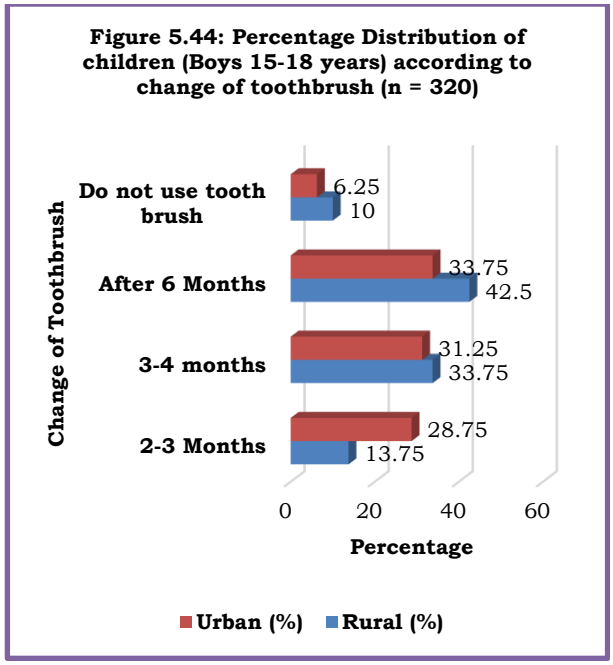


Replacing of toothbrush after a certain period is very important as oral hygiene is maintained by brushing and flossing the teeth. It was found that among 320 children respondents in the age group of 15 to 18 years, 22.5 per cent of children changed their toothbrush in two to three months, 32.5 per cent changed in three to four months and 37.18 per cent changed after six months. Around 7.81 per cent of children did not use toothbrush instead used fingers for brushing/cleaning their teeth's (Table 5.40).

Table 5.40: Distribution of children (15-18 years) according to change of toothbrush (n = 320)

Change of toothbrush	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
2-3 Months	14 (17.5)	24 (30)	**38 (23.75)**	11 (13.75)	23 (28.75)	**34 (21.25)**	**72 (22.5)**
3-4 months	25 (31.25)	27 (33.75)	**52 (32.5)**	27 (33.75)	25 (31.25)	**52 (32.5)**	**104 (32.5)**
After 6 Months	32 (40)	26 (32.5)	**58 (36.25)**	34 (42.50	27 (33.75)	**61 (38.125)**	**119 (37.18)**
Do not use toothbrush	9 (11.25)	3 (3.75)	**12 (7.5)**	8 (10)	5 (6.25)	**13 (8.125)**	**25 (7.81)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**





The highest percentage in changing toothbrush after six months in the age group of 15 to 18 years was 40 per cent among rural girls whereas 32.5 per cent urban girls changed their toothbrush for the same duration. In two to three months, 30 per cent of urban girls and 17.5 per cent of the rural girls changed their toothbrush. The respondents who changed their toothbrush within three to four months were 33.75 per cent in case of urban children and 31.25 per cent in case of rural children (Figure 5.43). In case of boys of the same age group, 33.75 per cent of urban boys and 42.5 per cent rural boys changed their toothbrush after using the toothbrush for six months. In two to three months, 28.75 per cent of urban boys and 13.75 per cent of the rural boys changed their toothbrush. The respondents who changed their toothbrush within three to four months were 31.25 per cent in case of urban boys and 33.75 per cent in case of rural boys (Figure 5.44). About 11.25 per cent of rural girls and 3.75 per cent of urban girls and 6.25 per cent of urban and 10 per cent of rural boys did not used brush for brushing their teeth instead used fingers in cleaning the teeth's respectively. The reasons for not using brush are ignorant parents or lack of knowledge of using brush from an early age. Children's from minority areas are usually seen to be not using brush.

5.9. Personal Hygiene

Personal hygiene related to bathing, washing hands, hair, trimming nails, etc. were covered in personal hygiene among children in the age group of 15 to 18 years. The study found that all (100%) of children from both urban and rural areas took bath every day and all mentioned of taking bath with any kind of soap.

Data on nasal hygiene was assessed and found that almost all the children respondents from both urban and rural areas in the age group of 15 to 18 years mentioned of cleaning their nose at different time. It was found that more than half among the rural (71.25%) and urban (76.25%) girls cleaned their nose whenever they feel dirty and the remaining 28.75 per cent of rural and 23.75 per cent of urban girls mentioned of cleaning the nose while taking bath/face wash. In case of boys, it was found that more than half among the rural (72.5%) and urban (75%) boys cleaned their nose whenever they feel dirty and the remaining 27.5 per cent of rural and 25 per cent of urban boys mentioned of cleaning the nose while taking bath/face wash (Table 5.42).

Table 5.42: Distribution of children (15-18 years) according to nasal hygiene (n = 320)

Cleaning of nose	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
During bath/face wash	23 (28.75)	19 (23.75)	**42 (26.25)**	22 (27.5)	20 (25)	**42 (26.25)**	**84 (26.25)**
Any time whenever you feel it's dirty	57 (71.25)	61 (76.25)	**118 (73.75)**	58 (72.5)	60 (75)	**118 (73.75)**	**236 (73.75)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Hygiene regarding use of handkerchief while coughing or sneezing was also assessed under personal hygiene. About 53.75 per cent of rural girls and 75 per cent of urban girls in the age group of 15 to 18 years mentioned of using handkerchief while coughing or sneezing. Again, it was reported that 46.25 per cent of rural girls and 25 per cent of urban girls covered face/nose while sneezing and coughing with hands if handkerchief is not available with them. (Table 5.43).

Table 5.43: Distribution of children (15-18 years) according to covering face/nose while coughing and sneezing (n = 320)

Covering face/nose while coughing/sneezing	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Yes (use handkerchief)	43 (53.75)	60 (75)	**103 (64.37)**	40 (50)	44 (55)	**84 (52.5)**	**187 (58.43)**
Yes (use hands)	37 (46.25)	20 (25)	**57 (35.63)**	40 (50)	36 (45)	**76 (47.5)**	**133 (41.57)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

In case of boys, 50 per cent of rural boys and 55 per cent of urban boys in the age group of 15 to 18 years mentioned of using handkerchief while coughing or sneezing. About 50 per cent of rural and 45 per cent of urban boys reported that they use hands to cover the nose/face while coughing or sneezing (Table 5.43).

Ear hygiene was assessed among the children of 15 to 18 years. All children of both sexes mentioned that they clean the ear either regularly or weekly, once in 15 days and monthly. Among both boys and girls, 29.06 per cent mentioned of cleaning their ears regularly, 21.25 per cent cleaned weekly, 3.75 per cent cleaned once/15 days and 45.93 per cent cleaned monthly respectively (Table 5.44).

Table 5.44. Distribution of children (15-18 years) according to ear hygiene (n = 320)							
Cleaning ear at different intervals	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Regularly	22 (27.5)	26 (32.5)	**48 (30)**	28 (35)	17 (21.25)	**45 (28.12)**	**93 (29.06)**
Weekly	14 (17.5)	17 (21.25)	**31 (19.37)**	16 (20)	21 (26.25)	**37 (23.12)**	**68 (21.25)**
Once /15 days	7 (8.75)	2 (2.5)	**9 (5.62)**	2 (2.5)	1 (1.25)	**3 (1.87)**	**12 (3.75)**
Monthly	37 (46.25)	35 (43.75)	**72 (45)**	34 (42.4)	41 (51.25)	**75 (46.87)**	**147 (45.93)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.45 and 5.46 gives the percentage distribution of girls and boys in the age group of 15 to 18 years on cleanliness of ears at different intervals like regularly, once/15 days, monthly and whenever the ears are dirty. It was observed that among urban girls of 15 to 18 years they cleaned the ears more regularly (32.5%), weekly (21.25%), once/15 days (2.5%) than rural girls in terms of regularly (27.5%), weekly (17.5%), once/15 days (8.75%) respectively. About 46.25 per cent of rural and 43.75 per cent of urban girls cleaned their ears on monthly (Figure 5.45). Among urban boys of 15 to 18 years, it was observed that they cleaned the ears regularly (21.25%), weekly (26.25%), once/15 days (1.25%) and monthly (51.25%) against rural boys in terms of regularly (35%), weekly (20%), once/15 days (2.5%) and monthly (42.5%) respectively.

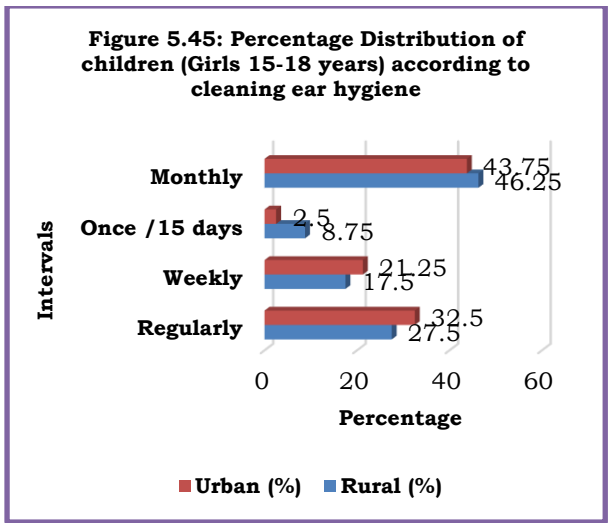


Figure 5.45: Percentage Distribution of children (Girls 15-18 years) according to cleaning ear hygiene

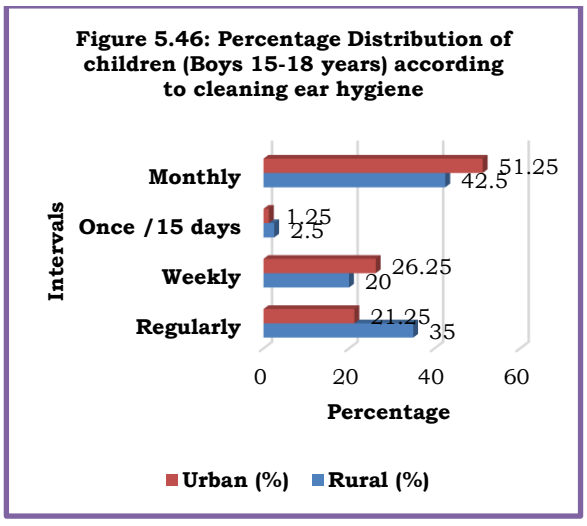


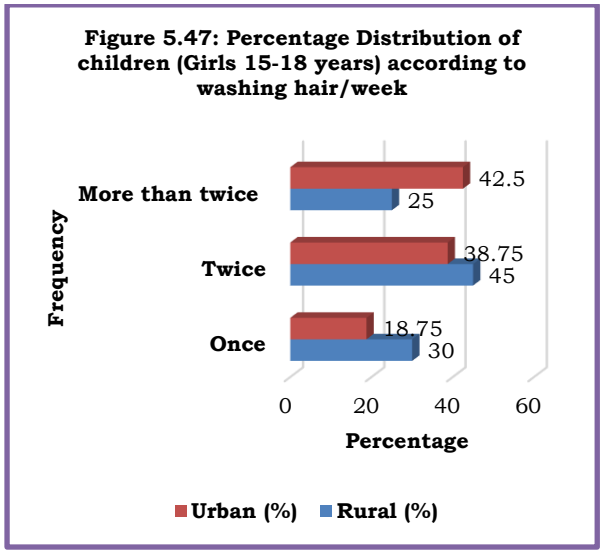
Figure 5.46: Percentage Distribution of children (Boys 15-18 years) according to cleaning ear hygiene

Among 320 children, all children mentioned of washing hair in a week. About 21.87 per cent of children from both sexes washed their hair more than once in a week, 31.56 per cent twice/week and 46.56 per cent once/week respectively (Table 5.45). Regarding hair washing on weekly basis by girls and boys, it was revealed that boys washed their hair more often than girls.

Table 5.45. Distribution of children (15-18 years) according to washing hair/week (n = 320)

Washing hair/week	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Once	24 (30)	15 (18.75)	**39 (24.37)**	17 (21.25)	14 (17.5)	**31 (19.37)**	**70 (21.87)**
Twice	36 (45)	31 (38.75)	**67 (41.87)**	22 (27.5)	12 (15)	**34 (21.25)**	**101 (31.56)**
More than twice	20 (25)	34 (42.5)	**54 (33.75)**	41 (51.25)	54 (67.5)	**95 (59.37)**	**149 (46.56)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Among girls of rural and urban areas, it was observed that 45 per cent of rural girls washed their hairs more than twice/week against 38.75 per cent of urban girls. In case of boys the percentage for urban boys washing hair more than twice/week is more (67%) than urban boys with 51.25 per cent respectively (Figure 5.47 & 5.48).



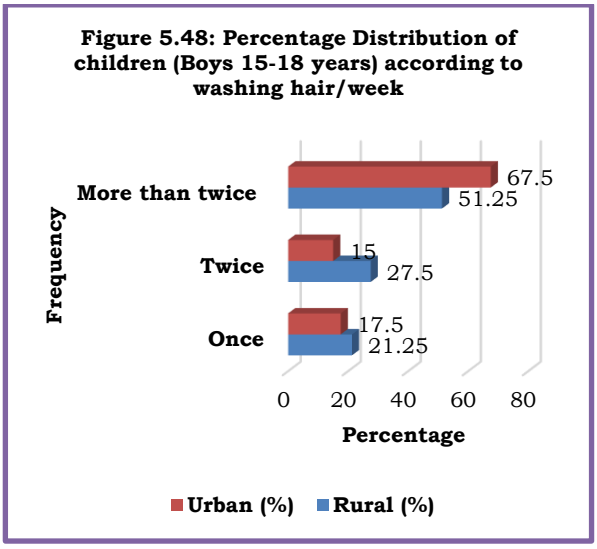


Table 5.46 gives the detailed about the use of material viz. soap and shampoo for washing hair. The use of shampoo was 91.87 per cent among both girls and boys than soap with 8.12 per cent respectively. Among girls of both rural and urban areas use of shampoo was more prevalent with cent per cent among urban and 97.5 per cent among rural girls. The urban boys used more (87.5%) shampoo than rural boys with 82.5 per cent respectively.

Table 5.46. Distribution of children(15-18 years) according to material used for washing hair (n = 320)

Material used for washing hair	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Soap	2 (2.5)	-	**2 (1.25)**	14 (17.5)	10 (12.5)	**24 (15)**	**26 (8.12)**
Shampoo	78 (97.5)	80 (100)	**158 (98.75)**	66 (82.5)	70 (87.5)	**136 (85)**	**294 (91.87)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Regarding oiling of hair, it was found that among 320 children of both sexes in the age group of 14 to 18 years, 29.06 per cent oil their hair sometimes, 34.37 per cent oil regularly, 33.43 per cent oil once/week and 3.12 per cent mentioned of oiling their hair while going outside (Table 5.47).

Table 5.47. Distribution of children (15-18 years) according to oiling hair (n = 320)

Oiling of hair	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Regularly	15 (18.75)	10 (12.5)	**25 (15.62)**	46 (57.5)	39 (48.75)	**85 (53.12)**	**110 (34.37)**
Once/ week	39 (48.75)	33 (41.25)	**72 (45)**	18 (22.5)	17 (21.25)	**35 (21.87)**	**107 (33.43)**
Sometimes	26 (32.5)	37 (46.25)	**63 (39.37)**	9 (11.25)	21 (26.25)	**30 (18.75)**	**93 (29.06)**
Only while going outside	-	-	**-**	7 (8.75)	3 (3.75)	**10 (6.25)**	**10 (3.12)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.49 and 5.50 gives the detailed about the rural and urban girls and boys with regard to oiling of hair. Among girls of 15 to 18 years, it was found that 18.75 per cent of rural girls oiled their hair regularly than urban girls with only 12.5 per cent. The percentage of urban girls who oiled their hair once/week was 41.25 per cent and sometimes was 46.25 per cent against rural girls with 48.75 per cent and 32.5 per cent once/week and sometimes respectively.

Figure 5.49: Percentage Distribution of children (Girls 15-18 years) according to Oiling of Hair (n=320)

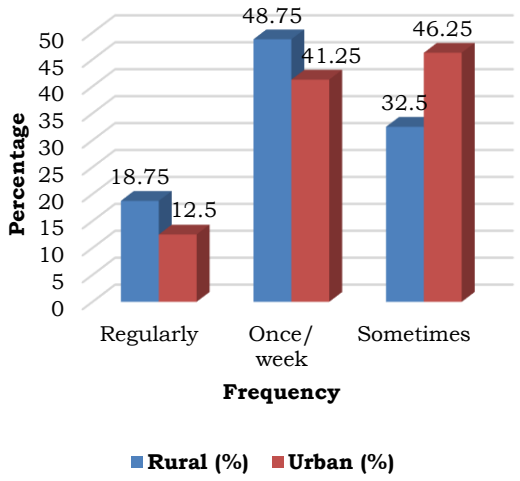
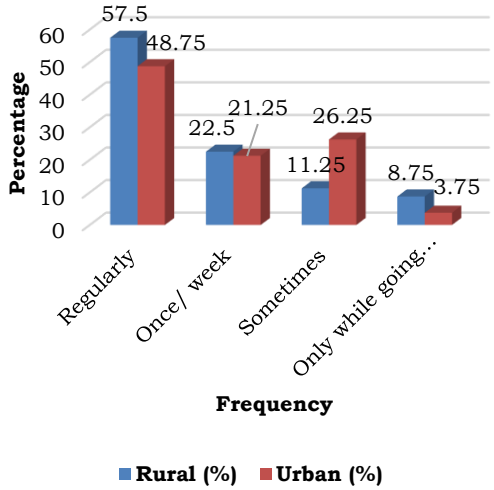


Figure 5.50: Percentage Distribution of children (Boys 15-18 years) according to Oiling of Hair (n=320)



Among boys of 14 to 18 years, it was found that 57.5 per cent of rural boys oiled their hair regularly than urban boys with 48.75 per cent. The percentage of urban boys who oiled their hair once/week was 21.25 per cent and sometimes was 26.25 per cent against rural boys with 22.5 per cent and 11.25 per cent once/week and sometimes respectively. About 3.75 per cent and 8.75 per cent from urban and rural areas reported of oiling their hair while going outside home. The boys reported that they have no issue to put oil to the hair than the girls as they felt that putting oil to hair makes the hair difficult in doing any kind of hair style.

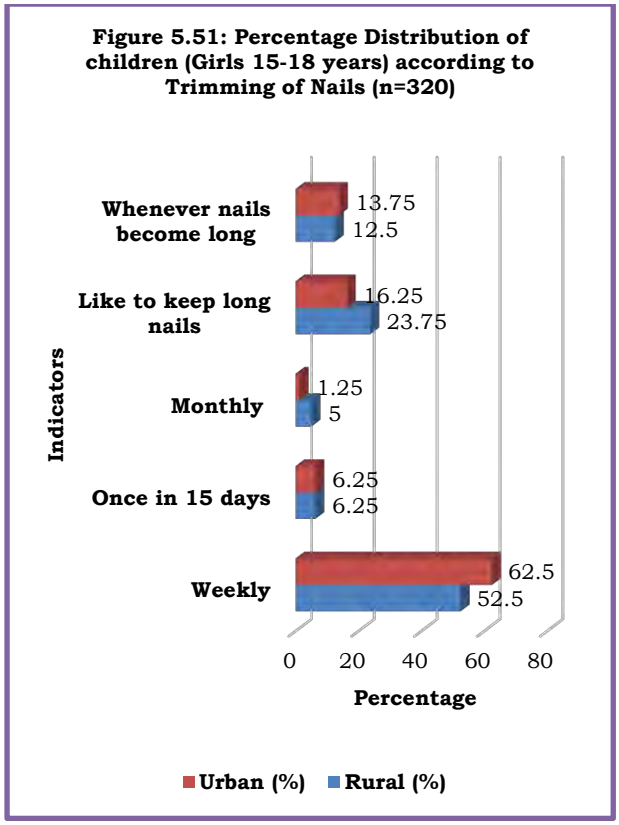
Fingernails as well as toenails should be kept short, and the undersides should be cleaned frequently with soap and water as dirty nails

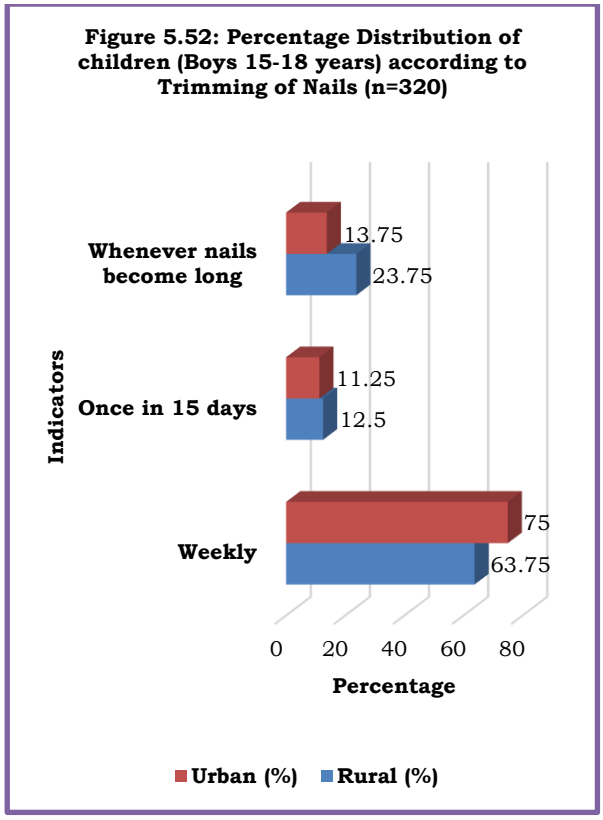
leads to stomach ailments. In the study, it was observed that out of 320 children, 63.43 per cent trim their fingernails weekly, 9.06 per cent trim once in 15 days, 10.93 trim monthly and 6.56 per cent trim their nails whenever nails become long respectively. About 10 per cent of girls from both urban and rural areas mentioned of keeping long nails (Table 5.48).

Table 5.48. Distribution of children (15-18 years) according to trimming of hand nails (n = 320)

Trimming of nails	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Weekly	42 (52.5)	50 (62.5)	**92 (57.5)**	51 (63.75)	60 (75)	**111 (69.37)**	**203 (63.43)**
Once in 15 days	5 (6.25)	5 (6.25)	**10 (6.25)**	10 (12.5)	9 (11.25)	**19 (11.87)**	**29 (9.06)**
Monthly	4 (5)	1 (1.25)	**5 (3.12)**	19 (23.75)	11 (13.75)	**30 (18.75)**	**35 (10.93)**
Like to keep long nails	19 (23.75)	13 (16.25)	**32 (20)**	-	-	-	**32 (10)**
Whenever nails become long	10 (12.5)	11 (13.75)	**21 (13.12)**	-	-	-	**21 (6.56)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

From Figure 5.51, it is apparent that 52.5 per cent of rural girls and 62.5 per cent of urban girls trim their finger nails weekly, 6.25 per cent each of rural and urban girls trim once in 15 days, five per cent and 1.25 per cent of rural and urban girls trim monthly and 12.5 per cent and 13.75 per cent of urban and rural girls trim whenever nails become long respectively. The remaining 23.75 per cent of rural and 16.25 per cent of urban girls likes to keep long nails. The screnario regarding trimming of nails among boys of rural and urban area is somewhat different than the girls. About 63.75 per cent of rural boys and 75 per cent of urban boys trim their finger nails weekly, 12.5 per cent of rural and 11.25 per cent of urban boys trim once in 15 days and 23.75 per cent and 13.75 per cent of rural and urban boys trim monthly (Figure 5.52).





Regarding trimming of toe nails, it was observed that out of 320 boys in the age group of 15 to 18 years, 65.31 per cent trim their toe nails weekly, 12.5 per cent trim once in 15 days, 9.68 per cent trim monthly and 5.31 per cent trim their nails whenever nails become long respectively. About 7.18 per cent reported of keeping long nails (Table 5.49).

Table 5.49. Distribution of children (15-18 years) according to trimming of toe nails (n = 320)

Trimming of nails	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Weekly	50 (62.5)	60 (75)	**110 (68.75)**	49 (61.25)	50 (62.5)	**99 (61.87)**	**209 (65.31)**
Once in 15 days	5 (6.25)	6 (7.5)	**11 (6.87)**	13 (16.25)	16 (20)	**29 (18.12)**	**40 (12.5)**
Monthly	7 (8.75)	7 (8.75)	**14 (8.75)**	11 (13.75)	6 (7.5)	**17 (10.62)**	**31 (9.68)**
Like to keep long nails	16 (20)	7 (8.75)	**23 (14.37)**	-	-		**23 (7.18)**
Whenever nails become long	2 (2.5)	-	**2 (1.25)**	7 (8.75)	8 (10)	**15 (9.37)**	**17 (5.31)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Figure 5.53 and 5.54 gives the percentage distribution of children with regard to trimming of toe nails. About 62.5 per cent of rural girls and 75 per cent of urban girls trim their toe nails weekly, 6.25 per cent of rural and 7.5 per cent of urban girls trim once in 15 days, 8.75 per cent both from rural and urban girls trim monthly and 2.5 per cent rural girls trim whenever nails become long respectively. About 20 per cent of rural girls and 8.75 per cent of urban girls likes to keep long nails. The screnario regarding trimming of nails among boys of rural and urban area is almost similar to that of girls. About 61.25 per cent of rural boys and 62.5 per cent of urban boys trim their finger nails weekly, 16.25 per cent of rural and 20 per cent of urban boys trim once in 15 days, 13.75 per cent and 7.5 per cent of rural and urban boys trim monthly and 10 per cent and 8.75 per cent of urban and rural boys trim whenever nails become long respectively.

Figure 5.53: Percentage Distribution of children (Girls 15-18 years) according to Trimming of Toe Nails (n=320)

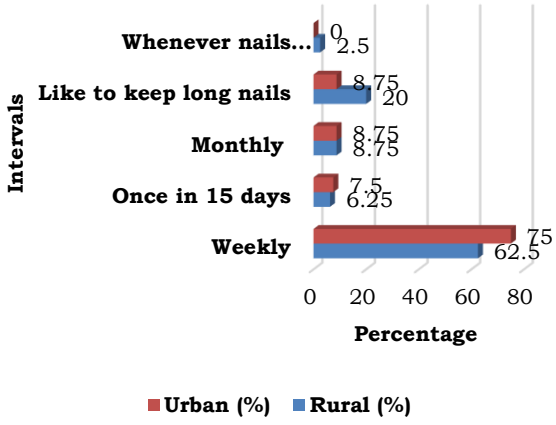
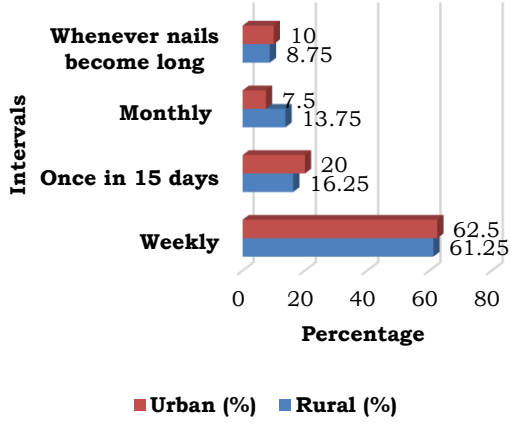


Figure 5.54: Percentage Distribution of children (Boys 15-18 years) according to Trimming of Toe Toe Nails (n=320)



The study also tried to observe the children on some parameters of cleanliness like tidy, untidy, nail hygiene, presence of body odour, etc. The tidy children were those who had done their hairs right, wearing clean clothes or uniform while attending school or at home, eyes, nose and face was clean, etc. The untidy children were categorized on observation with messy hairs, dirty teeth's, running nose, eyes with discharge present, dirty or filthy clothes, dirty hands etc. Among boys and girls from rural and urban areas, there was not much difference observed on the parameters of

tidy and untidy. About 81.2 per cent of rural and 86.25 per cent of urban girls were observed as tidy. In case of boys, 71.25 per cent of rural and 87.5 per cent of urban boys were observed as tidy. Regarding body odour, it was observed that 18.75 per cent of rural girls had a body odour which was higher than the urban girls (11.2%). The trend was similar in case of boys as well with presence of an unwanted smell among rural boys with high percentage of 22.5 per cent than urban boys with 12.5 per cent only.

5.10. Hand Washing

All the children respondents of the study in the age group of 15 to 18 years from both sexes and from both rural and urban areas reported of washing their hands with soap or liquid soap. Further, the children respondents were also interviewed on occasions of hand washing. The children reported that they wash their hand after using toilet, before & after eating, after touching dustbins, moping cloths, pets, etc., after wiping/blowing nose/sneezing, after coming from outside and after doing urinal. Table 5.50 give the distribution of children according to occasions of hand washing. Out of 320 children, all (100%) children reported of washing their hand after using toilet, 92.5 per cent before & after eating, 53.43 per cent after touching dustbins, moping cloths, pets, etc., 28.43 per cent after coming from outside and 25.05 per cent after doing urinal respectively.

Table 5.50. Distribution of children (15-18 years) according to occasions of hand washing (n = 320)

Occasions of Hand washing	Girls (n=80)		Total (n/%)	Boys (n=80)		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
After using toilet	80 (100)	80 (100)	**160 (100)**	80 (100)	80 (100)	**160 (100)**	**320 (100)**
Before & after eating	76 (95)	78 (97.5)	**154 (96.25)**	74 (92.5)	68 (85)	**142 (88.75)**	**296 (92.5)**
After touching dustbins, moping cloths, pets, etc)	48 (60)	48 (60)	**96 (60)**	43 (53.75)	31 (38.75)	**74 (46.25)**	**171 (53.43)**
After coming from outside	21 (26.25)	13 (16.25)	**34 (21.25)**	32 (40)	25 (31.25)	**57 (35.62)**	**91 (28.43)**
After doing urinal	10 (12.5)	8 (10)	**18 (11.25)**	8 (10)	17 (21.25)	**25 (15.62)**	**43 (25.05)**

Figure 5.55 and 5.56 gives the percentage distribution of boys and girls belonging to rural and urban areas with regard to occasions of hand washing. Cent per cent of urban and rural girls mentioned of washing hands after using toilet. Majority (95%) of rural girls and 97.5 per cent of urban girls mentioned of washing hands before and after eating. Sixty per cent of girls from both rural and urban areas washed their hands after touching dustbins, moping cloths, pets, etc. About 12.5 per cent each of rural and 10 per cent of urban girls reported of washing hands after doing urinal and 16.25 of urban girls and 26.25 per cent of rural girls washed their hands after coming from outside (Figure 5.55).

Figure 5.55: Percentage Distribution of children (Girls 15-18 years) according to Occasions of Hand Washing (n=320)

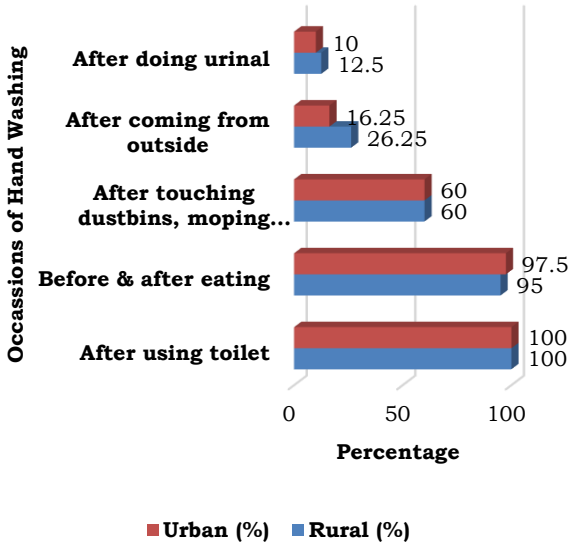
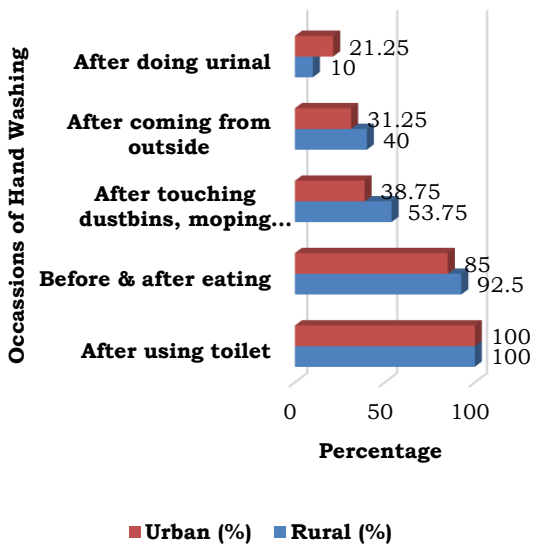


Figure 5.56: Percentage Distribution of children (Boys 15-18 years) according to Occasions of Hand Washing (n=320)



The data in Figure 5.56 depicts that, cent per cent of urban and rural boys mentioned of washing hands after using toilet. About 85 per cent of urban and 92.5 per cent of rural boys mentioned of washing hands before and after eating food. About 53.75 per cent of rural boys washed their hands after touching dustbins, moping cloths, pets, etc., in comparison to urban (38.75%) boys. About 21.25 per cent of urban boys and 10 per cent rural boys reported of washing hands after doing urinal. Comparing rural and

urban boys, it was found that the rural boys washed their hands more (40%) after coming from outside than urban (31.25%) boys (Figure 5.56). Regarding awareness about hand washing, it was found that almost all reported of being aware about benefits of hand washing. Children also reported that although they know it is essential to wash hands with soap and water, they do not practice as they are in a hurry either for going to schools or tuitions or play and other activities. Some children of tea garden areas mentioned that they go with the parents to field, so they don't get to wash their hands properly. Many children also reported that they forget to wash their hands after urinal. Few even said that they didn't even knew that they need to wash their hands after urinal**.**

5.11. Toilet hygiene

Regarding toilet hygiene it was observed that about 94.56 per cent of children in the age group of 15 to 18 years wear chappals while going to toilet or outside and the remaining 8.43 per cent do not wear chappals respectively. Among girls of urban areas, the percentage was high with 91.25 per cent against 90 per cent for rural girls. About 92.5 per cent of both rural and urban areas reported of wearing chappals while going to toilet and outside (Table 5.51).

Table 5.51. Distribution of children (15-18 years) according to wearing chappals while going toilet/outside (n = 320)

wearing chappals while going toilet/outside	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Yes	72 (90)	73 (91.25)	**145 (90.62)**	74 (92.5)	74 (92.5)	**148 (92.5)**	**293 (91.56)**
No	8 (10)	7 (8.75)	**15 (9.37)**	6 (75)	6 (75)	**12 (75)**	**27 (8.43)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The children in the age group of 15 to 18 years were interviewed regarding change of innerwear, outerwear, sun drying of clothes, etc. It was found that maximum (93.75%) of children changed their inner wear

regularly and few (6.25%) changed on alternate days. Among girls of urban areas, it was 93.75 per cent and 87.5 per cent of rural girls changed regularly. About 98.75 per cent of urban boys changed regularly their innerwear against 95 per cent of rural boys respectively (Table 5.52).

Table 5.52. Distribution of children(15-18 years) according to change of inner wear (n = 320)

Frequency of changing innerwear	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Regularly	70 (87.5)	75 (93.75)	**145 (90.62)**	76 (95)	79 (98.75)	**155 (96.87)**	**300 (93.75)**
Alternate days	10 (12.5)	5 (6.25)	**15 (9.37)**	4 (5)	1 (1.25)	**5 (3.12)**	**20 (6.25)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Regarding change of outerwear, it was found that among 320 children in the age group of 15 to 18 years, 83.43 per cent of children changed their outer wear regularly and 16.57 per cent changed on alternate days. Among girls of urban areas, it was 98.75 per cent and 93.75 per cent of rural girls changed regularly. About 78.75 per cent of urban boys changed regularly their innerwear against 62.5 per cent of rural boys respectively (Table 5.53).

Table 5.53. Distribution of children (15-18 years) according to change of outer wear (n = 320)

Frequency of changing outerwear	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
Regularly	75 (93.75)	79 (98.75)	**154 (96.25)**	50 (62.5)	63 (78.75)	**113 (70.62)**	**267 (83.43)**
Alternate days	5 (6.25)	1 (1.25)	**6 (3.75)**	30 (37.5)	17 (21.25)	**47 (29.38)**	**53 (16.57)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

It was observed that 82.18 per cent of children reported of wearing washed clothes every day. Among urban girls it was 78.75 per cent against

72.5 per cent for rural girls. But in case of boys, the rural boys wear washed clothes less (81.25%) than urban boys with 96.25 per cent respectively.

Table 5.54. Distribution of children (15-18 years) according to wearing washed clothes (n = 320)

Wearing washed clothes	Girls		Boys		Grand Total (n/%)
	Rural (n/%)	Urban (n/%)	Rural (n/%)	Urban (n/%)	
Yes	58 (72.5)	63 (78.75)	65 (81.25)	77 (96.25)	**263 (82.18)**
No	22 (27.5)	17 (21.25)	15 (18.75)	3 (3.75)	**57 (17.81)**
Total (n/%)	**80 (100)**	**80 (100)**	**80 (100)**	**80 (100)**	**320 (100)**

Regarding sun drying of under garments it was observed that 91.87 per cent of children reported of sun drying the under garments after washing. Among urban girls it was 87.5 per cent against 85 per cent for rural girls. In case of boys, 97.5 per cent each of urban and rural boys reported of sun drying the inner garments after washing. During interaction with the children, they reported that they feel lazy to wash their innerwear every day, so they do not change. Girls reported that although they change their panties every day but they do not change their upper wear every day. They wear the same upper wear for two or more days because the girls were not aware that changing upper wear is as important as changing the panties (Table 5.54). Regarding sun drying of under garment, the reasons for mentioned by children especially the girls were no private space as there were more men in their families and do not want to display the innerwear. Some respondents mentioned since their mothers were working and no one is present in the house, someone may steal the innerwear, etc.

Table 5.55. Distribution of children (15-18 years) according to sun drying of under garments (n = 320)

Sun drying of under garments	Girls		Boys		Grand Total (n/%)
	Rural (n/%)	Urban (n/%)	Rural (n/%)	Urban (n/%)	
Yes	68 (85)	70 (87.5)	78 (97.5)	78 (97.5)	**294 (91.87)**
No	12 (15)	10 (12.5)	2 (2.5)	2 (2.5)	**26 (8.12)**
Total (n/%)	**80 (100)**	**80 (100)**	**80 (100)**	**80 (100)**	**320 (100)**

Majority of children mentioned that they keep the armpit the belly button clean by washing with soap and water during bath. All children mentioned of washing their anal after defecation with water.

Table 5.56 depicts the distribution of children according to place of spitting. Among 320 children, 45 per cent mentioned of spitting on the ground, 4.06 per cent in the dustbin, 37.5 per cent wherever they feel and 13.43 per cent in the drain of the house respectively. The urban and rural differentiation of girls and boys is given in Table 5.56.

Table 5.56. Distribution of children (15-18 years) according to place of spit (n = 320)

Place of spit	Girls		Total (n/%)	Boys		Total (n/%)	Grand Total (n/%)
	Rural (n/%)	Urban (n/%)		Rural (n/%)	Urban (n/%)		
On the ground	38 (47.5)	45 (56.25)	**83 (51.87)**	35 (43.75)	26 (32.5)	**61 (38.12)**	**144 (45)**
In the dustbin	1 (1.25)	4 (5)	**5 (3.12)**	1 (1.25)	7 (8.75)	**8 (5)**	**13 (4.06)**
Wherever you feel	30 (37.5)	20 (25)	**50 (31.25)**	40 (50)	30 (37.5)	**70 (43.75)**	**120 (37.5)**
Drain	11 (13.75)	11 (13.75)	**22 (13.75)**	4 (5)	17 (21.25)	**21 (13.12)**	**43 (13.43)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

About 47.5 per cent of rural girls mentioned of spiting on the ground against 56.25 per cent of urban boys. In case of rural boys, it was 43.75 per cent against 32.5 per cent of urban boys. Very less percentage of children from both rural and urban setting mentioned of use of dustbin for spitting and maximum number of respondents spitted wherever they feel thus having less awareness on hygienic practices.

Table 5.57. Distribution of children (15-18 years) according to diseases suffered in last six months (n = 320)							
Diseases suffered in last six months	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Grand Total (n/%)**
	Rural (n/%)	**Urban (n/%)**		**Rural (n/%)**	**Urban (n/%)**		
Diarrhoea	**-**	2 (2.5)	**2 (1.25)**	2 (2.5)	**-**	**2 (1.25)**	**2 (0.62)**
Dysentery	-	-		1 (1.25)	-	**1 (0.625)**	**1 (0.31)**
Fever	11 (13.75)	8 (10)	**19 (11.87)**	5 (6.25)	14 (17.5)	**19 (11.87)**	**38 (11.87)**
Cough cold	7 (8.75)	7 (8.75)	**14 (8.75)**	11 (13.75)	5 (6.25)	**16 (10)**	**30 (9.37)**
Stomach problems	5 (6.25)	2 (2.5)	**7 (4.37)**	5 (6.25)	3 (3.75)	**8 (5)**	**15 (4.68)**
Jaundice	1 (1.25)	1 (1.25)	**2 (1.25)**	1 (1.25)	-	**1 (0.625)**	**3 (0.94)**
Skin disease	6 (7.5)	5 (6.25)	**11 (6.87)**	21 (26.25)	2 (2.5)	**23 (14.37)**	**34 (10.62)**
No such diseases in last 6 months	50 (62.5)	55 (68.75)	**105 (65.62)**	34 (42.5)	56 (70)	**90 (56.25)**	**195 (60.93)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Table 5.57 gives a detail distribution of children (15-18 years) according to diseases suffered in last six months. Among 320 girls and boys from both rural and urban areas, it was observed that 39.04 per cent of the population suffered from hygiene related diseases like diarrhoea (0.62%), dysentery (0.31%), fever (11.87%), cough cold (9.37%), stomach problems (4.68%), jaundice (0.94%) and skin disease (10.62%) respectively. Among girls and boys, there is very less difference in percentages about diseases suffered in the last six months.

In the age group of 15 to 18 years, pubertal changes occur in both girls and boys, hence both were interviewed on hygienic aspects with regard to menstruation and cleaning pubic parts. Among boys in the age group of

15 to 18 years, it was found that 88.75 per cent of boys from urban areas and 71.25 per cent from rural areas reported of cleaning pubic parts with soap and water every day. The remaining 11.25 per cent of urban boys and 28.75 per cent of rural boys mentioned of washing the areas occasionally with soap (Table 5.58). All boys mentioned of cleaning the tip of penis every day.

Table 5.58: Distribution of boys (15-18 years) according to cleaning pubic parts (n = 160)

Cleaning pubic parts	Urban (n/%)	Rural (n/%)	Total (n/%)
Every day with water and soap	71 (88.75)	57 (71.25)	**128 (80)**
Occasionally with soap	9 (11.25)	23 (28.75)	**32 (20)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**

During menstruation, 87.5 per cent of urban girls and 70 per cent of rural girls mentioned of using napkins and the remaining 12.5 per cent of urban and 30 per cent of rural girls used clothes respectively (Table 5.59). All girls mentioned of washing with soap or handwash after changing the napkins/cloth.

Table 5.59: Distribution of girls (15-18 years) according to use of material during menstruation (n = 160)

Type of material	Urban (n/%)	Rural (n/%)	Total (n/%)
Clothes	10 (12.5)	24 (30)	**34 (21.25)**
Napkin	70 (87.5)	56 (70)	**126 (78.75)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**

Table 5.60: Distribution of girls (15-18 years) according to the number of times of changing the napkin/cloth during menstruation (n =160)

Number of times	Urban (n/%)	Rural (n/%)	Total (n/%)
Twice	26 (32.5)	27 (33.75)	**53 (26.17)**
More than twice	14 (17.5)	20 (25)	**34 (21.25)**
Depends on the flow	40 (50)	33 (41.25)	**73 (45.62)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**

Table 5.60 depicts the number of times of changing napkins/cloth. It was found that 26.17 per cent of girls changed the napkins/cloth twice per day, 21.25 per cent more than twice and 45.62 per cent mentioned that it depends on the flow respectively**.**

It can be concluded that in the age group of 15 to 18 years, the hygienic aspects were far better than the younger age groups. Hence, it may be concluded that awareness regarding hygiene improves with age. Some parameters of hygiene like brushing twice per day, hand washing and wearing chappals while going toilet/outside were found to be same among the rural and urban girls of Assam. Nasal hygiene was found better among rural girls than urban girls and the girls mentioned that they clean the nose during bath. Hygiene related to oral, change of toothbrush in two to three months, covering face/nose while coughing and sneezing, ear hygiene, hair hygiene, trimming hand nails weekly, trimming toe nails weekly, changing innerwear and outerwear regularly and use of sanitary napkins and changing the napkin frequently was found to be better among urban girls than rural girls.

Among boys of the same age group, it was found that ear and nasal hygiene were found to be better among rural than urban boys. Some aspects of hygiene like covering face/nose while coughing and sneezing, trimming toenails weekly, hand washing, wearing chappals while going toilet/outside were found to be same among rural and urban boys. Again, the hygienic practices among urban boys regarding oral, brushing twice per day, frequent change of toothbrush, hair hygiene, trimming hand nails weekly, changing innerwear and outerwear regularly and use of soap and water in washing were found to better than rural boys.

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CHAPTER VI

Factors Impeding Hygienic Habits among Women and Children

Hygienic habits should be introduced to children at an early stage so that the habits remain with them throughout their life. One of the objectives of the study was to determine the factors that impede development of hygienic habits among women and children. During the study, many of the respondents mentioned that they wanted to follow the hygienic practices like hand washing, personal hygiene, household hygiene, culinary hygiene, etc. but some of the factors like lack of time, financial problem, lack of water, etc. hampers in following the hygienic practices. In this chapter, an attempt has been made to discuss the factors impeding in development of hygienic practices. Table 5.1 gives the detail of the factors for impeding hygiene among women in rural and urban areas of Assam.

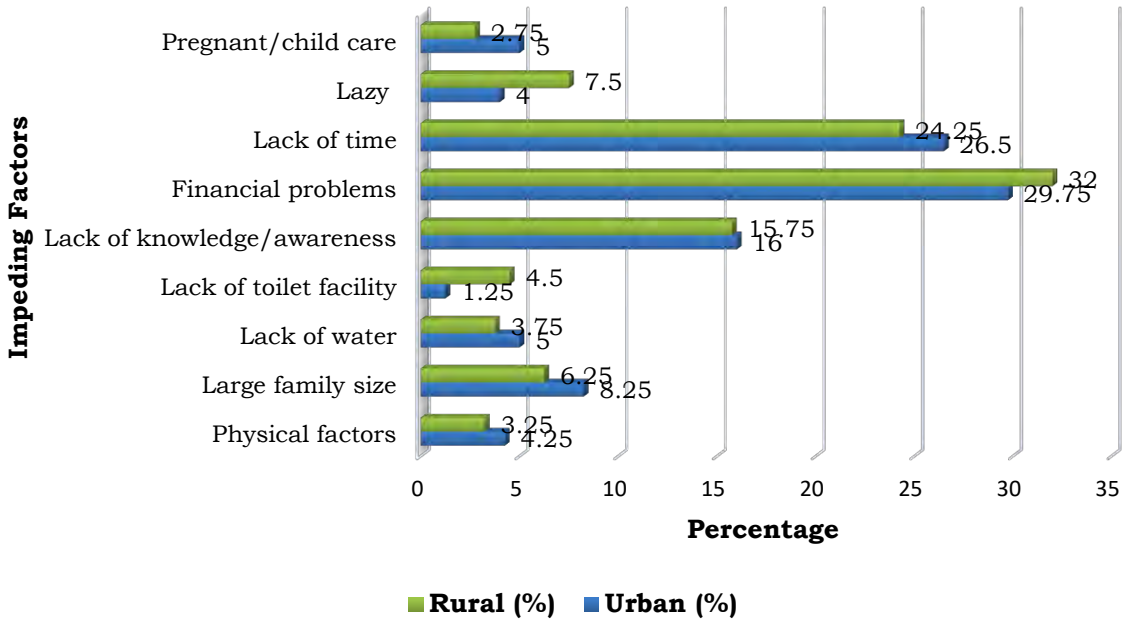
Table 6.1. Factors Impeding Hygienic Habits among Women (N=800)

Factors	Urban (n/%)	Rural (n/%)	Total (n/%)
Physical factors like sickness, disability, medical problem, etc.	17 (4.25)	13 (3.25)	30 (3.75)
Large family size	33 (8.25)	25 (6.25)	58 (7.25)
Lack of water	20 (5)	15 (3.75)	35 (4.37)
Lack of toilet facility	5 (1.25)	18 (4.5)	23 (2.87)
Lack of knowledge/awareness about personal hygiene	64 (16)	63 (15.75)	127 (15.87)
Financial problems	119 (29.75)	128 (32)	247 (30.87)
Lack of time	106 (26.5)	97 (24.25)	203 (25.37)
Lazy	16 (4)	30 (7.5)	46 (5.75)
Pregnant/childcare	20 (5)	11 (2.75)	31 (3.87)
Total	**400 (100)**	**400 (100)**	**800 (100)**

It has been observed that, more than one-fourth (30.87%) of the respondents mentioned that financial problem was the major reason for impeding hygienic habits among women. The women respondents mentioned that for financial problem they were unable to buy dustbins, toilet cleaning agents, construct pacca toilets, purchase sanitary napkins, etc. It was 29.75 per cent of women in urban areas and 32 per cent in rural areas mentioned finance as a barrier in maintaining hygiene. Hygienic practices mean washing hands, personal hygiene, household hygiene, culinary hygiene, menstrual hygiene, etc. The second impeding factor reported by one-fourth (25.37%) of women was lack of time. The women respondents mentioned that lack of time as they have to cook food for the family as well as take care of the children. Moreover, some women were working hence they do not get much time to clean their houses and maintain proper hygiene. Some of the women from rural and urban areas were domestic helpers so they have to work in many households. They mentioned that they clean other households but unable to clean and maintain hygiene in their own households. Some of the women respondents from rural areas were involved in jhum cultivation and hence have to be away from their homes. The women working in tea garden reported of tiredness for maintaining hygiene after engaged in long working hours. The women respondents of the urban areas (26.5%) mentioned that since they were working women so they could not maintain the hygienic aspects whereas 24.25 per cent of rural women reported of going to fields/jhum cultivation as the major reasons for impeding hygienic habits. Lack of knowledge or lack of awareness and following traditional methods about personal hygiene is one of another impeding factors reported by 15.87 per cent of women in following hygienic practices. In both urban and rural areas, the percentage were similar viz. 16 per cent and 15.75 per cent respectively. A study conducted by Akter and Ali (2014), on factors influencing knowledge and practice of hygiene in Water, Sanitation and Hygiene (WASH) in Bangladesh reported that lack of interest, financial condition, poverty, lack of affordability, traditional knowledge, etc. hinders hygiene-related behaviour among women.

The other impeding factors of women for not able to maintain hygiene were physical factors like sickness, diseased condition, disability (3.75%), large family size (7.25%), lack of water (4.37%), feeling lazy (5.75%) and pregnancy or child care (3.87%) respectively (Table 6.1).

Figure 6.1. Percentage Distribution of Factors Impeding Hygienic Habits among Women



From Figure 6.1, it gives a clear picture that child care and pregnancy was one of the impeding factors in both rural and urban areas but in urban area it was more with five per cent and 2.75 per cent in rural areas. Women having small kids had to give extra care to thier young ones which prevent them from taking care of the cleanliness in thier houses. Small kids needed extra attention which did not let them concentrate in their household cleanliness.

During pregnency women suffered from nausea and felt tired and could not work much as they did when they were not pregnant. Moping floor, washing heavy clothes was not possible during that time. Therefore

pregnent women could not practice proper hygiene as required. Another impeding factor was laziness which was 7.5 per cent in rural areas women respondents and four per cent in urban areas. One of the factors may be that in urban areas, women had a sedentary lifestyle and in rural areas women had a moderate or heavy lifestyle. In urban areas, large family size (8.25%) was one of the factor of impeding hygiene than in rural (6.25%) areas.

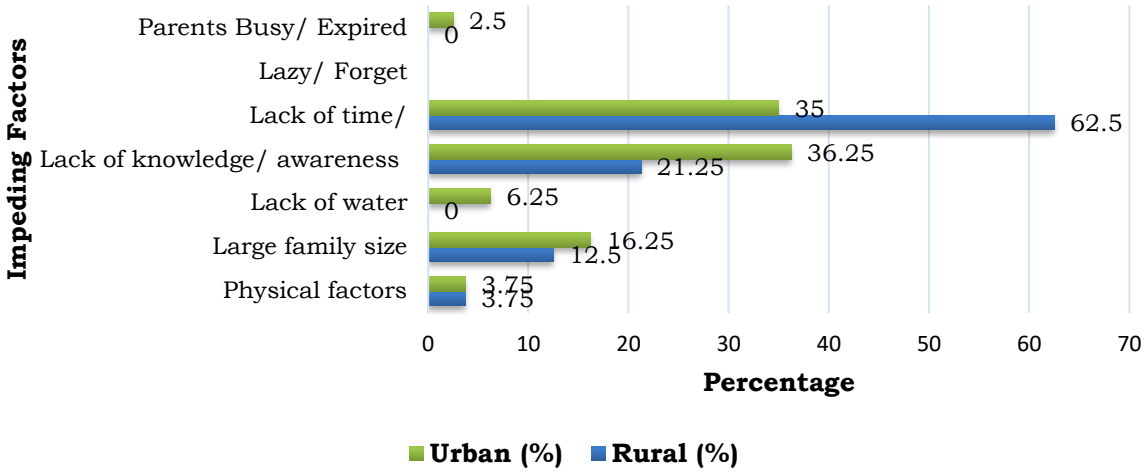
Women having more than three kids and a large number of family members needed to concentrate on the food preparation of the family starting fron tiffin for the kids and husband rather than cleaning their houses. The women respondents mentioned they have to take care of their in-laws in terms of food as well as medicines. So cleaning houses in regular basis was sometime not possible for them. It may be so as again in urban areas, lack of water was five per cent higher than rural (3.75%) areas as reported in the study as a factor for impeding hygiene. Physical factors like disease, disability, etc was 4.25 per cent in rural areas and 3.25 per cent in urban areas respectively. Lack of toilet facility was reported by 1.25 per cent in urban areas and 4.5 per cent in rural areas. Lack of toilet facility was one of the important problem found in the study. Many people residing in urban and rural did not have proper sanitation facility. They didnot have enough money to build pacca toilet on thier own nor they received any such facilities from Government. Therefore they used kaccha toilets which were also not in proper condition nor in hygieneic condition.

The study also tried to find out the factors for impeding hygiene among children. It was found that almost all the children from different community and from different age group faces various problems while maintaining hygiene practices. Some of the factors relating to impeding hygienic practices among the three age groups viz. six to nine years, 10 to 14 years and 15 to 18 years is presented in Table 6.2, Table 6.3 and Table 6.4 respectively.

Table 6.2. Factors Impeding Hygienic Habits among Children (6-9 years) n = 320							
Factors	**Girls**		**Total (n/%)**	**Boys**		**Total (n/%)**	**Total (n/%)**
	Rural	**Urban**		**Rural**	**Urban**		
Physical factors like sickness, disability, medical problem, etc	3 (3.75)	3 (3.75)	**6 (3.75)**	1 (1.25)	3 (3.75)	**4 (2.5)**	**10 (3.12)**
Large family size	10 (12.5)	13 (16.25)	**23 (14.37)**	4 (5)	5 (6.25)	**9 (5.62)**	**32 (10)**
Lack of water	-	5 (6.25)	**5 (3.12)**	1 (1.25)	-	**1 (0.62)**	**6 (1.87)**
Lack of knowledge/ awareness about personal hygiene	17 (21.25)	29 (36.25)	**46 (28.75)**	20 (25)	24 (30)	**44 (27.5)**	**90 (28.12)**
Lack of time/ Lazy/ Forget	50 (62.5)	28 (35)	**78 (48.75)**	52 (65)	46 (57.5)	**98 (61.25)**	**176 (55)**
Parents Busy/ Expired	-	2 (2.5)	**2 91.25)**	2 (2.5)	2 (2.5)	**4 (2.5)**	**6 (1.87)**
Total (n/%)	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

The factors which were found while collecting data on impeding hygiene among girls and boys of six to nine years were physical factors like sickness, disability, medical problem, etc, large family size, lack of water lack of knowledge and awareness about personal hygiene, lack of time or lazy or forget to keep hygiene and either parents were busy or expired and hence no one to take care of the child.

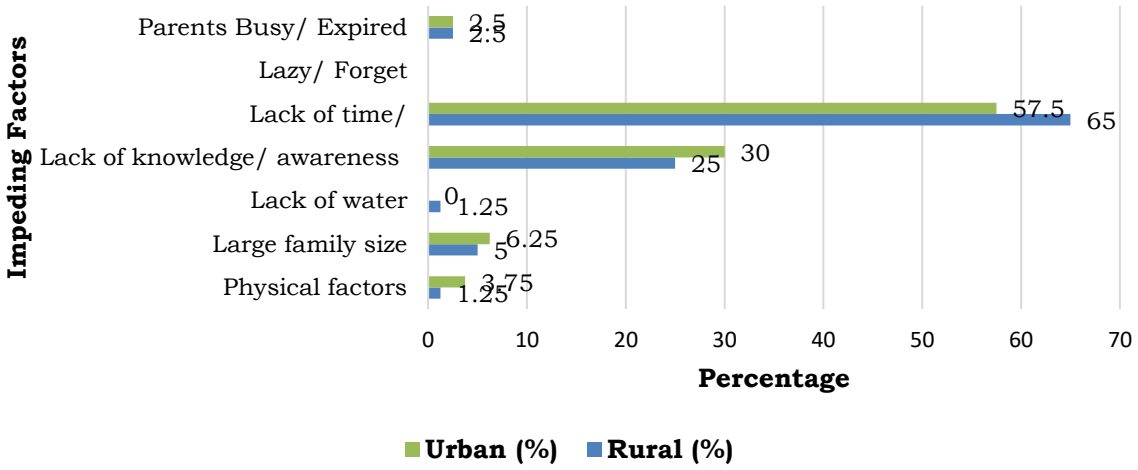
Figure 6.2. Percentage Distribution of Factors Impeding Hygienic Habits among Girls of Rural & Urban Areas (6-9 yrs)



From Figure 6.2, it was found that the factor for impeding hygiene like either parents were busy or parents expired was found very less (2.5%) only in urban areas. Children whose parents were expired or separated, especially when they did not have their mother to take care faced problems to remain healthy and clean. They did not have anyone to clean their clothes or clean their body, which hampers their hygienic habits. Small children without concern parents are seen coming to school dirty. The highest factor reported was lazy, forget and lack of time. It was 62.5 per cent in rural areas and 35 per cent in urban areas. The children mentioned that they forgot to clean their hands and other body parts if someone in the family does not tell them. Sometimes, it was due to laziness that they do not want to practice proper hygienic practices even though they remember it. The children mentioned they forget to wash their hands and feet. The second highest factor was either lack of knowledge or lack of awareness which was observed more in urban (36.25%) than rural (25.25%) areas. Lack of knowledge was more in urban areas as because the parents of the urban areas were working parents and were found to be very busy and had very less interaction with the children than the rural areas parents. Small children in urban areas were more often found in creche or play schools from early stages of life for which they did not get enough time to be with their parents

and receive hygienic knowledge from them. But women in rural areas are closer to their children which keeps them in higher rate from the urban children's in having proper hygienic knowledge. The women in rural areas are constantly attached with their children because of which they could keep proper eye on their children hygienic practices. People have a general perception that urban society children are more aware about personal hygiene but the study reveals the opposite. A study conducted by Talakeri *et. al.* (2015) also reported in a comparative study on assessment of knowledge and practice regarding personal hygiene among urban and rural school children in Belagavi, India and found that more of urban school children (91.5%) compared to rural school (51.5%) were having good knowledge about personal hygiene and (48.5%) of rural school children were having poor knowledge which is contrary to the findings of the present study. Large family size in urban area (16.25%) was one of the factor reported by six to nine year girls against 12.5 per cent of girls of same age of rural areas. Very less (3.75%) percentage of each rural and urban girls mentioned about physical factors like sickness, disability, medical problem, etc. as an impeding factor in maintaining hygiene.

Figure 6.3. Percentage Distribution of Factors Impeding Hygienic Habits among Boys of Rural & Urban Areas (6-9 yrs)



Boys of six to nine years also reported the factors for impeding hygiene similar to girls of the same age group (Figure 6.3). Very less (2.5%) each of the rural and urban boys mentioned that lack of parents or busy parents was one of the factors for impeding hygiene. The highest factor reported was lazy, forget and lack of time. It was 65 per cent in rural areas and 57.5 per cent in urban areas. The boys mentioned that they play a lot in the school and after coming from school they feel tired to follow the hygienic practices.

The second highest factor was either lack of knowledge or lack of awareness which was observed more in urban (30%) than rural (25%) areas. Parents and teachers were the most common source of knowledge providers about personal hygiene to the children. There may be some lacking in conveying the messages regarding personal hygiene by the teachers or the parents for which the children mentioned that they do not follow the hygienic practices.

This finding of the boys in the age group of six to nine years is same with the findings of the girls of the same age group in the study. Large family size in urban area (6.25%) was one of the factor reported by six to nine year boys against five per cent of girls of same age of rural areas. Very less (3.75%) percentage of urban boys and 1.25 per cent of rural boys mentioned about physical factors like sickness, disability, medical problem, etc. as an impeding factor in maintaining hygiene.

Table 6.3. Factors Impeding Hygienic Habits among Children (10-14 years) n = 320

Factors	Girls		Total (n/%)	Boys		Total (n/%)	Total (n/%)
	Rural	Urban		Rural	Urban		
Physical factors like sickness, disability, medical problem, etc	5 (6.25)	3 (3.75)	**8 (5)**	9 (11.25)	1 (1.25)	**10 (6.25)**	**18 (5.62)**
Large family size	7 (8.75)	11 (13.75)	**18 (11.25)**	7 (8.75)	3 (3.75)	**10 (6.25)**	**28 (8.75)**

Lack of water	-	-	**-**	2 (2.5)	1 (1.25)	**3 (1.87)**	**3 (0.94)**
Lack of knowledge/ awareness about personal hygiene	16 (20)	14 (17.5)	**30 (18.75)**	12 (15)	16 (20)	**28 (17.5)**	**58 (18.12)**
Lack of time/ Lazy/ Forget	48 (60)	52 (65)	**100 (62.5)**	50 (62.5)	56 (70)	**106 (66.25)**	**206 (64.37)**
Parents Busy/ Expired	4 (5)	-	**4 (2.5)**	-	3 (3.75)	**3 (1.87)**	**7 (2.19)**
Total	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

Out of 320 children comprising of both girls and boys in the age group of 10 to 14 years, data revealed from Table 6.3 that 64.37 per cent of children mentioned that lack of time, feeling of laziness and forgot was one of the impeding factor in following hygienic practices followed by 18.12 per cent mentioned as lack of knowledge and lack of awareness as one of the reason for not following hygienic practices. The children in the age group of 10-14 years mentioned that they do not have enough time as the children have to attend tuition classes in the morning as well as in the evening and apart from school and this hampers their hygienic practices. The children also reported that they has to wait for Sunday for hair cutting to trimming of nails. If their parents did not wash their clothes, then they cannot wash their own clothes due to lack of time. And such tight schedules keep them busy from early morning to evening which also, makes them lazy. Large family size (8.75%), Physical factors like sickness, disability, medical problem, etc. (5.62%), parents busy/expired (1.29%) and lack of water (0.94%) were the other factors for impeding hygiene among the children of both sexes in the age group of 10 to 14 years.

Figure 6.4. Percentage Distribution of Factors Impeding Hygienic Habits among Girls of Rural & Urban areas (10-14 yrs)

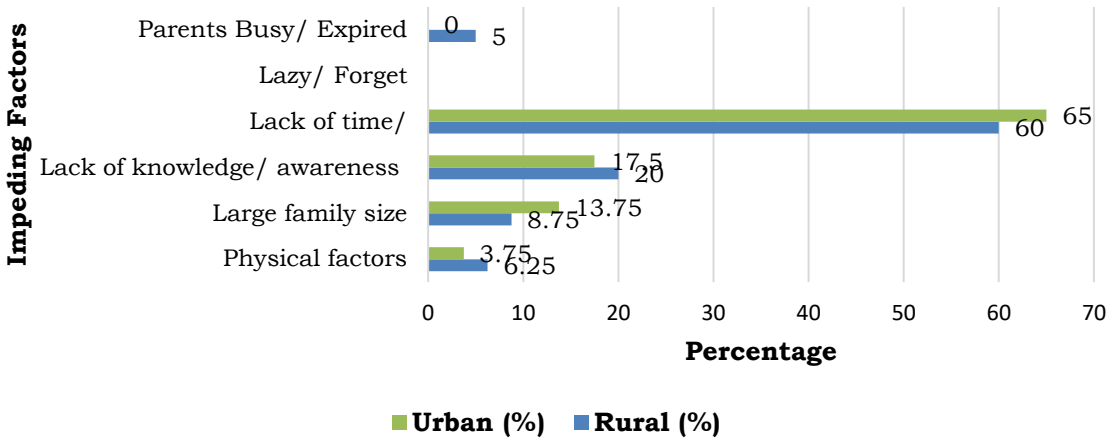
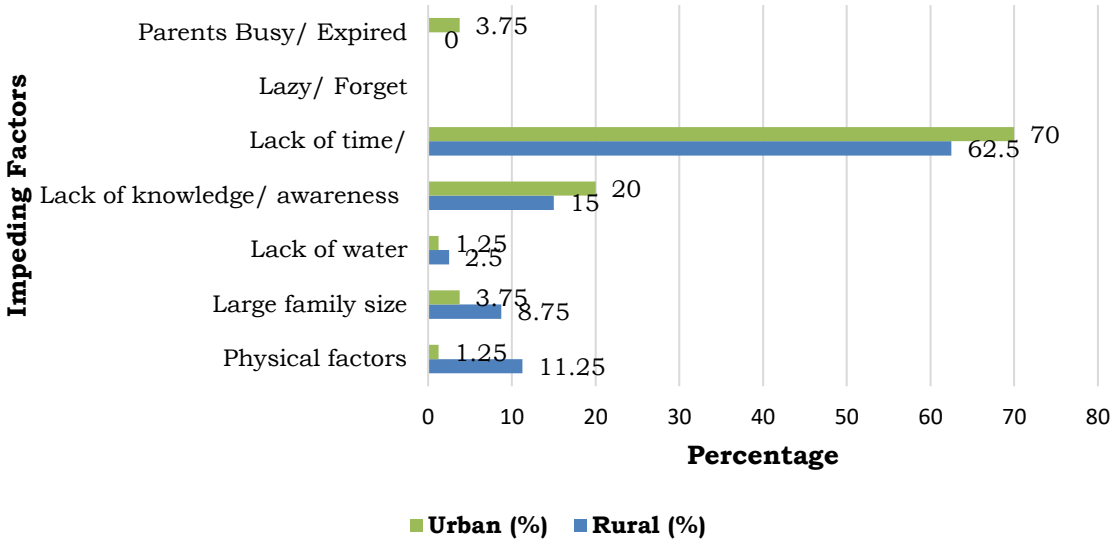


Figure 6.4 gives a comparative analysis of girls of rural and urban areas in the age group of 10 to 14 years. Data reveals that among rural and urban girls, lack of time, laziness and forget were more with 65 per cent among urban girls than rural girls (60%). Lack of awareness regarding hygiene was found to be 20 per cent among rural girls and 17.5 per cent girls among urban girls respectively. Large family size was another factor mentioned by 13.75 per cent of urban girls and 8.75 per cent of rural girls as one of the impeding factors for following personal hygiene. Physical factors like sickness and disease was reported by 6.25 per cent of rural girls and 3.75 per cent urban girls as an impeding factor and very less (5%) of rural girls of 10 to 14 years reported of either parents are busy or expired as one of the factors of impeding hygiene.

Figure 6.5. Percentage Distribution of Factors Impeding Hygienic Habits among Boys of Rural & Urban areas (10-14 yrs)

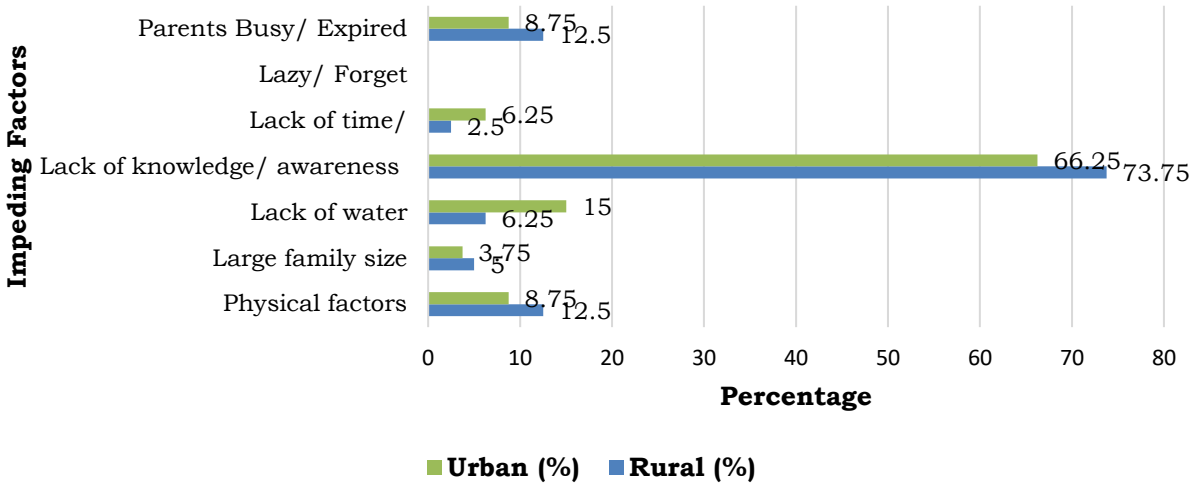


Among the boys of rural and urban areas in the age group of 10 to 14 years there was some similarity in factors as with the girls of the same group (Figure 6.5). Data reveals that among rural and urban girls, lack of time, laziness and forget were more with 70 per cent among urban boys than rural boys (62.5%). Lack of awareness regarding hygiene was found to be 20 per cent among urban boys and 15 per cent girls among rural boys respectively. Large family size was another factor mentioned by 8.75 per cent of rural boys and 3.75 per cent of urban boys as one of the impeding factors for following personal hygiene. Physical factors like sickness and disease was reported by 11.25 per cent of rural boys and 1.25 per cent urban boys as an impeding factor and very less (3.75%) of urban boys of 10 to 14 years reported of either parents are busy or expired as one of the factors of impeding hygiene. Lack of water was reported by 2.5 per cent of rural boys and 1.25 per cent of urban boys respectively.

Table 6.4. Factors Impeding Hygienic Habits among Children (10-14 years) n = 320							
Factors	**Girls**		**Total**	**Boys**		**Total**	**Total**
	Rural	**Urban**	**(n/%)**	**Rural**	**Urban**	**(n/%)**	**(n/%)**
Physical factors like sickness, disability, medical problem, etc	10 (12.5)	7 (8.75)	**17 (10.62)**	3 (3.75)	3 (3.75)	**6 (3.75)**	**23 (7.18)**
Large family size	4 (5)	3 (3.75)	**7 (4.37)**	8 (10)	4 (5)	**12 (7.5)**	**19 (5.94)**
Lack of knowledge/ awareness about personal hygiene	5 (6.25)	12 (15)	**17 (10.62)**	12 (15)	12 (15)	**24 (15)**	**41 (12.81)**
Lack of time/ Lazy/ Forget	59 (73.75)	53 (66.25)	**112 (70)**	55 (68.75)	58 (72.5)	**113 (70.62)**	**225 (70.31)**
Parents Busy/ Expired	2 (2.5)	5 (6.25)	**7 (4.37)**	2 (2.5)	3 (3.75)	**5 (3.12)**	**12 (3.75)**
Total	**80 (100)**	**80 (100)**	**160 (100)**	**80 (100)**	**80 (100)**	**160 (100)**	**320 (100)**

In the age group of 15 to 18 years, out of 320 children comprising of both girls and boys data (Table 6.4) revealed that highest (70.31%) of children mentioned that lack of time, feeling of laziness and forgot was one of the impeding factor in following hygienic practices followed by 12.81 per cent mentioned as lack of knowledge and lack of awareness as one of the reason for not following hygienic practices. The other impeding factors mentioned by children were large family size (5.94%), Physical factors like sickness, disability, medical problem, etc. (7.81%) and parents busy/expired (3.75%) for impeding hygiene among girls and boys in the age group of 15 to 18 years.

Figure 6.6. Percentage Distribution of Factors Impeding Hygienic Habits among Girls of Rural & Urban areas (15-18 yrs)



The data presented in Figure 6.6 revealed that as age increased among girls in the age group of 15 to 18 years, the percentage of girl children reported the factors of laziness, forget and lack of time as an impeding factor decreased unlike the other two younger groups of six to nine years and 10 to 14 years. Very less i.e. 2.5 per cent of rural girls and 6.25 per cent of urban girls reported that laziness, forget and lack of time is an impeding factor for maintaining hygiene. Lack of knowledge and lack of awareness was highest viz. 73.75 per cent among rural girls and 66.25 per cent among urban girls respectively. Lack of knowledge and awareness among 15-18 years of children was seen as many girls did not have much awareness about using sanitary pads. Girls wearing clothes during menstruation did not sundry their used clothes out of shame and rules among the family. Many girls and boys were not much concerned about daily washing their pubic parts although they said that they washed them but they were not aware of the various diseases they would face without cleaning. Many of these girls were not aware of cleaning pubic parts with soap on daily basis. They even thought that cleaning pubic parts other than water might create some infection. Many often girls attending school in menstruation days do not change their pads very often which was not a very

hygienic habit. They were not aware that they should not remain in the same pad for more than four to six hours. The adolescents were not aware of such hygienic habits. Lack of water was reported by 15 per cent of urban girls and 6.25 per cent of rural girls as one of the factors for impeding hygiene. Another factor of either parents is busy or expired was reported by 12.5 per cent of rural girls and 8.75 per cent of urban girls. Large family size was reported by five per cent of urban girls and 3.75 per cent of rural girls and 12.5 per cent of rural girls and 8.75 per cent of urban girls mentioned that physical factors like disability, disease and sickness was an factor for impeding hygiene among the girls of 15 to 18 years of age.

Figure 6.7. Percentage Distribution of Factors Impeding Hygienic Habits among Boys of Rural & Urban areas (15-18 yrs)

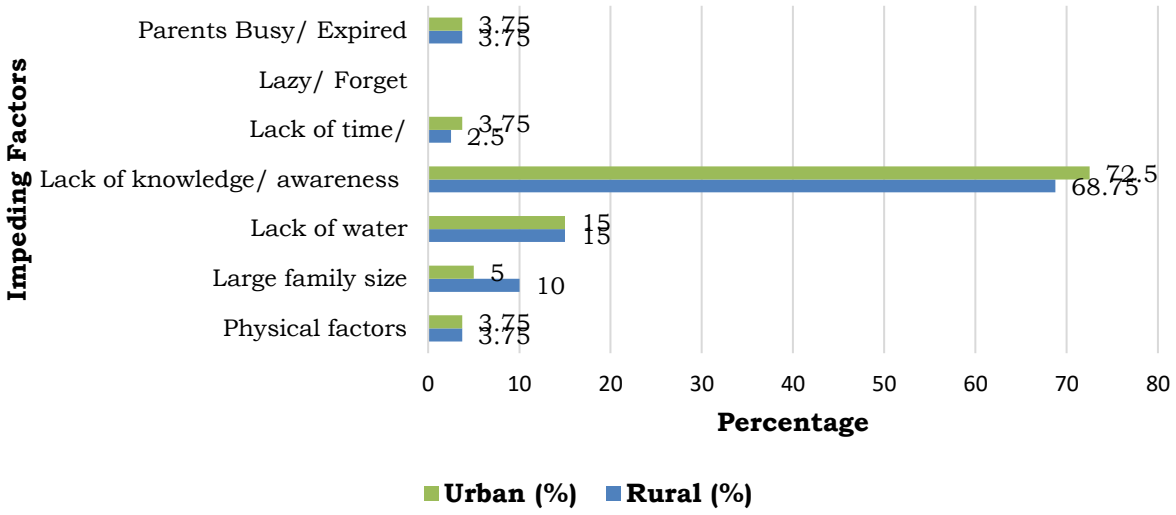


Figure 6.7 gives the comparative analysis of boys of rural and urban areas of Assam in the age group of 15 to 19 years. The data presented is similar to the girls of the same age groups which is found that as age increases the percentage of boys on reporting of the factors like laziness, forget and lack of time as an impeding factor decreases unlike the other two younger groups of six to nine years and 10 to 14 years. Very less i.e. 2.5 per cent of rural boys and 3.75 per cent of urban boys mentioned that laziness, forget and lack of time is an impeding factor for maintaining hygiene. Lack

of knowledge and lack of awareness was highest viz. 72.5 per cent among urban boys and 68.75 per cent among rural boys respectively. Lack of water was reported by 15 per cent each of urban and rural boys as one of the factors for impeding hygiene. Another factor of either parents is busy or expired was reported by 3.75 per cent each of rural and urban boys. Large family size was reported by five per cent of urban boys and 10 per cent of rural boys and 3.75 per cent each of rural and urban boys mentioned that physical factors like disability, disease and sickness was a factor for impeding hygiene among the girls of 15 to 18 years of age.

It may be concluded that the factors which were found while collecting data on impeding hygiene among women and children were physical factors like sickness, disability, medical problem, etc, large family size, lack of water lack of knowledge and awareness about personal hygiene, lack of time or lazy or forget to keep hygiene and either parents were busy or expired and hence no one to take care of the child.

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CHAPTER VII

Documentation of Community Level Best Practices on Promotion of Hygienic Habits

Promotion of hygienic practices is very important as good hygienic habits keep the diseases away. The present study also tried to document some of the good practices in the eight districts of Assam in relation to promoting hygienic practices.

7.1. Measures for promoting hygienic habits among women and children

Children should be the targets for promotion of hygienic habits as children are the future citizens of the country. If positive practices can be imbibed in them, the practices will be carried lifelong with them. Similarly, hygienic habits must also be imbibed in a woman. A famous African Proverb says "if you educate a man, you educate one person. If you educate a woman, you educate a nation". Hence, knowledge and awareness about positive hygienic practices should be given to women so that their behaviour changes and the messages can be spread. Hence, the researches tried to give knowledge and messages related to hygienic practices while collecting data from the field to the respondents so that they can act as channels to change the behavior of the people on promotion of hygienic habits.

The message related to hand washing in critical situations in everyday were after using the toilet, after going to urinal, after and before eating food, after changing a baby's diaper (nappy) and disposing of the faeces, immediately after touching raw food when preparing meals (chicken or other meat), before preparing and handling cooked/ready-to-eat food, before eating food or feeding children, after contact with contaminated surfaces (e.g. rubbish bins, cleaning cloths), after handling pets and domestic

animals, after wiping or blowing the nose or sneezing into the hands (respiratory hygiene), after handling soiled tissues (your own or others', e.g. children), before and after contact with an infected wound, after contact with blood or body fluids (e.g. vomit), before and after dressing wounds, before giving care to an 'at risk' person (e.g. attending delivery, attending a baby), after giving care to an infected person, etc. Hand washing after touching dustbins or waste materials was focused especially for women involved in cooking food for the family. Emphasis was also given on trimming hand nails frequently. While discussing on oral hygiene importance of changing toothbrush after every three to four months was informed to both women and children. Respondents who were found to be using the same toothbrush for one year was strictly advised to change it as soon as possible.

Similarly, personal hygiene included foot hygiene, armpit and bottom hygiene, clothes hygiene, public area hygiene, etc. The messages incorporated for foot hygiene (foot care) were toenails do not have much role in the transmission of diseases, yet the nails can accumulate dirt and this can increase the potential for bacterial and fungal breeding e.g. athlete's foot. Along with foot hygiene women were motivated to take care of heels as on observation it was found that the heels of many women were cracked and dirty. Armpit and bottom hygiene are one of the important areas where hygiene is a must. These are body parts that easily get sweaty and where ventilation is very poor. After puberty, the sweat gains a specific and unpleasant odour which may be offensive to others. Therefore, the armpits and the bottom should be washed daily with soap and water. Armpit hairs make smell bad. It was discussed among the women and adolescents that bacteria intermingling with one's sweat and produces the bad odor and hence, armpits should be cleaned/ shaved at regular intervals.

Anal cleansing is the hygienic practice of cleaning the anus after defecation. Along with anal, the anus and buttocks may be cleansed with water/ clean toilet paper and hands must be washed with soap afterwards.

The use of rags, leaves, stones, corn cobs, or sticks must be discouraged as these materials can damage the skin. The belly button also carries thousands of varieties of bacteria so regular cleaning is important. Women were advised to clean their belly button with soap and water while bathing.

Regarding clothes hygiene, the internal layer is underwear (or under clothes) such as pants, vest and t-shirt. These are right next to our skin and collect sweat and dead skin cells, which can stain the cloth and bacteria love to grow on this dirt and produce a bad smell in addition to the specific odour of the sweat. Underwear must be washed more frequently than the outer layer of clothing and changing used clothes for clean ones every day is recommended. Washing dirty clothes requires clean water, detergents (solid or powdered soap) and washing facilities. If the washed clothes are ironed, it helps in the destruction of body lice and nits. Awareness was given to the respondents regarding the importance of sun drying and wearing washed inner wears and outer wears. They were asked not to spread the washed clothes in bathroom or any place where sun rays do not reach. Awareness was also given to sundry the washed clothes in clean areas. Along with the body, pubic region cleanliness is very important. For girls, the vagina is one part of the body that can clean itself. Cleaning around the genital region with soap and water is also a must along with cleaning the rest of the body. Older girls, teenagers and women should also be taught about removing pubic hair. Boys as well should also be taught early on to clean their genitalia. They should wash the penis and the scrotum every day with soap and clean water and along with that the boys should be taught about cleaning the tip of the penis carefully as well as under the foreskin every day. Instructions on giving priority for washing hands after touching and cleaning private body parts were discussed. Along with cleaning intimate body parts they were asked to sundry their inner garments to avoid various diseases.

Coughing and sneezing spreads viruses easily from one person to another. The viruses are spread when we cough and sneeze. This is a

common disease among every next-door individual so such disease can get easily spread among one another. Awareness was sought to use handkerchief while coughing and sneezing.

Hair washing is an important factor while maintaining personal hygiene and along with that is washing hair comb. Comb used by women need to cleaned daily or in alternative days to maintain proper hygiene. Importance of wearing Chappals while going to bathroom was explained while discussing bathroom hygiene. Women and children were made aware that they must strictly follow the rule of wearing chappals while going to toilet because going to toilet naked legs might be the reason of various infectious and deadly diseases.

Menstruation hygiene for women and adolescent girls are one of the most important aspects of maintaining proper hygiene. During menstruation one must be more concern about cleaning themselves whenever they feel dirty, changing pads whenever necessary, dumping the pads in a proper manner, washing and drying clothes, and most importantly washing hands after changing pads.

For culinary hygiene women are highly responsible. Women need to keep an eye in keeping the kitchen clean. From washing vegetables to cleaning the kitchen shelves every day, a woman plays an important role in everyday life. Majority of women cooks food for the family. The women respondents mentioned that they wash the vegetables before cooking and cover the cooked food. The pot-holders should be washed regularly to avoid spreading of germs to food and utensils. The kitchen waste should be collected either in a dustbin or bags. The dustbin/bags should be discarded every day so that no foul smell emits. The respondents were asked to burn the waste material if they do not have any place to throw their wastes. Dustbins were asked to keep away from food so that flies are away. One of the most important aspect discussed during the visit was about drinking direct water collected from various sources. There were women who were not

able to use filter water for drinking was asked to boil the water to make it safe so that there is very less chances of getting contact with water borne diseases like jaundice, cholera etc. Although there were many discussions related to personal and culinary hygiene among the respondents of the study, yet it was felt that constant awareness programmes are to be held to change the behavior of the women and children of the communities.

7.2. Documentation of community level good practice

The method or technique that is unique and accepted by one and all and has the potential to change the behaviour of people is known as good practice or best practice. As the study was related to hygienic practices among women and children, there was an effort to document the community level good practice observed in the eight districts of Assam.

Plate 2: Kamrup (Metro)

In Kamrup district, the visited households were clean. Majority of women and adolescent girls were using sanitary napkins. In one household more than one dustbin was used. The dustbins were kept clean. One was used to collect wet waste and another one for dry waste. The surroundings of the houses were also clean.

Plate 3: Dhubri

In Dhubri district, the people residing in Baghmara area were mostly tribal (Karbi). The households of every Karbi family was found to be very clean. Even the surrounding of the households was clean. The Muslim women of Dhubri district mentioned that they rub their hands-on mud after defecation and thereafter use soap and water to clean the hands. They also mentioned about shaving their underarms and pubic area every month as it is a belief that their prayers will be accepted if they maintain cleanliness of the private parts.

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Plate 4: Karimganj

In South Karimganj, the visited AWCs had a dustbin and the area found to be very clean. The drinking water was made safe by using filter. In some areas water was boiled to make it safer for drinking. An inhabitant of Sharifnagar area has taken an initiative under Swachh Bharat to keep a dustbin in every school and spread the awareness regarding maintenance of hygiene among children.

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Plate 5: Karbi Anglong

In Karbi Anglong, it was observed that majority of the households as well as the surroundings were very clean. There was pacca toilet in every household. Although garbage was collected in open area, there was periodic burning of the garbage. People use eco-friendly dustbins made from bamboo which were kept outside the church, schools and public places. In one of the government school, steps of hand washing was displayed clearly on the wall of the school.

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Plate 6: Dima Hasao






Dima Hasao district was thinly populated hence the areas and household were clean. They use bamboo baskets as dustbin in the public places and in houses they dig a pit to throw the garbage. Majority of the households use drinking water after boiling and filtering

Plate 7: Dhemaji





In Dhemaji district, houses and surroundings of the houses were observed to be very clean. Most of the households have pacca latrines. The members of the community mentioned about burning the garbage/waste material every day or once/week.

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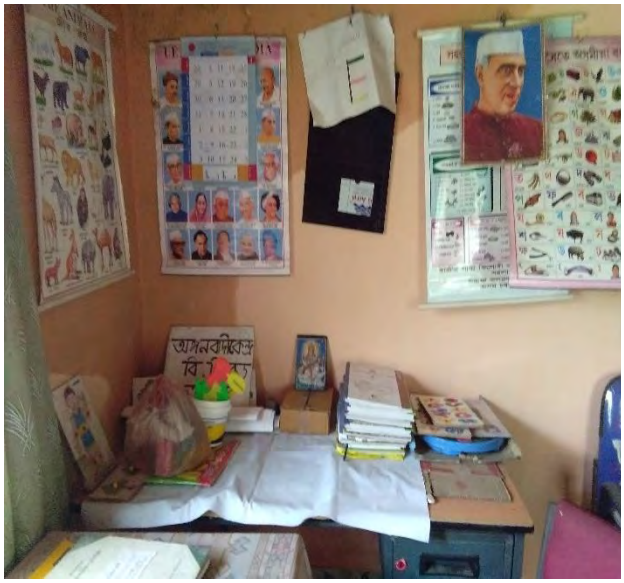
Plate 8: Jorhat



In Jorhat district, the visited households used dustbin. The areas in Koliapani Project where most of the inhabitants were tea tribes kept their houses and surrounding very clean. Even the connecting roads in Koliapani area were neat and clean as compared to other areas in the village. The Tea Garden Associations also took the initiative to keep the areas clean

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CHAPTER VIII

Conclusion and Recommendation

The present study on Hygiene Practices among Women and Children in Rural and Urban Areas of Assam was carried out to understand the issues of hygienic practices among women and children which have become very pertinent in our country with the launching of the Swachh Bharat Abhiyan. The cleanliness mission will be successful only if individuals especially women and children from different sections of the communities come forward and acknowledge the better personal hygiene practices. In this chapter the study is concluded considering Swachh Bharat Abhiyan in the light of the Urban and Gramin components in Assam.

In the context of Urban Areas of Assam

The results revealed that oral hygiene regarding use of brush and toothpaste, overall look of tidiness, trimming of hand and toenails were satisfactory among urban women. Handwashing after using the toilet, after using urinal, before eating, after eating, before preparing/handling cooked good, before feeding children and after contact with contaminated surfaces/garbage bins/cleaning cloth, etc. were better followed by the urban women. Majority of urban women reported of wearing chappals while going to toilet or outside. Among urban women the percentage of changing outwear was highest. Regarding spitting on the ground, it was observed that urban women spitted less on the ground and hence the percentage of suffering from one or another kind of disease related to hygiene like stomach problems, diarrhoea, dysentery, fever, cough, cold, jaundice, etc. in the last six months was less in urban families. The percentage of women washing pubic parts with water and soap on every day, use of sanitary napkin, changing the sanitary napkin/cloth more than twice/day, washing of hands after changing of sanitary napkins/cloth, etc. was satisfactory among urban

women respondents. From the study, it was observed that the urban women took various precautions regarding insects and cockroaches and the respondents mentioned of using market products like hit, etc. It was also observed that the garbage bin or area giving foul smell in urban areas was less than in rural areas.

Among children it was found that the urban girls of the age group of six to nine years were more independent in talking bath and did not take the help of elderly persons while taking bath. In some aspects of hygiene like changing toothbrush within two to three months, use of handkerchief while coughing and sneezing, ear hygiene, hair hygiene, more use of shampoo, weekly trimming of toenails, hand washing and awareness regarding hand washing were better among urban girls than rural girls. In terms of brushing of tooth twice per day and in aspects of hand washing the rural and urban boys had followed the same hygienic practices. The parameters like change of toothbrush in two to three months, use of soap for bathing every day, use of handkerchief while coughing and sneezing, hair hygiene, more use of shampoo, weekly trimming of toe nails and awareness about hand washing were practiced more by urban boys than rural boys. Like the girls the boys were also more independent in talking bath.

In the age group of 10 to 14 years, the parameters like oral hygiene, brushing teeth in the morning after getting up & before sleeping, change of toothbrush, nasal and ear hygiene, use of handkerchief while coughing and sneezing, weekly trimming hand and toenails, hand washing, wearing chappals to toilet and outside and changing innerwear and outerwear regularly were found to be better among urban girls than rural girls. The study found that frequent change of toothbrush in two to three months, use of soap in bath, use of shampoo, oiling hair, weekly trimming of toe nails weekly, hand washing, wearing chappals to toilet and outside and change of innerwear and outerwear regularly were found to be followed more among urban boys.

Hygiene related to oral, change of toothbrush in two to three months, covering face/nose while coughing and sneezing, ear hygiene, hair hygiene, trimming hand nails weekly, trimming toe nails weekly, changing innerwear and outerwear regularly and use of sanitary napkins and changing the napkin frequently was found to be better among urban girls in the age group of 15 to 18 years. The hygienic practices among urban boys regarding oral, brushing twice per day, frequent change of toothbrush, hair hygiene, trimming hand nails weekly, changing innerwear and outerwear regularly and use of soap and water in washing were found to better among urban boys.

In the context of Rural/ Gramin areas of Assam

Regarding knowledge and attitude towards hygienic practices among women, the study found that culinary and kitchen hygiene regarding washing the kitchen slaps and potholders, use of dustbin (wet and dry), covering the dustbins, etc were observed more in rural kitchens and homes. Some aspects of hygiene related behavior among rural women respondents like handwashing practices before and after contact with an infected wound/vomiting/dressing wounds/care, before attending a baby and washing hands after wiping, blowing, sneezing, etc. into the hands was better followed among rural women respondents. Personal hygiene related to cleaning the armpit by using soap or liquid soap was satisfactory among rural women. Clean, super clean and use of water in households' chores were observed more in rural areas as compared to urban areas.

The children in the age group of six to nine years for both girls and boys, it was observed that on some parameters like brushing teeth twice per day, nasal hygiene, oiling of hair and weekly trimming of hand nails the hygienic aspects were better among the rural girls. It was also observed that the rural girls used charcoal to brush the teeth. In case of boys, hygienic

aspects regarding weekly trimming of hand nails, nasal and ear hygiene and oiling of hair were found better among rural boys.

Among children of 10 to 14 years, it was observed that hygiene related to hair like hair wash and oiling the hair was better among rural girls than urban girls. The data regarding boys was that the rural boys were found to be better than urban boys in the hygienic parameters like brushing teeth twice viz. morning after getting up & before sleeping, nasal hygiene, use of handkerchief, ear and hair hygiene and weekly trimming of hand nails. Nasal hygiene was found better among rural girls in the age group of 15 to 18 years. Among boys of the same age group, it was found that ear and nasal hygiene were found to be better among rural than urban boys.

Hygienic habits should be introduced to children at an early stage so that the habits remain with them throughout their life. One of the objectives of the study was to determine the factors that impede development of hygienic habits among women and children. During the study, many of the respondents mentioned that they wanted to follow the hygienic practices like hand washing, personal hygiene, household hygiene, culinary hygiene, etc. but there were some factors which restricts them from practicing the hygienic habits. It may be concluded that the factors which were found while collecting data on impeding hygiene among women and children were physical factors like sickness, disability, medical problem, etc, large family size, lack of water lack of knowledge and awareness about personal hygiene, lack of time or lazy or forget to keep hygiene and either parents were busy or expired and hence no one to take care of the child.

Promotion of hygienic practices is very important as good hygienic habits keep the diseases away. Hence, knowledge and awareness about positive hygienic practices should be given to women so that their behaviour changes and the messages can be spread. Hence, the researches tried to give some knowledge and messages related to hygienic practices while

collecting data from the field so that the children and women can be the channels of communication for behaviour change about promotion of hygienic habits. The study also tried to document some of the good practices in the eight districts of Assam in relation to promoting hygienic practices.

Suggestions and Recommendations

i) It has been found that cent per cent of women and children in all age groups brushed their teeth, however it was only once in the morning. Hence, awareness may be sought to brush teeth twice per day viz. after getting up and before sleeping and on changing the toothbrush after three months of use.

ii) The present study brought to light that there was lack of awareness regarding nasal hygiene, covering the face/nose while coughing and sneezing, nail hygiene, hand washing, etc. Hence, frequent awareness programmes may be held to change the behavior of women and children.

iii) The study also found that use of dustbins was very less among the study population. Maximum respondents threw their garbage in open spaces of the backyard of the house or nearby ponds thus polluting the land and the water bodies. There is a need of the community, civil society organizations and government sector to come up with some plans so that environment and water bodies can be saved.

iv) The study found that although toilets were present, it was not clean frequently. Again, it is the role of SBM or community to spread awareness about keeping the toilet clean for better health.

v) From the findings of the study, it is highly recommended that intense awareness programmes are required to change the behavior pf the people towards hygiene.

Based on the findings of the study, the following recommendations are made at programme level, community level and individual level.

At Programme Level

Intense training programmes are to be conducted for all stakeholders on the importance of maintaining a high level of hygiene and cleanliness in the area of work. The frontline workers like the AWW, AWH, ANM, ASHA, etc. should repeatedly be made aware about the importance of personal hygiene and its impact on health. The frontline workers should be entrusted to spread awareness among children attending AWCs, adolescents and pregnant and lactating mothers while conducting home visits, organizing NHED and VHSND sessions, community meetings, etc. The children need to learn about personal hygiene and the teachers should be mandated to give awareness at school.

At Community Level

The involvement of every gram panchayat, panchayat samiti and Zila Parishad for spreading awareness on environmental hygiene is required. The Mahila Mandals, Self-help groups, etc. should spread mass awareness on personal as well as environmental hygiene. The community can set up community dustbins or specific area for disposal of waste which can be cleaned at regular intervals.

At Individual Level

Cleanliness is a habit not an act. Hence, the community should make an effort to identify any individual i.e. any man, women or a child who is keen in keeping himself/herself clean, his/her house and the surrounding clean. The identified person may act as champion and can bring changes in the behavior of others about hygiene. The champion may further help in internalizing and inculcating cleanliness as a matter of habit and routine among others.

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Annexures

A Study on Hygiene Practices among Women and Children in Rural and Urban Areas of Assam

INTERVIEW SCHEDULE FOR WOMEN
(19 years & above)

(INTERVIEW SCHEDULE FOR WOMEN)

Instruction for recording responses and filling boxes

1. **Use pencils, write neatly and clearly,**
2. **All to be completed. No box to be left empty,**
3. **Note down clearly the response of the respondents for open end questions**

A. Basic Information

1. Name of the Respondent:
2. Age of the Respondent:
3. Address:
    1. Village/ Town:
    2. ICDS Project:
    3. District:
    4. Mobile Number:

4. Religion:
    1. Hindu
    2. Muslim
    3. Christian
    4. Buddhist

5. Caste:
    1. General
    2. OBC
    3. SC
    4. ST
    5. Others

6. Community:

B. Household Information

7. Monthly Income
    1. Less than Rs.5000
    2. Rs. 5000 - Rs. 15,000
    3. Rs. 15,000 and above.

8. Family type:
    1. Nuclear
    2. Joint
    3. Extended

9. Family Size:
    1. 3 – 5 members
    2. 6 – 8 members
    3. 9 – 12 members
    4. More than 12 members

10. Education status:
    1. Illiterate
    2. Primary
    3. Elementary
    4. High School
    5. Matriculate
    6. Higher Secondary
    7. Graduate
    8. Post Graduate
    9. Ph.D

11. Marital Status:
    1. Married
    2. Widow
    3. Divorce

C. Personal Information

12. Do you brush your teeth everyday:
    1. Yes
    2. No

13. If yes, use of materials:
    1. Toothpaste/powder with brush
    2. Tooth paste/powder with finger
    3. Charcoal
    4. Tooth sticks/ plant
    5. Any other, specify

14. When do you brush your teeth:
    1. Morning after getting up
    2. After taking morning tea
    3. Morning after getting up & before sleeping
    4. More than twice, please specify

15. For how long you use your toothbrush
    1. 2 to 3 months
    2. 3 to 4 months
    3. After 6 months
    4. No toothbrush used

16. Do you take bath daily:
    1. Yes
    2. No

17. If yes, cleaning materials used:
    1. Soap
    2. Detergent
    3. Bar
    4. Only water
    5. Any other, specify

18. If no, reasons:
    1. Take bath on alternate day
    2. Scarcity of water
    3. Climate is cold
    4. Feels not necessary to take bath everyday
    5. Not habituated to take bath everyday
    6. Any other, specify

19. For how many times you take bath
    1. More than once
    2. More than once only during summer
    3. More than once always (summer & winter)

20. Do you clean your nose:
    1. Yes
    2. No

21. If yes, when:
    1. During bath
    2. During morning face wash
    3. Any time whenever you feel it's dirty
    4. Any other, specify
    5. During cough and cold

22. Do you use handkerchief/hand during coughing and sneezing:
    1. Yes
    2. No

23. Do you cover your face/nose while coughing and sneezing:
    1. Yes
    2. No

24. Do you wash your hair:
    1. Yes
    2. No

25. If yes, how many times/ week:
    1. Once
    2. Twice
    3. More than twice

26. Materials used to wash hair:
    1. Soap
    2. Shampoo
    3. Only water
    4. Local products
    5. Herbs
    6. Mud
    7. Any other, specify

27. How frequently do you Wash your comb
    1. Daily
    2. Weekly
    3. Monthly
    4. Never

28. Do you comb your hair
    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

29. Do you oil your hair:
    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

30. How often you trim your nails (hand):
    1. Weekly
    2. Once in 15 days
    3. Monthly
    4. Like to keep long nails
    5. Any other, specify/ whenever nail grows long

31. How often you trim your nails (Toe):
    1. Weekly
    2. Once in 15 days
    3. Monthly
    4. Like to keep long nails
    5. Any other, specify/ whenever nail grows long

32. Do you wash your hands
    1. Yes
    2. No

33. If yes, on what occasions:
    1. After using the toilet (or disposing of human or animal faeces)
    2. After using urinal
    3. Before eating
    4. and after eating food
    5. After changing a baby's diaper (nappy) and disposing of the faeces.
    6. Immediately after touching raw food when preparing meals (chicken or other meat).
    7. Before preparing and handling cooked/ready-to-eat food.
    8. Before feeding children.
    9. After contact with contaminated surfaces (e.g. rubbish bins, cleaning cloths,).
    10. After handling pets and domestic animals.
    11. After wiping or blowing the nose or sneezing into the hands (respiratory hygiene).
    12. After handling soiled tissues (your own or others', e.g. children).
    13. Before and after contact with an infected wound.
    14. After contact with blood or body fluids (e.g. vomit).
    15. Before and after dressing wounds.
    16. Before giving care to an 'at risk' person (e.g. attending delivery, attending a baby).
    17. After giving care to an infected person.
    18. Any other, specify

34. Do you use any agent for washing hands
    1. Yes
    2. No

35. If yes, what do you use while washing your hands
    1. Soap
    2. Water
    3. Liquid soap
    4. Sanitizer
    5. Ash
    6. Mud
    7. Any other, specify

36. Do you wear chappals while going to toilet/ outside:
    1. Yes
    2. No

37. How frequently you change your innerwear:
    1. Regularly
    2. Twice/week
    3. Thrice/week
    4. Whenever you feel it's dirty
    5. Any other time, specify

38. Do you sundry your under garments:
    1. Yes
    2. No

39. How frequently you change your outerwear:
    1. Regularly
    2. Twice/week
    3. Thrice/week
    4. Whenever you feel it's dirty
    5. Any other time, specify

40. Do you wear washed clothes everyday:
    1. Yes
    2. No

41. Do you sundry your washed clothes:
    1. Yes
    2. No

42. Do you feel that you should keep the armpit clean
    1. Yes
    2. No

43. If yes, how do you clean
    1. Using soap/ liquid soap, etc
    2. By Shaving
    3. waxing
    4. Any other, specify

44. Do you clean your belly button
    1. Yes
    2. No

45. Where do you spit:
    1. On the ground
    2. In the dustbin
    3. Wherever you feel
    4. Any other, specify

46. In last six months, what are the diseases you or your family has suffered from:
    1. Diarrhea
    2. Dysentery
    3. Fever
    4. Cough cold
    5. Stomach problems
    6. Jaundice
    7. Skin disease
    8. Any others, specify

47. If yes, how many times
    1. Once
    2. Twice
    3. More than twice
    4. Did not suffer from any disease

48. Do you wash your feet before entering the house from outside:
    1. Yes
    2. No

49. Do you clean your anal after defecation:
    1. Yes
    2. No

50. What do you use to clean your anal:
    1. Clean water
    2. Soap and water
    3. Paper
    4. Leaves
    5. Any other, specify

51. Do you wash your hands after cleaning your anal:
    1. Yes
    2. No

52. Do you take care to wash your pubic parts:
    1. Yes
    2. No

53. If yes, how often with soap and water
    1. Everyday only with water and soap
    2. Occasionally with soap
    3. Only during menstruation
    4. Never

54. What do you use during your menstruation
    1. Clothes
    2. Napkin
    3. Cotton
    4. Any other, specify
    5. Menopause

55. How many times you change your napkin/ cloth during menstruation
    1. Twice
    2. More than twice
    3. Depends on the flow
    4. Menopause

56. Do you wash your hands after changing napkin/cloth
    1. Yes
    2. No

57. If yes, what do you use
    1. Soap
    2. Water
    3. Liquid soap
    4. Sanitizer
    5. Ash
    6. Mud
    7. Any other, specify

58. Do you cook food for the family:
    1. Yes
    2. No

59. Do you wash the vegetables before cooking:
    1. Yes
    2. No

60. If yes,
    1. Before cutting or peeling
    2. After cutting
    3. After peeling and cutting
    4. Depends on the vegetable
    5. Any other, specify

61. If no, then why:
    1. You think it is not important
    2. You don't know about washing them

62. Do you cover the prepared food:
    1. Yes
    2. No

63. If no, then why:
    1. Not aware
    2. Aware but do not find it important
    3. Forget
    4. Any other, specify

64. How often you clean the kitchen cooking slaps, kitchen tools, pot holders,
    1. Every day after cooking
    2. Weekly
    3. Once/15 days
    4. Monthly
    5. Any other, specify

65. Do you use garbage bin:
    1. Yes
    2. No

66. Do you use separate for wet anddry:
    1. Yes
    2. No
    3. Do not use dustbin

67. Do you cover the dustbin:
    1. Yes
    2. No
    3. Do not use dustbin

68. Do you wash the utensils after and before cooking:
    1. No
    2. Yes
    3. Only after cooking
    4. Not before cooking

69. Do you wash/clean the utensils before eating :
    1. Yes
    2. No

70. If yes, what material do you:
    1. Soap
    2. Detergent
    3. Ash
    4. Water
    5. Clean with pot holder
    6. Any other, specify

71. After eating when do you wash the utensils:
    1. Instantly after eating
    2. Wash after wards
    3. Wash after an hour
    4. Wash after more than one hour

72. What do you do with the dinner utensils
    1. Wash immediately after taking dinner
    2. Wash with clean water and keep for the next day to clean
    3. Keep it as such
    4. Any other, specify

73. Do you use any precautions for insects and cockroaches:
    1. Yes
    2. No

74. If yes, what
    1. Hit/ Market products
    2. Local indigenous products
    3. Any other, specify/ Sandals
    4. Uses no precautions

75. What is the first thing you do after collecting water for drinking:
    1. Filter
    2. Keep it for drinking
    3. Boiling & filter
    4. Others, specify

76. Do you broom your house:
    1. Yes
    2. No

77. If yes, then how many times a day:
    1. Once
    2. Twice
    3. More than twice
    4. Whenever it is dirty
    5. Any other, specify

78. How often you mop your house:
    1. Once
    2. Twice
    3. More than twice
    4. Whenever it is dirty
    5. Any other, specify

79. Do you mop the floors with medicated material:
    1. Phenyl
    2. Dettol
    3. Kerosene
    4. Cow dung paste
    5. Any other, specify

80. How do you clean your toilet
    1. Only water
    2. Harpic, etc
    3. Sand, mud
    4. Local products
    5. Any other, specify

FACTORS IMPEDING HYGIENE

What are the factors that that impede development of hygienic habits among women

1. Physical factors like sickness, disability, etc.
2. Large family size
3. Lack of water
4. Lack of toilet facility
5. Medical problem
6. Mental and psychological issues like depression, mood swings, low motivation
7. Lack of knowledge about personal hygiene
8. Not aware
9. Financial problems
10. Any other, specify

Government of India

INTERVIEW SCHEDULE FOR CHILDREN

A Study on Hygienic Practices among Women and Children in Rural and Urban Areas of Assam

(INTERVIEW SCHEDULE FOR CHILDREN) (6 years to 9 years)

Instruction for recording responses and filling boxes

4. **Use pencils, write neatly and clearly,**
5. **All to be completed. No box to be left empty,**
6. **Note down clearly the response of the respondents for open end questions**

A. Background Information

1. Name of the respondent:

2. Age of the Respondent:
   1. 6-9 years
   2. 10-14 years
   3. 15-18 Years

3. Address:
   1. Village/ Town:
   2. ICDS Project:
   3. District:
   4. Mobile Number:

4. Going to School/ Out of School:

5. Class:

6. Sex:
   1. Male
   2. Female

7. Religion:
   1. Hindu
   2. Muslim
   3. Christian
   4. Buddhist

8. Caste:
    1. General
    2. OBC
    3. SC
    4. ST
    5. Others

9. Community:

B. Household Information

10. Monthly Income
    1. Less than Rs.5000
    2. Rs. 5000 - Rs. 15,000
    3. Rs. 15,000 and above.

11. Family type:
    1. Nuclear
    2. Joint
    3. Extended

12. Family Size:
    1. 3 – 5 members
    2. 6 – 8 members
    3. 9 – 12 members
    4. More than 12 members

C. Personal Information

13. Do you brush your teeth everyday:
    1. Yes
    2. No

14. If yes, use of materials:
    1. Toothpaste/powder with brush
    2. Tooth paste/powder with finger
    3. Charcoal
    4. Tooth sticks/ plant
    5. Any other, specify

15. When do you brush your teeth:
    1. Morning after getting up
    2. After taking morning tea
    3. Morning after getting up & before sleeping
    4. More than twice, please specify

16. For how long you use your tooth brush
    1. 2 to 3 months
    2. 3 to 4 months
    3. After 6 months

17. Do you take bath regularly:
    1. Yes
    2. No

18. If yes, materials used:
    1. Soap
    2. Detergent
    3. Bar
    4. Only water
    5. Any other, specify

19. If no, reasons:
    1. Take bath on alternate day
    2. Mother/ Care giver busy
    3. Special need child
    4. Scarcity of water
    5. Climate is cold
    6. Any other, specify

20. Do someone help you in taking bath:
    1. Yes
    2. No

21. If yes, who helps
    1. Mother/ Father
    2. Siblings
    3. Grandparents
    4. Others, specify

22. Do you clean your nose:
    1. Yes
    2. No

23. If yes, how often:
    1. During bath
    2. During morning face wash
    3. Any time whenever you feel its dirty
    4. Any other, specify

24. Do you use handkerchief/hand during coughing and sneezing:
    1. Yes
    2. No

25. Do you cover your face/nose while coughing and sneezing:
    1. Yes
    2. No

26. Do you clean your ears:
    1. Yes
    2. No

27. If yes, how often:
    1. Regularly
    2. Weekly
    3. Once/15 days
    4. Monthly
    5. Any other, specify

28. Do you wash your hair:
    1. Yes
    2. No

29. If yes, how many times/ week:
    1. Once
    2. Twice
    3. More than twice

30. Materials used to wash hair:
    1. Soap
    2. Shampoo
    3. Only water
    4. Local products
    5. Any other, specify

31. Do you comb your hair
    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

32. Do you oil your hair:
    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

33. How often you trim your nails (hand):
    1. Weekly
    2. Once in 15 days
    3. Monthly
    4. Like to keep long nails
    5. Whenever nails becomes long
    6. Any other, specify

34. How often you trim your nails (Toe):
    1. Weekly
    2. Once in 15 days
    3. Monthly
    4. Like to keep long nails
    5. Any other, specify

35. Do you wash your hands
    1. Yes
    2. No

36. When do you feel you require hand washing:
    1. After using the toilet (or disposing of human or animal faeces)
    2. Before eating and after eating food
    3. After contact with contaminated surfaces (e.g. rubbish bins, cleaning cloths)
    4. After wiping or blowing the nose or sneezing do you wash your hands
    5. After coming from outside
    6. After doing urinal
    7. After caring a pet
    8. Any other, specify

37. Reasons for not washing hands:
    1. Forgot
    2. No time
    3. Have to do some other important thing
    4. No water
    5. Felt the need to wash hands
    6. Felt lazy
    7. Any other, specify

38. What do you use while washing your hands
    1. Soap
    2. Water
    3. Liquid soap
    4. Sanitizer
    5. Ash
    6. Any other, specify

39. Do you know unclean hands carry germs:
    1. Yes
    2. No

40. Do you wear chappals while going to toilet/ outside:
    1. Yes
    2. No

FACTORS IMPEDING HYGIENE

What are the factors that that impede development of hygienic habits among women

1. Physical factors like sickness, disability, etc.
2. Large family size
3. Lack of water
4. Lack of toilet facility
5. Medical problem
6. Mental and psychological issues like depression, mood swings, low motivation
7. Lack of knowledge about personal hygiene
8. Not aware
9. Financial problems
10. Any other, specify

(Name of the Investigator with Date)

Government of India

INTERVIEW SCHEDULE FOR CHILDREN

A Study on Hygienic Practices among Women and Children in Rural and Urban Areas of Assam

(INTERVIEW SCHEDULE FORCHILDREN) (10 years to 14 years)

Instruction for recording responses and filling boxes

7. **Use pencils, write neatly and clearly,**
8. **All to be completed. No box to be left empty,**
9. **Note down clearly the response of the respondents for open end questions**

D. Background Information

1. Name of the respondent:

2. Age of the Respondent: ☐
   1. 6-9 years
   2. 10-14 years
   3. 15-18 Years

3. Address:
   1. Village/ Town:
   2. ICDS Project:
   3. District:
   4. Mobile Number:

4. Going to School/ Out of School: ☐

5. Class: ☐

6. Sex: ☐
   1. Male
   2. Female:

7. Religion: ☐
   1. Hindu
   2. Muslim
   3. Christian
   4. Buddhist

8. Caste:
    1. General
    2. OBC
    3. SC
    4. ST
    5. Others

9. Community:

10. Household Information

10. Monthly Income
    1. Less than Rs.5000
    2. Rs. 5000 - Rs. 15,000
    3. Rs. 15,000 and above.

11. Family type:
    1. Nuclear
    2. Joint
    3. Extended

12. Family Size:

    1. 3 – 5 members
    2. 6 – 8 members
    3. 9 – 12 members
    4. More than 12 members

11. Personal Information

13. Do you brush your teeth everyday:

    1. Yes
    2. No

14. If yes, use of materials:

    1. Toothpaste/powder with brush
    2. Tooth paste/powder with finger
    3. Charcoal
    4. Tooth sticks/ plant
    5. Any other, specify

15. When do you brush your teeth:

    1. Morning after getting up
    2. After taking morning tea
    3. Morning after getting up & before sleeping
    4. More than twice, please specify

16. For how long you use your tooth brush

1. 2 to 3 months
2. 3 to 4 months
3. After 6 months

17. Do you take bath regularly:

1. Yes
2. No

18. If yes, materials used:

1. Soap
2. Detergent
3. Bar
4. Only water
5. Any other, specify

19. If no, reasons:
1. Take bath on alternate day
2. Mother/ Care giver busy
3. Special need child
4. Scarcity of water
5. Climate is cold
6. Any other, specify

20. Do someone help you in taking bath:
1. Yes
2. No

21. If yes, who helps
1. Mother/ Father
2. Siblings
3. Grandparents
4. Others, specify

22. Do you clean your nose:
1. Yes
2. No

23. If yes, how often:
1. During bath
2. During morning face wash
3. Any time whenever you feel its dirty
4. Any other, specify

24. Do you use handkerchief/hand during coughing and sneezing:

1. Yes
2. No

25. Do you cover your face/nose while coughing and sneezing:

1. Yes
2. No

26. Do you clean your ears:
    1. Yes
    2. No

27. If yes, how often:
    1. Regularly
    2. Weekly
    3. Once/15 days
    4. Monthly
    5. Any other, specify

28. Do you wash your hair:

    1. Yes
    2. No

29. If yes, how many times/ week:

    1. Once
    2. Twice
    3. More than twice

30. Materials used to wash hair:

    1. Soap
    2. Shampoo
    3. Only water
    4. Local products
    5. Any other, specify

31. Do you comb your hair:

    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

32. Do you oil your hair:

    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

33. How often you trim your nails (hand):

    1. Weekly
    2. Once in 15 days
    3. Monthly
    4. Like to keep long nails
    5. Whenever nails becomes long
    6. Any other, specify

34. How often you trim your nails (Toe):

1. Weekly
2. Once in 15 days
3. Monthly
4. Like to keep long nails
5. Any other, specify

35. Do you wash your hands:

1. Yes
2. No

36. When do you feel you require hand washing:

1. After using the toilet (or disposing of human or animal faeces)
2. Before eating and after eating food
3. After contact with contaminated surfaces (e.g. rubbish bins, cleaning cloths)
4. After wiping or blowing the nose or sneezing do you wash your hands
5. After coming from outside
6. After doing urinal
7. After caring a pet
8. Any other, specify

37. Reasons for not washing hands:

1. Forgot
2. No time
3. Have to do some other important thing
4. No water
5. Felt the need to wash hands
6. Felt lazy
7. Any other, specify

38. What do you use while washing your hands

1. Soap
2. Water
3. Liquid soap
4. Sanitizer
5. Ash
6. Any other, specify

37. Do you know unclean hands carry germs:

1. Yes
2. No

38. Do you wear chappals while going to toilet/outside:

1. Yes
2. No

39. How frequently you change your innerwear:

1. Regularly
2. Twice/week
3. Thrice/week
4. Whenever you feel its dirty
5. Any other time, specify

39. Do you sun-dry your under garments:

1. Yes
2. No

40. How frequently you change your outerwear:

1. Regularly
2. Twice/week
3. Thrice/week
4. Whenever you feel its dirty
5. Any other time, specify

41. Do you wear washed clothes everyday:

1. Yes
2. No

42. Do you sun dry your washed clothes:

1. Yes
2. No

43. Do you feel that you should keep the armpit clean

1. Yes
2. No

44. If yes, how do you clean:

1. Using soap/ liquid soap, etc
2. By Shaving
3. waxing
4. Any other, specify

45. If yes, how do you clean:

1. Using soap/ liquid soap, etc
2. By Shaving
3. Any other, specify

46. Do you clean your belly button:

1. Yes
2. No

47. Do you wash your hands after urinal:

1. Yes
2. No

48. Where do you spit:
    1. On the ground
    2. In the dustbin
    3. Wherever you feel
    4. Any other, specify

49. In last six months, what are the diseases you suffered from:
    1. Diarrhea
    2. Dysentery
    3. Fever
    4. Cough cold
    5. Stomach problems
    6. Jaundice
    7. Any others, specify

50. If yes, how many times
    1. Once
    2. Twice
    3. More than twice

51. Do you wash your feet before entering the house from outside:
    1. Yes
    2. No

52. Do you clean your anal after defecation:
    1. Yes
    2. No

53. What do you use to clean your anal:
    1. Clean water
    2. Soap and water
    3. Paper
    4. Leaves
    5. Any other, specify

54. Do you wash your hands after cleaning your anal:
    1. Yes
    2. No

FACTORS IMPEDING HYGIENE

What are the factors that that impede development of hygienic habits among women

1. Physical factors like sickness, disability, etc.
2. Large family size
3. Lack of water
4. Lack of toilet facility
5. Medical problem
6. Mental and psychological issues like depression, mood swings, low motivation
7. Lack of knowledge about personal hygiene
8. Not aware
9. Financial problems
10. Any other, specify

Government of India

INTERVIEW SCHEDULE FOR CHILDREN

A Study on Hygienic Practices among Women and Children in Rural and Urban Areas of Assam

(INTERVIEW SCHEDULE FORCHILDREN) (15 years to 18 years)

Instruction for recording responses and filling boxes

1. **Use pencils, write neatly and clearly,**
2. **All to be completed. No box to be left empty,**
3. **Note down clearly the response of the respondents for open end questions**

A. Background Information

12. Name of the respondent:

13. Age of the Respondent: ☐
    1. 6-9 years
    2. 10-14 years
    3. 15-18 Years

14. Address:
    1. Village/ Town:
    2. ICDS Project:
    3. District:
    4. Mobile Number:

15. Going to School/ Out of School: ☐

16. Class: ☐

17. Sex: Male/ Female: ☐

18. Religion: ☐
    1. Hindu
    2. Muslim
    3. Christian
    4. Buddhist

19. Caste:
    1. General
    2. OBC
    3. SC
    4. ST
    5. Others

20. Community:

B. Household Information

21. Monthly Income
    1. Less than Rs.5000
    2. Rs. 5000 - Rs. 15,000
    3. Rs. 15,000 and above.

22. Family type:
    1. Nuclear
    2. Joint
    3. Extended

23. Family Size:
    1. 3 – 5 members
    2. 6 – 8 members
    3. 9 – 12 members
    4. More than 12 members

C. Personal Information

24. Do you brush your teeth everyday:
    1. Yes
    2. No

25. If yes, use of materials:
    1. Toothpaste/powder with brush
    2. Tooth paste/powder with finger
    3. Charcoal
    4. Tooth sticks/ plant
    5. Any other, specify

26. When do you brush your teeth:
    1. Morning after getting up
    2. After taking morning tea
    3. Morning after getting up & before sleeping
    4. More than twice, please specify

27. For how long you use your tooth brush
    1. 2 to 3 months
    2. 3 to 4 months
    3. After 6 months

28. Do you take bath regularly:
    1. Yes
    2. No

29. If yes, materials used:
    1. Soap
    2. Detergent
    3. Bar
    4. Only water
    5. Any other, specify

30. If no, reasons:
    1. Take bath on alternate day
    2. Mother/ Care giver busy
    3. Special need child
    4. Scarcity of water
    5. Climate is cold
    6. Any other, specify

31. Do someone help you in taking bath:
    1. Yes
    2. No

32. If yes, who helps
    1. Mother/ Father
    2. Siblings
    3. Grandparents
    4. Others, specify

33. Do you clean your nose:
    1. Yes
    2. No

34. If yes, how often:
    1. During bath
    2. During morning face wash
    3. Any time whenever you feel its dirty
    4. Any other, specify

35. Do you use handkerchief/hand during coughing and sneezing:
    1. Yes
    2. No

36. Do you cover your face/nose while coughing and sneezing:
    1. Yes
    2. No

37. Do you clean your ears:
    1. Yes
    2. No

38. If yes, how often:
    1. Regularly
    2. Weekly
    3. Once/15 days
    4. Monthly
    5. Any other, specify

39. Do you wash your hair:
    1. Yes
    2. No

40. If yes, how many times/ week:
    1. Once
    2. Twice
    3. More than twice

41. Materials used to wash hair:
    1. Soap
    2. Shampoo
    3. Only water
    4. Local products
    5. Any other, specify

42. Do you comb your hair
    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

43. Do you oil your hair:
    1. Regularly
    2. Once/week
    3. Sometimes
    4. Only while going outside the home
    5. Any other, specify

44. How often you trim your nails (hand):
    1. Weekly
    2. Once in 15 days
    3. Monthly
    4. Like to keep long nails
    5. Whenever nails becomes long
    6. Any other, specify

45. How often you trim your nails (Toe):
    1. Weekly
    2. Once in 15 days
    3. Monthly
    4. Like to keep long nails
    5. Any other, specify

46. Do you wash your hands
    1. Yes
    2. No

47. When do you feel you require hand washing:
    1. After using the toilet (or disposing of human or animal faeces)
    2. Before eating and after eating food
    3. After contact with contaminated surfaces (e.g. rubbish bins, cleaning cloths)
    4. After wiping or blowing the nose or sneezing do you wash your hands
    5. After coming from outside
    6. After doing urinal
    7. After caring a pet
    8. Any other, specify

48. Reasons for not washing hands:
    1. Forgot
    2. No time
    3. Have to do some other important thing
    4. No water
    5. Felt the need to wash hands
    6. Felt lazy
    7. Any other, specify

49. What do you use while washing your hands
    1. Soap
    2. Water
    3. Liquid soap
    4. Sanitizer
    5. Ash
    6. Any other, specify

50. Do you know unclean hands carry germs:
    1. Yes
    2. No

51. Do you wear chappals while going to toilet/ outside:
    1. Yes
    2. No

52. How frequently you change your innerwear:
    1. Regularly
    2. Twice/week
    3. Thrice/week
    4. Whenever you feel its dirty
    5. Any other time, specify

53. Do you sun-dry your under garments:
    1. Yes
    2. No

54. How frequently you change your outerwear:
    1. Regularly
    2. Twice/week
    3. Thrice/week
    4. Whenever you feel its dirty
    5. Any other time, specify

55. Do you wear washed clothes everyday:
    1. Yes
    2. No

56. Do you sun dry your washed clothes:
    1. Yes
    2. No

57. Do you feel that you should keep the armpit clean
    1. Yes
    2. No

58. If yes, how do you clean
    1. Using soap/ liquid soap, etc
    2. By Shaving
    3. waxing
    4. Any other, specify

59. If yes, how do you clean
    1. Using soap/ liquid soap, etc
    2. By Shaving
    3. Any other, specify

60. Do you clean your belly button
    1. Yes
    2. No

61. Do you wash your hands after urinal:
    1. Yes
    2. No

62. Where do you spit:
    1. On the ground
    2. In the dustbin
    3. Wherever you feel
    4. Any other, specify

63. In last six months, what are the diseases you suffered from:
    1. Diarrhea
    2. Dysentery
    3. Fever
    4. Cough cold
    5. Stomach problems
    6. Jaundice
    7. Any others, specify

64. If yes, how many times
    1. Once
    2. Twice
    3. More than twice

65. Do you wash your feet before entering the house from outside:
    1. Yes
    2. No

66. Do you clean your anal after defecation:
    1. Yes
    2. No

67. What do you use to clean your anal:
    1. Clean water
    2. Soap and water
    3. Paper
    4. Leaves
    5. Any other, specify

68. Do you wash your hands after cleaning your anal:
    1. Yes
    2. No

69. Do you wash your pubic parts:
    1. Yes
    2. No

70. If yes, how often with soap and water
    1. Regularly
    2. Twice/week
    3. Weekly
    4. Only during menstruation
    5. Any other, specify

71. Do you clean the tip of the pennies:
    1. Yes
    2. No

72. Do wash your hands after touching your private parts:
    1. Yes
    2. No

73. What do you use during your menstruation:
    1. Clothes
    2. Napkin
    3. Cotton
    4. Any other, specify

74. How many times you change your napkin/ cloth during menstruation
    1. Twice
    2. More than twice
    3. Depends on the flow

75. Do you wash your hands after changing napkin/cloth
    1. Yes
    2. No

76. If yes, what do you use
    1. Soap
    2. Water
    3. Liquid soap
    4. Sanitizer
    5. Ash
    6. Mud
    7. Any other, specify

FACTORS IMPEDING HYGIENE

What are the factors that that impede development of hygienic habits among women

11. Physical factors like sickness, disability, etc.
12. Large family size
13. Lack of water
14. Lack of toilet facility
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16. Mental and psychological issues like depression, mood swings, low motivation
17. Lack of knowledge about personal hygiene
18. Not aware
19. Financial problems
20. Any other, specify

(Name of the Investigator with Date)