

Awareness & Practice of Hand Hygiene among Medical Students of RIMS Ranchi, India

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Abstract

Objective: To find out the practice of personal hygiene and hand hygiene and correlation with its effects on health outcomes among medical students.

Methods: At Rajendra Institute of Medical Sciences, Ranchi over a period of 3 months. 200 students were selected on random basis from 2nd, 6th & 8th semesters. A pre-designed and pre-tested questionnaire was used to collect data from students, which was distributed to them and collected back. Anonymity was maintained. Data was assimilated in Microsoft Excel 2014 and analysed using SPSS 20 software.

Conclusions: Medical students are predisposed to a wide array of infections during dissections, microbiology and pathology practical classes and during bed side teaching while handling or examining the patients. All medical students are expected to practice standard personal hygiene practice. Universal compliance to personal hygiene among the medical students under study were not found in the current study

I. Introduction

Hand hygiene and personal hygiene are the primary measures for prevention of infectious diseases.. This is because enough scientific evidence supports the observation that if properly implemented, personal hygiene alone can significantly reduce the risk of cross transmission of infection in health care facilities. Proper personal hygiene practice of medical students is more important as they interact with patients during anatomical dissections, laboratory practical and clinical postings & any time while providing health care. With these backgrounds, the current study was planned to find out the practice of personal hygiene and hand hygiene and correlation with its effects on health outcomes among students

II. Materials & Methodology

It is a descriptive epidemiological study, cross-sectional in design, conducted at Rajendra Institute of Medical Sciences, Ranchi over a period of 3 months. 200 students were selected on random basis from 2nd, 6th & 8th semesters. A pre-designed and pre-tested questionnaire was used to collect data from students, which was distributed to them and collected back. Anonymity was maintained. Data was assimilated in Microsoft Excel 2014 and analysed using SPSS 20 software

III. Results.

Altogether 200 student participants were there in the study among which 80(40%) were students of 2nd semester, 60(30%) were students of 6th semester and 60(30%) were students of 8th semester. Overall 132(66%) were male and 68(34%) were female. For the whole group of study participants 131(65.5%) stay in college hostel, 60(33%) in rented house and 9(0.45%) in rented house.

Student's profile	2 ND SEMESTER	6 th SEMESTER	8 th SEMESTER	TOTAL
	N=80	N = 60	N = 60	
Gender				
Male	54	37	41	132 (66%)
Female	26	23	19	68 (34%)
Residential status				
College hostel	23	52	56	131(65.5%)
Rented house	53	4	3	60(33%)
Own house	4	4	1	9(0.45%)

The habit of hand washing practice among students shows that 200(100%) of students wash hands after going to toilet, 188(94%) students wash hands before touching or taking food, 189(94%) of students wash

hands after practical classes or clinics. Use of cleansing material for washing hands varied among students 29(14.5%) students use plain water ,117 (58.5%) use soap or detergent water and 54 (27%) students were using antiseptic solution or hand sanitizer.

	2 ND SEMESTER	6 TH SEMESTER	8 TH SEMESTER	
Hand washing practice				
After going to toilet	80	60	60	200 (100%)
Before touching/ taking food	74	56	58	188(94%)
After clinical / practical classes	78	54	57	189(94%)
Use of cleansing materials				
Plain water	12	8	9	29(14.5%)
Soap or detergent water	54	33	30	117(58.5%)
Antiseptic, Sanitizer &Other materials	14	19	21	54(27%)

Awareness and knowledge of students was assessed and 142(71%) students were aware of various nosocomial infections , 196(98%) students were aware of water borne diseases , 184(92%) students were aware about importance of hand hygiene , 77(38.5%) students were aware of proper hand washing technique , 41(20.5%) students knew or read about WHO guidelines on hand hygiene. All students 200(100%) were aware of drinking water safety and its methods

Awareness	2 ND SEMESTER	6 th SEMESTER	8 th SEMESTER	TOTAL
	N=80	N = 60	N = 60	
Nosocomial infections	22	60	60	142 (71%)
Water borne diseases	76	60	60	196(98%)
Hand hygiene	64	60	60	184(92%)
Hand washing technique	6	24	47	77(38.5%)
WHO guidelines on hand hygiene	4	13	24	41(20.5%)
Drinking water safety	80	60	60	200(100%)

Symptoms which may be manifested by poor hand hygiene was assessed for past 6 months , 61(30.5%) students had one or more episodes of diarrhoea, 6(3%) students had dysentery , 39(19.5%) students had one or more episodes of vomiting. 4 (2%) had skin infections .10(5%) students had UTI

Symptoms Preceding 6 Months	2 ND SEMESTER	6 th SEMESTER	8 th SEMESTER	TOTAL
	N=80	N = 60	N = 60	
Diarrhoea	23	17	21	61(30.5%)
Dysentery	3	1	2	6(3.3%)
Vomiting	12	14	13	39(19.5%)
Skin Infections	2	1	1	4(2%)
URTI/LRTI	24	11	39	74(37%)
UTI	4	2	4	10(5%)

IV. Discussion

In the study of Kadi A and Salati SA, among 60 medical students 60% and 40%. The average awareness regarding the positive indications of hand hygiene was 56%. Rests of the 44% of students were either

not sure or unaware of the indications of hygiene. Only 29% of students were able to identify all the five indications for hand hygiene. There was no significant difference between two genders. In the present study also, 100% students have habit of washing hands after going to toilet, 94% have practice hand washing before taking food and 94% wash hands after attending clinical and practical classes. Mohesh G and Dandapani A showed in their study, Four hundred and forty students were randomly selected from each year of MBBS course and surveyed with a pretested structured questionnaire. 96 reported that they are aware of hand hygiene practices, but 3/4 th of them said that they had no formal training on the same. 50% of them accepted that, hand hygiene practices before and after handling a patient will prevent health care associated infections. Girls differed from boys in their opinions on hand hygiene, they practiced hand hygiene better than boys.

Mobashr KA and Ibrahim MA showed in their study, most of the medical students performed hand hygiene. Females had better attitudes than males. The study showed that the overall average of medical student's knowledge about health care associated infection was 68.34%. Ayub A et al. showed in their study, only 31.25% medical students always followed hand hygiene procedure. Complete knowledge about hygiene and infection control procedures present only among 77.5% of students.

V. Conclusion

Medical students are predisposed to a wide array of infections during dissections, microbiology and pathology practical classes and during bed side teaching while handling or examining the patients. All medical students are expected to practice standard personal hygiene practice. Universal compliance to personal hygiene among the medical students under study were not found in the current study. "Personal Hygiene" topic is included in the medical curriculum, it should be given emphasis so that student understand the importance of it and convert it in practice in their daily life. The improved understanding of infection control and personal hygiene among students is expected to play a major role in curbing disease transmission when the students pass out and join the healthcare work force in future

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