Original Research Article

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A study of hygiene and sanitation among migrants reporting to a primary health care setting in North Goa

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ABSTRACT

Background: Considering that poor hygiene and inadequate sanitation has always been a major public health challenge and is responsible for the increased burden of communicable diseases in developing countries, and also the migrant population being a vulnerable community, the present study has been undertaken to evaluate this issue among them.

Methods: A cross sectional study was conducted at a primary healthcare setting, wherein migrant population reporting to the centre were assessed for knowledge, attitude and practices regarding personal hygiene and sanitation. Also, the prevalence of hygiene and sanitation associated communicable diseases was assessed based on history and clinical examination to check for the same.

Results: The study revealed that most of the study participants used a shared/community latrine (86%), followed by single household latrine (10%) and 4% participants practiced open defecation. During post defecation handwashing, 42% used water and soap every time, 39% used water and soap sometimes and 19% used water only. The most commonly reported poor hygiene and sanitation associated illness was acute gastro-enteritis (52%), followed by respiratory tract infections (39%), taenia (22%), genitor-urinary infections (12%) and others such as eye infections, dental caries, etc. (15%). 85% practice sanitary disposal of solid and liquid waste and 15% dumped the waste at a dump site or into the gutter.

Conclusions: From this study, we can conclude that there is inadequate knowledge regarding good hygiene and sanitation practices, and also that considerable proportion of the study population follow unhygienic and unsanitary practices.

Keywords: Hygiene, Sanitation, Migrants

INTRODUCTION

Poor hygiene and inadequate sanitation has always been a major public health challenge and is responsible for the increased burden of communicable diseases in developing countries. Much of the world's population is in dire need of improved sanitation, but it remains a neglected priority.

In the year 2016, water, sanitation and hygiene was responsible for 8,29,000 annual deaths from diarrhoea, and 1.9% of the global burden of disease (in disability adjusted life years or DALYs). This makes this risk factor an important environmental contributor to ill health. Most diarrhoeal deaths in the world are caused by unsafe water, poor sanitation or poor hygiene. All-together, improvements related to drinking-water, sanitation, hygiene, and water resource management could result in

the reduction of almost 10% of the total burden of disease worldwide. 1

Diseases due to poor drinking-water access, unimproved sanitation, and poor hygiene practices cause 4.0% of all deaths and 5.7% of all disability or ill health in the world.²

Poor sanitation impairs health, leading to high rates of malnutrition and productivity losses. India's sanitation deficit leads to losses worth roughly 6% of its gross domestic product according to World Bank estimates by raising the disease burden in the country. The absence of an effective public health network in a densely populated country has resulted in an extraordinarily high disease burden. According to the UNICEF, hand washing with soap, particularly after contact with excreta, can reduce diarrhoeal diseases by over 40 per cent and respiratory infections by 30 per cent.³

Migrants often come from communities affected by war, conflict or economic crisis and undertake long, exhausting journeys that increase their risks for diseases that include communicable diseases, particularly measles, and food- and waterborne diseases.⁴

Lack of affordable housing in Indian cities force migrants to live in slums. Many seasonal migrants who are not even able to afford rents in slums are forced to live at their workplaces (such as construction sites and hotel dining rooms), shop pavements, or in open areas in the city.⁵

Therefore, the personal hygiene and sanitation practices are questionable in this group, thus making them a very vulnerable population. Urban sanitation remains understudied. More applied work is required to evaluate promising programs and address policy implementation weaknesses.⁶

Assessing the level of awareness about hygiene and sanitation, and educating them about good personal hygiene, regular use of sanitary latrines, water source protection, proper disposal of solid and liquid waste, etc., will help in controlling this issue.

Objectives

The objectives of the present study were to assess the knowledge, attitude and practices regarding hygiene and sanitation among migrants reporting to a primary health care setting and to determine the proportion of communicable diseases prevalent among the study participants.

METHODS

After receiving approval from the Institutional Ethics Committee, a health facility based cross-sectional study was conducted between December 2018 and February 2019 on a convenient sample size of 100 adult migrants reporting to the primary health centre, St. Cruz, North Goa.

After obtaining informed consent, data was collected by administering a pre-tested semi-structured questionnaire which included socio-demographic details, hand washing practices, personal hygiene characteristics, knowledge about sanitation, sanitary conditions, and presence of associated diseases. All the migrants residing in the state for less than a year were considered for the study. Also, the prevalence of hygiene and sanitation associated communicable diseases such as diarrhoea, hookworm infestation, scabies, taenia, genitourinary infections, pediculosis, respiratory infections etc., was assessed based on history of recent episode (within the last four weeks) and clinical examination to check for the same.

Statistical analysis

Data was entered in Epidata Manager and analyzed using the IBM SPSS version 22 software.

RESULTS

Out of the 100 study participants, 54% were males and 46% were females, belonging to the class III and IV socio economic status as per modified BG Prasad classification.

54% (37 males and 17 females) of study participants were involved in unskilled jobs (construction site labourer or janitor or wood chopping etc.), 15% (8 males and 7 females) were involved in semi-skilled (mason or carpenter or driver or security guard) jobs, 10% (9 males and 1 females) in skilled (electrician or plumbers or mechanic or cook) jobs and 21% (21 females) were homemakers.

Table 1: Distribution of study participant's with respect to knowledge about hygiene and sanitation (n=100).

Variable	Knowledge	N
Importance of using	Yes	39
sanitary latrine	No	61
Importance of proper handwashing	Yes	54
	No	46
Safe drinking water practices	Yes	43
	No	57
Sanitary disposal of	Yes	58
waste	No	42
Importance of regular use of footwear	Yes	83
	no	17

Out of the study population, 15% were illiterate, 25% had completed their primary school education, 28% had passed mid school (8th standard), 28% completed SSCE and 4% had completed HSSCE.

As is evident from Table 1 showing the knowledge of the migrants regarding hygiene and sanitation, it is observed that a majority of the migrants i.e., 61% were unaware of the importance of using a sanitary latrine while, 46% were unaware of the importance of proper handwashing. A high proportion i.e., 58% and 83% were unaware of sanitary disposal of waste and importance of regular use of footwear respectively. Whereas, only 43% of the migrants were aware of safe drinking water practices and practiced boiling of water meant for drinking and cooking purpose. A majority of the migrants i.e., 86% used a shared or a community latrine. Only 10% of the migrants had their own attached household latrine while 4% of them practiced open defecation (Figure 1).

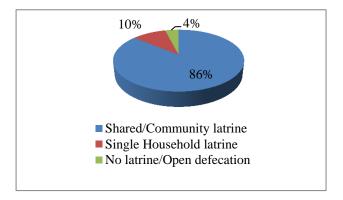


Figure 1: Place of defecation.



Figure 2: Post defecation handwashing.

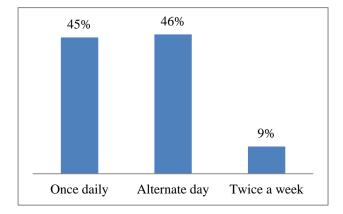


Figure 3: Frequency of bathing among study participants.

Figure 2 shows handwashing practices among migrants following defecation. Only 42% of the migrants washed their hands with soap every time after defecation, while 39% washed their hands with soap sometimes. As much as 19% of the migrants did not use soap for handwashing following defecation. On enquiring about frequency of bathing, only 45% responded that they have bath once daily. 46% of the migrants have bath on alternate day, while 9% of them have bath twice weekly (Figure 3).

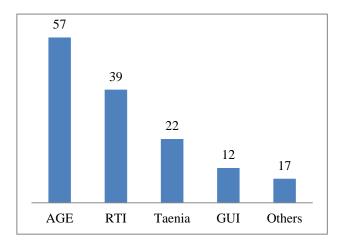


Figure 4: Frequency distribution of diseases associated with poor hygiene and sanitation*.

*Total was more than 100 since some study participants had more than one disease. AGE: acute gastro enteritis, RTI: respiratory tract infection, GUI: genito-urinary infections, Others: eye infections, scabies, dental caries etc.

Figure 4 shows the frequency distribution of diseases related to poor hygiene and sanitation. Majority of the episodes i.e., 57% were recent or current episodes of acute gastro-enteritis, 39% were respiratory tract infections, 22% were taenia infection, 12% were genitourinary infections and 17% were others such as eye infections, scabies, dental caries, etc.

Table 2 shows association between regular handwashing and incidence of acute gastro-enteritis. It is observed that there is a significant association between handwashing and incidence of acute gastro-enteritis with a p value <0.01, Pearson Chi-square=25.948 (p value <0.05 is considered significant).

It was also found that 70% (44 males, 26 females) of the study participants used footwear regularly and 30 % (18 males and 12 females) preferred to walk bare feet.

In this study, all the participants had access to tap water throughout the day. Most of them (57%) preferred drinking water directly from source without boiling it.

Majority of the study participants (96%) stored water in drums and bottles and (4%) stored water in utensils.

85% of the study participants practiced sanitary disposal of solid and liquid waste; whereas 15% of the study

participants practiced unsanitary waste disposal methods as they disposed the solid and liquid waste at an open dump site or into the gutter respectively and also did not follow waste segregation as they were not aware of the same.

Table 2: Comparison between regular hand washing practices and incidence of AGE.

Variable		AGE		
		Present N (%)	Absent N (%)	Total N (%)
Regular hand washing with soap	Yes	06	36	42
	No	38	20	58
Total		44	56	100

P value <0.01; Pearson Chi-square=25.948; (p value <0.05 is considered significant).

DISCUSSION

From this study it was noted that though all the study participants had a latrine available (either shared or single household), still 4% practiced open defecation, out of which 2% said they did so because of force of habit and 2% felt defecating in the open was more comfortable. These 4% participants belonged to the age group >60 years, males and were illiterate.

It was also found that most participants (42%) practiced hand washing only before meals and after defecation regularly. But some of the participants followed this only occasionally as they felt it was not convenient to use soap every time. It was also noted that very few participants followed handwashing with soap and water before cooking and after handling faeces of child (2%). About 2/5th of the study participants practiced regular handwashing post defecation using soap and water every time. The findings were similar to a study by Joshi et al and Sau et al.^{7,8}

It was found that the poor hygiene and bad sanitation practices were more common among those who were illiterate or less educated as compared to those who studied SSCE and beyond. These findings are similar to a study done by Verma et al and Farah et al. 9,10

Promoting good personal hygiene often requires that community members are mobilized towards this goal and awareness is raised about how to achieve it. It is important that hygiene education programmes do more than simply tell people that if they do not wash their hands they will become sick because of pathogens they cannot see. This rarely works. Instead, education programmes should try different methods to maximize community participation in the programmes and to encourage people to promote good hygiene. ¹¹

Almost half the study participants said they did not bathe on a regular basis. And as it was evident from the study, more number of the participants (59%) suffering from taenia, genital infections etc., were amongst those who did not bathe regularly and had poor personal hygiene. The decrease in frequency of bathing could probably also be attributed to the winter months during which the data collection for this study was done.

Regular bathing and laundering are important for cleanliness and good personal appearance. They also prevent hygiene-related diseases such as scabies, ringworm, trachoma, conjunctivitis and louse-borne typhus.¹¹

Around 1/3rd of the study population did not use footwear regularly. It was found that people with poor personal hygiene practices were also more likely to neglect their feet and presented with bad foot hygiene and also makes them prone to hookworm infections and injuries.

The findings given in Table 2 are consistent with the fact established by several other studies as well stating that there is a significant association between poor handwashing practices and AGE.

As per our study it was also seen that 15% of the study participants practiced unsanitary waste disposal methods; they disposed the solid and liquid waste at an open dump site or into the gutter respectively and also did not follow waste segregation as they were not aware of the same.

These findings were in accordance to studies done by Bhattacharya et al and Mehta et al in Madhya Pradesh and Haryana respectively. 12,13

Lack of safe water supply, poor environmental sanitation, improper disposal of human excreta and poor personal hygiene helps to perpetuate and spread diarrheal diseases in India. ¹⁴

A number of factors have been found to play an important role in determining toilet use. Sticking to toilet-using habit depends on construction aspects such as a good and well maintained, user friendly structure that protects privacy, has availability of water and where the owners are aware of the benefits of good sanitation. ¹⁵

CONCLUSION

From this study, we can conclude that there is inadequate knowledge regarding good hygiene and sanitation practices, and also that considerable proportion of the study population follow unhygienic and unsanitary practices. Though these findings can't be generalised for the entire population. High proportion of AGE was noted

among the study participants, which can be managed by promoting regular use of sanitary latrine and also educating the masses about proper hand washing habits.

There is a need to create increased awareness about good hygiene and sanitation practices and its importance via IEC activities such as health talks, skits, demonstration, cleanliness drives; and active community participation to help curb this issue and lessen the burden of disease.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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