



Short Communication

General Perspective Regarding Hand Washing Practices in Karachi, Pakistan

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ABSTRACT

This survey was conducted to evaluate the hand washing practices in the cosmopolitan city of Karachi-Pakistan. In this study, male (n = 250) and female (n = 200), between the age group 20-50 years, were asked regarding their hand washing attitude and their perception. All the respondents were literate with minimum school level and maximum higher education (university graduate). Despite the fact washing is a part and parcel being religious instruction of Islam, and Karachi is considered as the most advanced, cultured and educated city, the results of this survey were not up to expectation. Only 30% were aware of the fact that the contaminated hands may spread diarrhea, other practices like coughing and sneezing may contribute in spreading infections in the community was known to 40% only. Apart from this, only 40% reported to wash hands frequently, about 50% knew about antibacterial soap, 40% yet wash hands with plain water without soap, nonetheless, most of the respondents like 80% often get confused in the selection of antibacterial soap due to multitude number of commercial claiming themselves the best. Moreover, majority of the respondents 60% use towel for drying hands and among them, 70% of the population shared towel at home and other places. Furthermore, 50% follow the culture of washing hands before having food and 70% follow good practice as wash hands after using toilet. In addition to this, 80% were cognizant of this fact that the training in terms of course curricula must be introduced at grass root level in schools.

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The involvement of hands in the transmission of infections has been well accepted in literature. However, the compliance to hand washing is exceedingly low. Many reasons account for this, including lack of hand decontamination facilities; less availability of time due to high number of patients and inadequate knowledge regarding the proper methods of decontamination as well as the risks of non-compliance. Hand hygiene esp. in healthcare settings is strongly recommended by the United States CDC; and is considered to be highly important way to prevent the transmission of pathogenic bugs [1]. Washing hands using soap and water is the most efficient method to decrease the number of microorganism on them. However, in case of unavailability, 60% alcohol containing sanitizers are also considered useful, although sanitizers do not remove all kinds of germs [1]. Globally, many studies have shown the contamination of hands and resulting transmissions of various kinds of microbial pathogens. A study reported hands of 17% of the staff of an intensive care ward to be contaminated with *Klebsiella* spp [2]. It also showed that routinely washing of hands significantly reduced the frequency of patients infected with *Klebsiella* spp [2]. Gwaltney et al reported a 71% transmission of Rhinovirus within only 10-second hand contact

exposures [3]. A study from Iowa City, USA reported an epidemic of infection with *Pseudomonas aeruginosa* in surgical ICU through the hands of a health care providers [4]. Lues et al proved a very significant 98% contamination of hands of food handlers in South Africa, out of which 88% were contaminated with *Staphylococcus aureus* [5]. Thus, the rationale of our study is to evaluate the general perspectives of hand washing practices in the general population of Karachi, Pakistan. This study would help assess the level of urgency of the requirement of mass-scale campaigns to improve the knowledge and practice of the people related to hand hygiene.

The survey was conducted to evaluate the hand washing practices of the residents of Karachi-the cosmopolitan city of Pakistan. A questionnaire was developed comprising of twenty most relevant and direct queries based upon general hand-washing attitudes. This survey was done on small sample size of 450 people including 250 male and 200 females. The participants of the survey was randomly selected from various locations in Karachi, Pakistan during a period of four months i.e August-November, 2011. The study was conducted at six important and highly populated areas of the Karachi-

approaching common people including; Saddar, North Karchahi, North Nazimabad, Gulistan-e-johar, Bahardurabad, Defence, Landhi and Malir areas of Karachi city. The questionnaire is closed end based upon yes and no reply. In addition to this, the questionnaire was also designed in Urdu language, a mother tongue in Pakistan and provided them on request for the convenience of some respondents during study who are not good at English. The data was finally collected, analyzed and the results were expressed in percentages in the form of graphs.

The present study regarding hand-washing practices was based on four months survey conducted from August-November, 2011 in different areas of Karachi. The general information was collected from 450 population (250 males and 200 females) aged between 20 to 50 years including 30% illiterate, 50% matriculate, and 30% intermediate while just 20% were highly educated as mentioned in Fig 1 and Fig 2. The entire population was affiliated with different professions. The results showed that the 80% population believed that the washing is a part of the religious practice however; they were confused in the selection of antibacterial soap and intended to get proper training about hand washing in school.

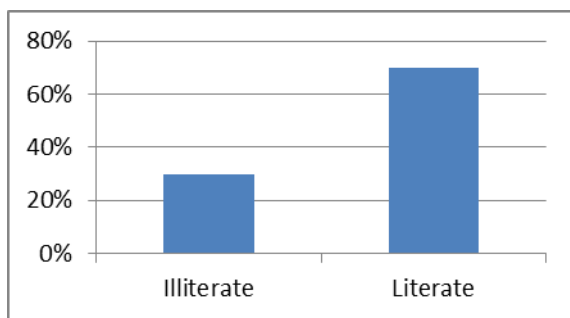


Figure-1: Percentage of illiterate people participants was 30% as compared to literate participants 70%

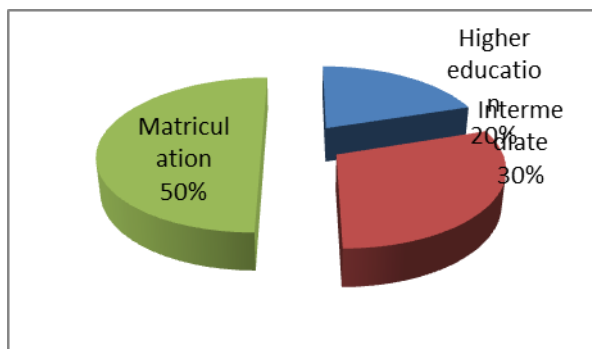


Figure-2: Number of participants having higher education, intermediate and matriculation were 20%, 30% and 50% respectively.

A study conducted in Geneva, Switzerland showed only 48% compliance with hand washing in a healthcare center [6]. Jeong et al conducted a countrywide study in Korea where only 63.4% of observed participants washed their hands after using a public toilet [7].

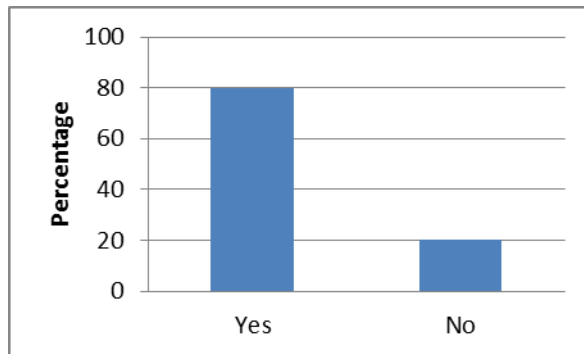


Figure-3: Number of participants considering hand-washing a religious practice

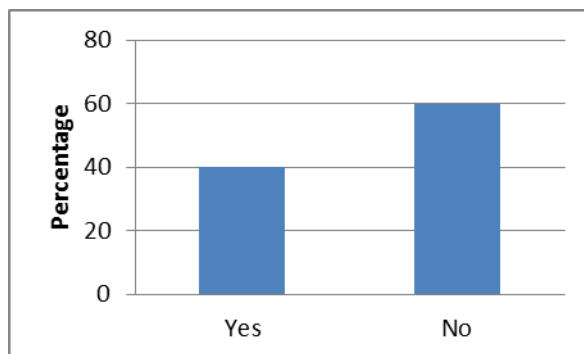


Figure-4: Number of participants that regularly wash hands

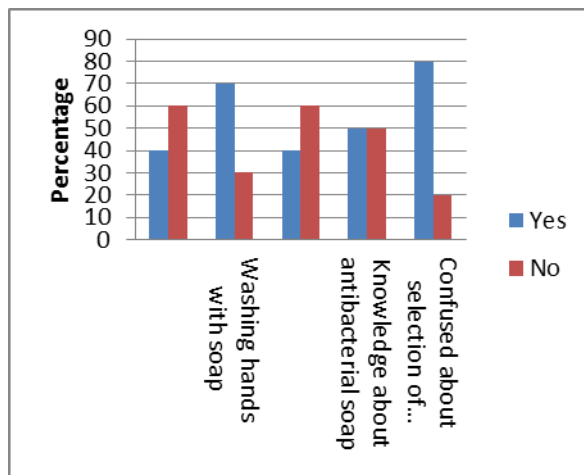


Figure-5: answers of participants to different questions in the survey

The 70% inhabitants agreed with the washing hands with soaps specially after using toilet but they used shared towel. In response to our question about the hand drying with towel, 60% people have the same opinion that they prefer to dry their hands with towel. Though, they all were familiar with the intensifying infection by dirty nails. Half of the total

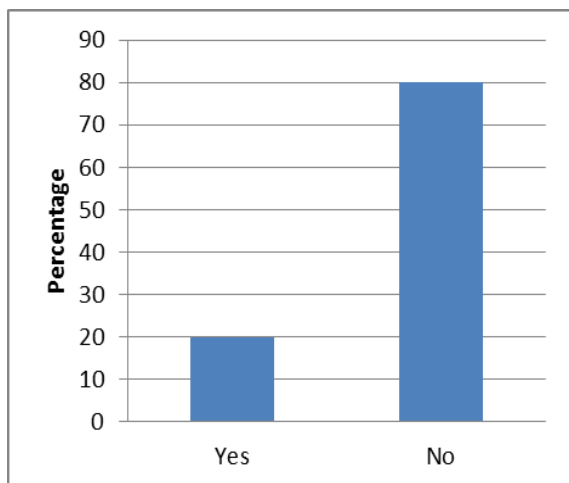


Figure-6: Number of participants wash had for less than a minute

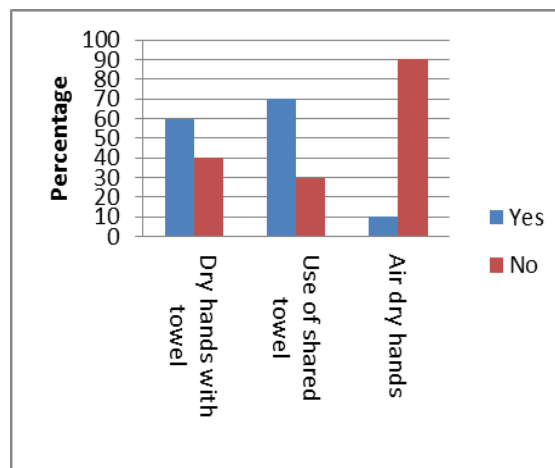


Figure-7: Number of participants using towel

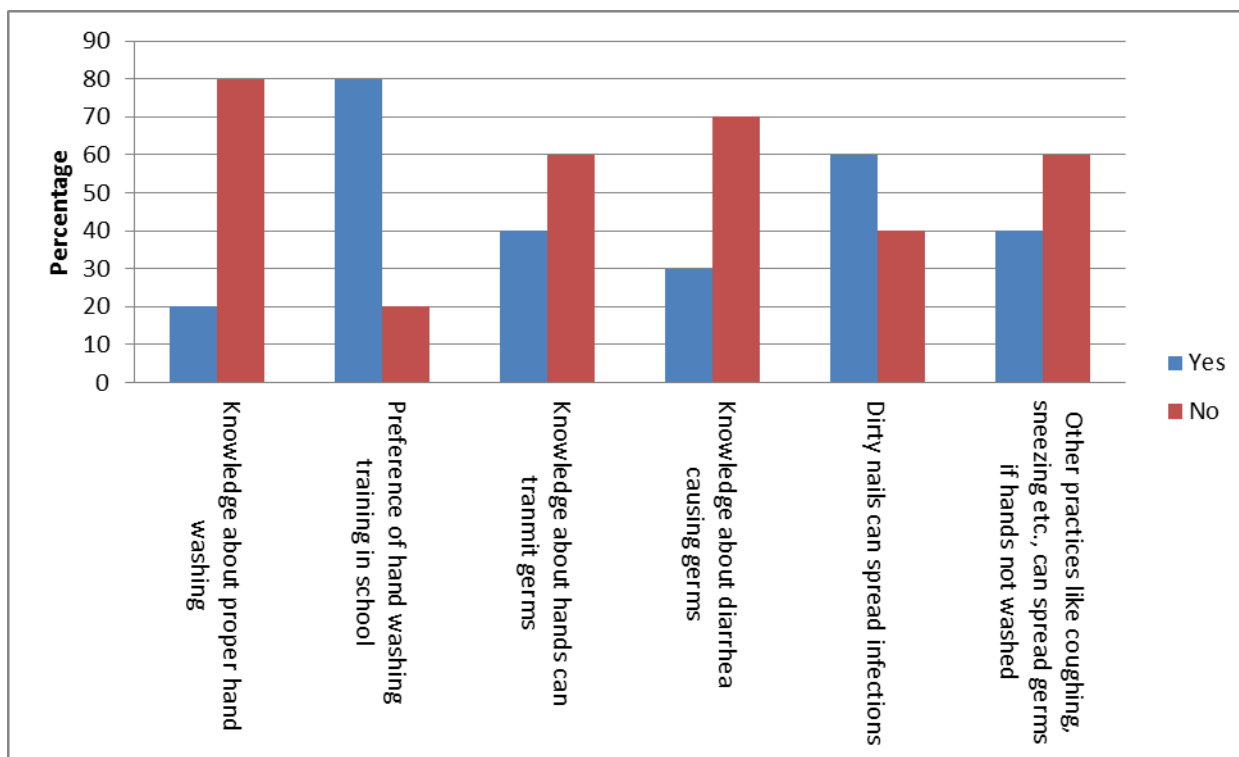


Figure-8: Answers of participants to some basic questions related to germs and hand washing.

population (50%) was acquainted with the use of antibacterial soap and they always wash hands before taking meal as shown in Fig 7 and Fig 8. A study from Karachi, Pakistan reported that only 8.9% doctors and staff of major public sector hospitals were practicing hand washing, while the facility was only present in 16.8% units. Further, only 68.8% providers were aware of the benefits of hand decontamination. It also showed that only 48.7% doctors were positive for adopting the hand washing practices if the proper facilities were provided [8]. However, any such data that represents the knowledge of general population has not been yet reported. According to our survey 40% local community was aware about the frequently wash hands with antibacterial or ordinary soap. Most

prominently, they knew that dirty hands and other practices like coughing, sneezing etc. can transmit germs while 30% persons had knowledge that diarrhea may be caused by germs. 20% people wash their hands in less than a minute though they had proper information about hand washing, just 10% of the entire population preferred to dry hands in air as indicated in Fig 8. According to one of the review by Guzewich and Ross that 89% of these outbreaks are due to the transmission of pathogens to food by workers' hands that indicates non compliance with hand washing [9]. Moreover, another study exclusively conducted on mothers highlighted that they do not give priority to hand washing while dealing with kids and their articles [10]

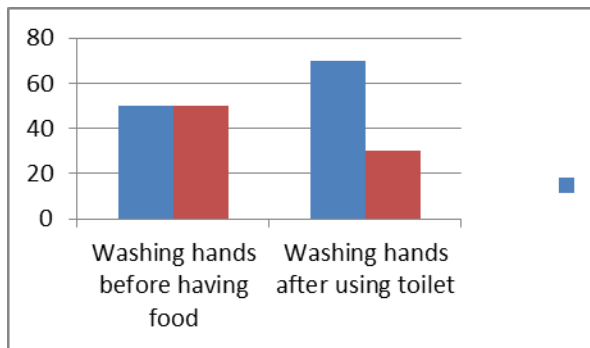


Figure-9: Number of participants washing hands before eating

CONCLUSION

The study of this survey plays a very important role to evaluate the attitude and practices of hand washing among people of Karachi, a major city of Pakistan. Despite of having better living standards, enjoying a bit better socio-economic conditions, somehow availability of soap and water for washing hands far better literacy rate in comparison to other counter parts city, yet the results obtained were not up to satisfactory level. In the light of results, we strongly realize that hands are the basic tools of transmitting pathogenic microorganisms from one point to another, as these bugs do not need any passport of travelling. What we can do is to do proper hand washing to

break the chain of infection. There is still dire need of creating awareness among them to put more attention towards this very simple, easy and important attitude that may save them from multitude number of diseases.

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