

Short

Communication

Personal hygienic practices of school going adolescents – A cross sectional study in Chennai

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Introduction:

As per World Health Organization estimates, acute diarrhoeal diseases and respiratory infections are the leading causes of death among children¹. Diarrhoeal diseases kill nearly 2 million children every year². Repeated diarrhoeal episodes during childhood and adolescence can lower the fitness and productivity during adulthood³. The main source of diarrhoeal pathogens is the human faeces and for transmission of these faecal pathogens from one infected host to other contaminated hands plays an important role. Hygiene education and hand washing with soap are proved to be cost effective primary preventive measure for diarrhoeal diseases⁴.

Though airborne route is the main mode of transmission for respiratory pathogens, previous studies^{5,6} have proved that contaminated hands play a role in transmission of respiratory pathogens. Hand washing with soap reduces the transmission of respiratory infections by 16-21%^{7,8}. There is also evidence from epidemiological studies that hand washing with soap is effective in preventing skin infections such as impetigo⁹.

Poor oral hygiene among adolescents can lead to various dental diseases including dental caries thereby resulting in pain and discomfort thus interfering with their ability to learn and communicate¹⁰. Tooth brushing twice daily help to promote oral hygiene and prevent dental caries¹¹.

Though hand washing with soap was found to be an important health determinant, it is less frequently studied among adolescents. We presented in this study the prevalence of personal hygienic practices among adolescents. These study findings were part of the main study conducted to determine the risk factors for non communicable diseases among school students.

Methods:

This is a cross sectional study conducted among students in VIII- XII Std classes in 2009 in Chennai, Tamil Nadu. Out of 658 secondary and higher secondary schools in Chennai city (475 private and 183 government, govt aided, trust managed schools) as listed in Tamilnadu government website, 60 schools were selected randomly and approached for permission. The schools which gave permission were included in the study (N=30). The schools included were 17 (3.5%) private and 13 (7.1%) government, govt aided, trust managed schools.

The number of students selected from 30 schools was 1832. In each school, the students studying in VIII- XII Std eligible to participate in the study. A sampling frame was prepared by enlisting the students name using attendance register of all the sections in VIII- XII Std classes and 64 students were selected by simple random sampling technique using table of random numbers. The randomly selected students were requested to assemble in a separate room and after obtaining informed consent data was collected using a self administered questionnaire. The questions on hygienic practices were taken from age appropriate Global School Based Student Health Survey (GSHS) questionnaire modified for India. English version of the questionnaire was translated to Tamil and both English and tamil versions were used depending on the medium of school. Ethical approval for this study was obtained from the Institutional Ethics Committee of Sri Ramachandra University, Porur, Chennai. Data was analyzed using SPSS for Windows Version 15. Pearson Chi-square test was used to find statistical significance.

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Results:

This study was conducted among 1842 randomly selected students from 30 schools in Chennai, Tamilnadu. The sample included 895 boys and 947 girls. The age group of study participants ranged between 12 and 18 years. There were 760 students (41.3%) in the age group 12-14 and 1082 students (58.7%) in the age group 15-18 years. In this study, 1078(58.5%) students were studying in private schools and 764 (41.5%) students were studying in government / government aided /trust managed schools.

The following results pertain to past 30 days as reported by the students at the time of data collection. The percentage of students who cleaned or brushed their teeth one or more times was 99.6%. Overall, 76.8 % of students always washed their hands before eating and 80.7% washed their hands after using the toilet or latrine. Overall, 19.2% of students always used soap when washing their hands. There were no significant difference in hygiene related behaviour between boys and girls (Table 1).

Table 1. Hygiene-related behaviour among adolescents by sex.

Characteristic	Male	Female	Total	95% CI
Students who brushed their teeth 1 or more times per day	889(99.3%)	945(99.8%)	1834(99.6%)	99.3– 99.9
Students who always washed their hands before eating	694(77.5%)	721(76.1%)	1415(76.8%)	74.9- 78.7
Students who always washed their hands after using the toilet or latrine	716(80%)	770(81.3%)	1486(80.7%)	78.9– 82.5
Students who always used soap when washing their hands	174(19.4%)	179(18.9%)	353(19.2%)	17.4 -21.0

Discussion

The present study reports the personal hygienic practices of school going adolescents in Chennai. Regular brushing the teeth using tooth paste two times a day which is important for preventing dental caries is reported by majority of the students in this study. In the present study nearly 77% of students reported that they always washed their hands before eating but only 19% used soap for hand washing. Contaminated hands play an important role in faeco oral transmission of infections. Hand washing with soap reduces diarrhoeal morbidity by 44% and respiratory infections by 30%¹ and is the most effective and inexpensive ways

to prevent diarrhoeal diseases and pneumonia¹². A study done in Maharashtra demonstrated the presence of bacterial pathogens in the hands of all 400 students whose hand swabs were examined¹³ and another study¹⁰ done in Bangalore and Kolkata demonstrated the presence of pathogenic organisms on the hands of 61% of the children examined. In the present study only one fifth of the students wash their hands with soap and 20% of students do not wash their hands after defecation. It is important that teachers should orient the students about the necessity for hand washing with soap before eating as well as after defecation in order to protect

their health. It is also equally important that schools should take efforts to provide soaps and sufficient water supply in toilets to facilitate hand washing practices among adolescents in schools.

Conflicts of interest: None declared

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