



Research Article

WATER, SANITATION AND HYGIENE (WASH) PRACTICES IN URBAN SLUMS

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ABSTRACT

Background: Adequate supply of safe water and basic sanitation are essential components of "primary health care". In India, according to the census 2011, population that lacked "improved" drinking water source and sanitation facilities were 14.5% and 58% respectively.

Objectives: To know

1. The proportion of the households having access to 'improved' drinking water source and 'improved' sanitation facility.
2. The proportion of caretakers safely disposing the recently passed stools of their children (<3yr).

Methods and Material: A cross sectional study was carried out in the field practice area of a private medical college, during January to March, 2014. A total of 200 households constituted the sample. Study was conducted using WHO/UNICEF-Joint Monitoring Programme survey questionnaire. Results were analyzed using Microsoft excel.

Results: There is 100% access to improved drinking water source but improved sanitation facilities were observed among 58% only. About 33% of the mothers in the urban area practicing safe disposal of childrens (<3yr) faeces.

Conclusions: Health education programs and public awareness campaigns to adopt healthy hygienic practices to be conducted actively in the urban slums to improve quality of life.

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INTRODUCTION

Adequate supply of safe water and basic sanitation are essential components of primary health care.¹ WASH is the collective term for Water, Sanitation and Hygiene. Due to their interdependent nature, these three core issues are grouped together to represent a growing sector. While each a separate field of work, each is dependent on the presence of the other. For example, without toilets, water sources become contaminated; without clean water, basic hygiene practices are not possible. Without these basic needs, the lives of millions of children are at risk. For children under five, water- and sanitation-related diseases are one of the leading causes of death. Every day, over 800 children die from preventable diseases caused by poor water, and a lack of sanitation and hygiene.²

663 million people are still without access to clean drinking water, despite the Millennium Development Goal target for clean water being met in 2010.159 million people use untreated water from lakes and rivers, the most unsafe water source. Since 1990, 2.6 billion people have gained access to improved drinking water and today, 91% of the world's population drink clean water. Yet In India, according to the census 2011, 14.5% of population lack access to improved source of drinking water.³

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Safety of drinking water is a growing concern in many parts of the world. Drinking water sources are increasingly under threat from contamination, which impacts on not only on the health of children, but also on the economic, environmental and social development of communities and nations. Threats to drinking water quality include unsafe handling and storage at the household: water drawn from safe sources may be contaminated by the time it reaches and is ultimately consumed in households

Sanitation is a comprehensive term and it means more than just toilets. Sanitation can be understood as interventions that reduce human exposure to diseases by providing a clean environment in which to live. It involves both behaviors and facilities, which work together to form a hygienic environment. Around 524 million people, which is nearly half the population of India, defecate in the open. India accounts for 90 per cent of the people in South Asia and 59 per cent of the 1.1 billion people in the world who practice open defecation.⁴

The safe disposal of children's faeces is of particular importance because children's faeces are the most likely cause of faecal contamination to the immediate household environment. The preferred disposal method, which is likely to ensure protection of the household environment from faecal contamination, is putting or rinsing stools into a sanitation facility. According to Unicef in India 44 per cent of mothers disposing their children's faeces in the open, there is a very high risk of microbial contamination (bacteria, viruses,

amoeba) of water which causes diarrhea in children. This is the main reason India reports the highest number of diarrhoeal deaths among children under-five in the world. Every year, diarrhoea kills 1,17,285 children under five in India.

Children weakened by frequent diarrhoea episodes are more vulnerable to malnutrition, stunting, and opportunistic infections such as pneumonia. About 38 per cent of children in India suffer from some degree of malnutrition. Diarrhoea and worm infection are two major health conditions that affect school-age children impacting their learning abilities. Open defecation also puts at risk the dignity of women in India. Women feel constrained to relieve themselves only under the cover of dark for reasons of privacy to protect their dignity.⁴ Open defecation exposes women to the danger of physical attacks and encounters such as snake bites. Poor sanitation also cripples national development: workers produce less, live shorter lives, save and invest less, and are less able to send their children to school.

MATERIALS AND METHODS

Study Design, Setting

It was a community based cross-sectional study conducted in two slums under the urban field practice area under the Department of Community Medicine, Dr.Pinnamaneni SIMS & RF. Study has been done over a period of 3 months from January to March, 2014.

Study Population: Was constituted by female respondents above 18 years of age present at the time of visit.

Inclusion criteria

1. Purpose of the study was explained and those who showed interest to participate after giving consent were included in the study.
2. Households with children <3 years

Exclusion criteria

1. Those who are not willing to participate in the study
2. Locked houses and houses where informants were not found during the time of visit.
3. Households with out children <3 years

Sample Size and Samplings

Urban Health and Training Center caters services to twenty slums with a population of 46,262. Two slums were selected randomly by lottery method and data was collected from 200 households with children <3 years.

Study Instruments and Data Collection

Data was collected using the WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation (JMP) household survey questionnaire.⁵ Before collection of the data oral consent was taken from the study subjects after explaining the importance of the study in detail. The data was collected by personally interviewing the respondents present during the time if visit.

Operational Definitions utilized in the study:⁵

Improved drinking water sources: Includes sources that, by nature of their construction or through active intervention, are protected from outside contamination, particularly faecal matter. It comprises piped water on premises such as piped household water connection located inside the user's dwelling,

plot or yard. Other improved drinking water sources include public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs and rainwater collection. Bottled water is considered improved only when the household uses water from an improved source for cooking and personal hygiene.

Unimproved drinking water sources: Include unprotected dug well, unprotected spring, cart with small tank/drum, tanker truck, and surface water (river, dam, lake, pond, stream, canal, irrigation channels), bottled water.

Open defecation: Defecation in fields, forests, bushes, bodies of water or other open spaces, or disposal of human faeces with solid waste.

Unimproved sanitation facilities: Facilities that do not ensure hygienic separation of human excreta from human contact. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines.

Shared sanitation facilities: Sanitation facilities of an otherwise acceptable type shared between two or more households. Shared facilities include public toilets. Shared or public facilities are not counted as improved.

Improved sanitation facilities: Facilities that ensure hygienic separation of human excreta from human contact. They include

Flush or pour-flush toilet/latrine to: piped sewer system
septic tank pit latrine
Ventilated improved pit (VIP) latrine
Pit latrine with slab
Composting toilet.

Sanitary disposal of children's faeces

- Child used toilet/latrine
- Put/rinsed faeces into the toilet or latrine
- Buried the faeces

Unsanitary disposal of children's faeces

- Put/rinsed faeces into drain or ditch
- Faeces thrown into the garbage
- Faeces left or buried in the open

Ethical Issues

Ethical clearance was obtained from the institutional ethical committee prior to the start of study. Questionnaire does not contain any identification details of the participant and confidentiality was maintained throughout the study.

Statistical Analysis

Data entry and statistical analysis was done using Microsoft excel. The study results were represented in form of percentages in tabular form.

RESULTS

Majority of the participants belong to the age group of 30 to 40 years. Mean age of the respondents is 36.4 years. 44% of the households use water from the public tap as main source for drinking and there is a 100 % utilization of improved drinking water source by households. Improved sanitation facility is available to 58%, with majority households had connection to piped sewer system. Sharing of toilet facility was noticed among 30.5% households and 11.5% households practice open defecation. Only 33% of caretakers put/rinsed faeces into the toilet or latrine. e disposing sanitarily.

Table 1 Age wise distribution of study participants

Age group	Percentage %
20-30	20.5%
30-40	30.5%
40-50	32%
50-60	17%
Total	100%
Mean age	36.45

Table 2 Main drinking water Source

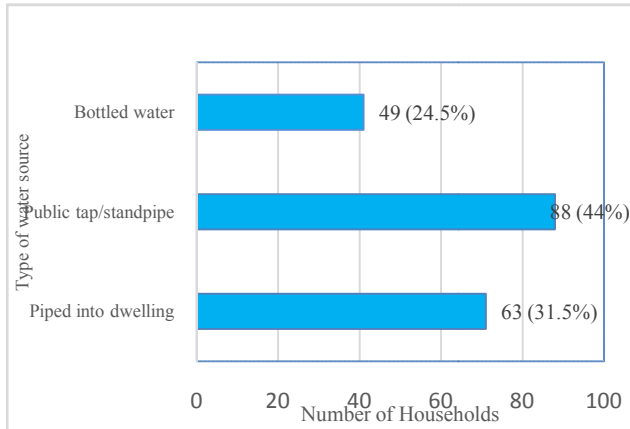


Table 3 Type of sanitation facility

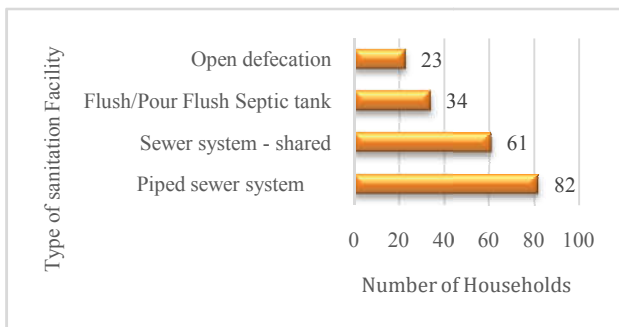
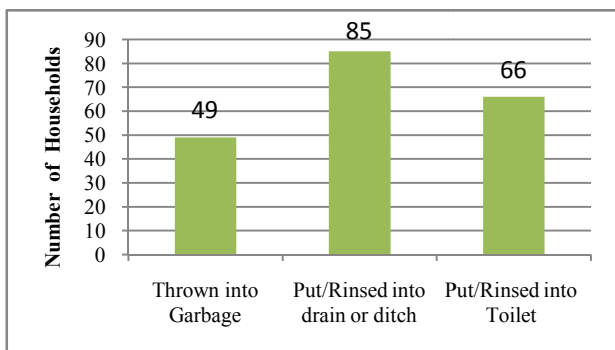


Table 4 Disposal of children’s faeces



DISCUSSION

In the present study percentage of the households with improved drinking water source, sanitation facilities were 100% & 58% respectively. Low level of unimproved sanitation when compared with the national and state is owing to the inclusion of shared sanitation facilities as unimproved facility by the WHO/UNICEF Joint Monitoring Programme which is not mentioned in census.

Type of Facility	Census - 2011				Present Study
	National	National-Urban	Andhra Pradesh	Andhra Pradesh - Urban	
Drinking water source Improved	85.5%	91.4%	90.5%	94.5%	100%
Drinking water source Unimproved	14.5%	8.6%	9.5%	5.5%	-
Sanitation facilities Improved	44%	79%	47.9%	83.3%	58%
Sanitation facilities Unimproved	58%	21%	52.1%	16.7%	42%
Safe disposal of child faeces(UNICEF)	44%	-	-	-	33%

CONCLUSION

Improved source of drinking-water is available for households in urban slums. In urban areas and slums in particular several families often share a facility. In the present study there is sharing of sanitation facilities was observed according to JMP shared or public facilities are not counted as improved and it suggested research to determine if generally as shared facilities should be considered unimproved, or if there is a reasonable cutoff point within which sharing can be seen as hygienically acceptable.⁵

Increasing the equitable access to and use of safe water and basic sanitation services and improved hygiene practices will reduce child mortality, improve health and education outcomes, and contribute to reduced poverty and sustainable development as a whole. Health education programs, public awareness campaigns to adopt healthy hygienic practices to be conducted actively to improve sanitation in the urban slums.

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