

KNOWLEDGE, ATTITUDE AND SELF-REPORTED HAND WASHING PRACTICE AMONG HEALTHCARE STAFF OF MILITARY HOSPITAL, RAWALPINDI

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ABSTRACT

Hand washing can be regarded as one of the most effective and important hygiene promotion programmes for community as well as hospital based settings. A cross sectional survey was carried out at Military Hospital, Rawalpindi, over 03 months from September to November 2012. The survey was conducted to assess the knowledge, attitude and self-reported hand washing practice among healthcare staff (nurses) working in family OPD and ward. Data was entered and analyzed in SPSS 16. Descriptive statistics was used in the form of numbers and percentages. It was believed by 95% of staff that handwashing can reduce infection rates in hospitals. Among the respondents, 24.2% expressed strong dissent on washing hands only with water, however, 22.5% considered it enough. Patients never (50%), sometimes (21.7%), seldom (19.2%), often (9.2%) asked health care staff about hand washing. Staff reported their practice of hand washing before touching patients as often (32.5%), sometimes (37.5%), seldom (20.8%) and never (9.2%).

Keywords: Attitude, Hand washing, Knowledge, Practice.

Keeping hands clean is one of the best ways to prevent the spread of infection and illness¹. According to WHO guidelines, hand washing is washing hands with plain or antimicrobial soap and water. For centuries, hand washing with soap and water has been considered a measure of personal hygiene but the link between handwashing and the spread of disease has only been established in the last 200 years.

A cross sectional survey was carried out at family OPD and wards of Military Hospital, Rawalpindi, over 03 months from September to November 2012. Healthcare staff (nurses and paramedics) working in family OPD and ward were included in the study. The survey was conducted to assess the knowledge, attitude and self-reported handwashing practice among nurses and paramedics. Using WHO calculator, sample size study was calculated as 114, keeping 95% confidence interval, anticipated knowledge of nurses as 92% and precision of 0.05. Inflating the sample size by 5% for incomplete responses, sample size was calculated as 120. The nurses

were selected using non probability convenient sampling technique.

A self-structured questionnaire was constructed and fourth year medical students were trained in collecting data by administering questionnaires. Brief introduction to the topic was given and verbal consent was taken prior to filling in the questionnaires. The questionnaire comprised closed ended questions on knowledge, attitude and practice. The responses on Likert scale were recorded and percentages were calculated. The qualitative data for each variable was entered and analyzed through statistical package for social sciences version 16.0. Descriptive statistics was used in the form of numbers and percentages.

Among 120 healthcare staff (nurses), majority were working in wards (70.8%). The mean age of healthcare staff was 26.2 years (SD= \pm 3.2 years). The fact that hand washing day is celebrated internationally every year, was known to only 50.8% healthcare staff. Ninety five percent (95%) believed that washing hands can control infection rates in hospitals. Among these, 51.7% showed strong agreement, however, 43.3% only agreed upon this reality. The presence of soap for washing hands was always ensured by 86.7% in home and work place all the time. The motivation

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of healthcare staff towards usage of soap was measured in terms of always (50.8%), often (40%), rarely (7.5%), never (1.7%). Among the respondents, 24.2 % expressed strong dissent on washing hands only with water, however, 10% and 22.5% considered it strong enough and mere enough respectively. Patients never (50%), sometimes (21.7%), seldom (19.2%), often (9.2%) asked health care staff about handwashing. Staff reported their practice of handwashing before touching patients as often (32.5%), sometimes

public health in developing countries². It can be regarded as a foremost measure to decrease the rate of infections in any healthcare center. Hand washing practice is the simplest preventive act to control disease but many ignored its magnitude³. A large number of diseases are known to be transmitted by unwashed or dirty human hands but they can be prevented by merely washing hands effectively. According to a study on human volunteers, washing hands with a non bacterial soap is statistically higher ($p < .001$)

Table-1: KAP survey of hand washing among healthcare staff.

Knowledge	Frequency distribution (%)
1) Do you know hand washing day is celebrated globally? i) Yes ii) No	50.8% 49.2%
2) Do you think washing hands can control infection in hospitals? i) Strongly agree ii) Agree iii) Undecided iv) Disagree v) Strongly disagree	51.7% 43.3% 4.2% 0.0% 0.8%
Attitude	
1) Do you always ensure presence of soap in home and work place all the time? i) Yes ii) No	86.7% 13.3%
2) Are you motivated to use soap every time you wash hands? i) Always ii) Often iii) Rarely iv) Never	50.8% 40% 7.5% 1.7%
3) Do you think washing hands only with water is enough? i) Strongly agree ii) Agree iii) Undecided iv) Disagree v) Strongly disagree	10% 22.5% 12.5% 30.8% 24.2%
Practice	
1) Have you ever been asked about hand washing by patient? i) Often ii) Sometime iii) Seldom iv) Never	9.2% 21.6% 19.2% 50%
2) Do you wash your hand before touching the patient? i) Often ii) Sometime iii) Seldom iv) Never	32.5% 37.5% 20.8% 9.2%

(37.5%), seldom (20.8%) and never (9.2%).

Hand washing can be regarded as one of the most effective hygiene promotion programmes of

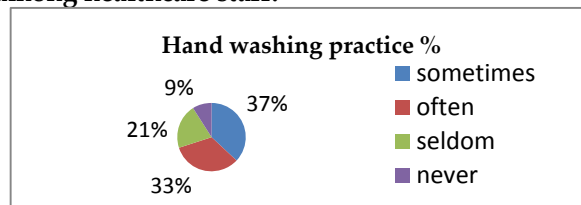
when compared to alcohol-based hand rubs of different compositions against viral infections⁴. Washing hands with a non-antibacterial soap and

water is more useful for the removal of bacteria especially of faecal origin than handwashing with water alone and thus can significantly control transmission of diarrhoeal diseases⁵. The importance of washing hands with soap should not be denied, however this was recognized by only 50% of healthcare staff in Military hospital (MH).

Healthcare workers survey, in tertiary care hospital in Boston, reported that 89% knew importance of handwashing as a valuable tool of preventing infection⁶. According to a cross sectional study in Karachi on trainees of teaching hospitals, overall compliance of hand hygiene was found to be 38.8%⁷. Adherence with hand hygiene guidelines among nurses in secondary care hospitals in Kuwait was 33.4%⁸. Similar findings were seen in an observational study in Cairo on healthcare workers (34%)⁹. The results are comparable to the practice of healthcare staff in MH (32.5%). The reasons given by nurses for this poor compliance were dense working conditions, uneasy access to necessary materials and drying and soreness of hands after frequent handwashing¹⁰.

The hand washing hand book declares this practice to be more effective than any single vaccine and that hand washing with soap can be called as a 'do-it-yourself' vaccine¹¹. A recent review declared hygiene promotion activities like hand washing as the most cost-effective intervention to prevent disease, at a cost of \$3.4 for each disability-adjusted life year saved¹². A release signed in Tamale acknowledged hand washing as being a significant practice to achieve the Millennium Development Goals (MDGs). It was further emphasized that hand-washing with soap, joined with educational proposals could be one of the world's most cost-effective preventive health involvements¹³. The evaluation of any programme should be done as Hand Hygiene Self-Assessment Framework Global Survey (HHSFA) is a tool to provide systematic situation analysis of hand hygiene structures, resources, promotion, and practices within a health-care

Figure-1: Self-reported hand washing practice among healthcare staff.



facility¹⁴. India scored 8, Iran 64, compared to United states of America 129 but no such scoring record was available for Pakistan¹⁵.

The search for reasons of continued burden of fecal-oral route morbidity in hospitals needs focusing in terms of health education and behavioral change on simple yet cost - effective hygiene techniques like hand washing.

REFERENCES

- Center for Disease Control and Prevention . Handwashing; clean hands save lives. [internet] Atlanta: The organization 2013 [updated 2013 Feb 14; Cited 2013 Feb 16]. Available from : <http://www.cdc.gov/features/handwashing>
- Rabbi SE, Dey NC. Exploring the gap between hand washing knowledge and practices in Bangladesh: a cross-sectional comparative study. *BMC public health* 2013; 13: 89.
- S Sulaiha SA, Ling WY, Chin LJ, Eow WL, Muhamad Faiz S, Noris Chien et al. The lack of effective hand washing practice despite high level of knowledge and awareness in medical students of clinical years. *IeJSME* 2010; 4(2): 18-26
- Grayson ML, Melvani S, Druce J, Barr IG, Ballard SA, Johnson PD et al. Efficacy of soap and water and alcohol-based hand-rub preparations against live H1N1 influenza virus on the hands of human volunteers. *Clin Infect dis* 2009; 48(3):285-91.
- Burton M, Cobb E, Donachie P, Judah G, Curtis V, Schmidt WP. The effect of handwashing with water or soap on bacterial contamination of hands. *Int J Environ Res Public Health* 2011; 8(1): 97-104.
- Harris AD, Samore MH, Nafziger R, DiRosario K, Roghmann MC, Carmeli Y. A survey on handwashing practices and opinions of healthcare workers. *J Hosp Infect* 2000; 45(4):318-21
- Anwar MA, Rabbi S, Masroor M, Majeed F, Andrades M, Baqi S et al. Self-reported practices of hand hygiene among the trainees of a teaching hospital in a resource limited country. *J Pak Med Assoc* 2009; 59(9): 631-4.
- Al-Wazzan B, Salmeeen Y, Al-Amiri E, Abul A, Bouhaimed M, Al-Taiair A. Hand hygiene practices among nursing staff in public secondary care hospitals in Kuwait: self-report and direct observation. *Med Princ Pract* 2011; 20(4): 326-31
- Abd Elaziz KM, Bakr IM. Assessment of knowledge, attitude and practice of hand washing among health care workers in Ain Shams University hospitals in Cairo. *J Prev Med Hyg* 2009; 50(1):19-25.
- Akyol AD. Hand hygiene among nurses in Turkey: opinions and practices. *J Clin Nurs* 2007; 16(3): 431-7.
- World Health Organization. Handwashing handbook. A guide for developing a hygiene promotion program to increase handwashing with soap. Geneva: The organization 2005.
- Curtis VA, Danguah LO, Aunger RV. Planned, motivated and habitual hygiene behaviour: an eleven country review. *Health Educ Res* 2009; 24(4): 655-73.
- World Hand washing Day [internet]. Geneva. The organization 2010. [cited 2012 Dec 15]. Available from: <http://www.altiusdirectory.com/Society/2008/10/global-handwashing-day-15th-october.htm>
- World Health Organization. Hand hygiene self-assessment framework.: Geneva: WHO 2010 [Cited 2013 Dec 21]. Available from:http://www.who.int/gpsc/5may/hhsa_framework/en/index.html
- WHO. Hand hygiene self-assessment framework global survey summary report. [internet]. Geneva: WHO; 2011. [cited 2013, Jan 06] p.1-4. Available from http://www.who.int/gpsc/5may/hhsa_framework/en/index.html