



## Comprehensive Evaluation of Personal Hygiene Practices among Nurses at Their Working Tenures: A Questionnaire based Original Research Study

Dr. Vartika Verma<sup>1</sup>, Dr. Gajendra Singh<sup>2</sup>, Myra De Guzman Angeles<sup>3</sup>, Robert Fua Angeles<sup>4</sup>, Roselle Barcelona Ramos<sup>5</sup>, Gloria Bones Coronado<sup>6</sup>

<sup>1</sup>Assistant Professor, Department of Periodontology and Oral Implantology, Kalka Dental College, Meerut, UP, India (Corresponding Author)

<sup>2</sup>Assistant Professor, Department of Conservative Dentistry and Endodontics, R.R Dental College, Udaipur, India

<sup>3</sup>RN, MAN, Lecturer, Department of Restorative Dentistry, College of Dentistry, Jazan University, KSA

<sup>4</sup>RN, MAN, Lecturer, College of Nursing, Jazan University, KSA

<sup>5</sup>RN, MAN, Lecturer, Department of Restorative Dentistry, College of Dentistry, Jazan University, KSA

<sup>6</sup>RN, MAN, Lecturer, Department of Maxillofacial Surgery, College of Dentistry, Jazan University, KSA

**Corresponding Author:** Dr. Vartika Verma

*(Received: 16 January 2025*

*Revised: 20 February 2025*

*Accepted: 20 March 2025)*

### KEYWORDS

Personal Hygiene,  
Contaminants, Infection  
Control, Hand Rub,  
Sanitation

### ABSTRACT:

**Aim:** Personal hygiene is the most significant entity to be managed by health care professionals especially when they are inside the hospital and handling various infections. The present questionnaire based study was conducted to assess the personal hygiene practices among nurses at their working tenures.

**Materials & Methods:** This study was conducted on total 30 nurses who have been explained about the relative significant of the study. A self framed, close ended questionnaire was set which have 8 questions and asked to answer honestly. The questionnaire exercises were finished at nurses routine working hours and or duty visits. To make sure totally relaxed responses, the study was conducted in an anxiety free environment. Results thus obtained was tabulated and subjected to basic statistical analysis. P value less than 0.05 was considered significant ( $p < 0.05$ ).

**Results:** Results confirmed that total 30 nurses were belonging to 5 different age groups. Only 3 nurses were falling in the age range of 25-30 years thus we can assume that most of the working nurses were belonging to older age groups. 20 nurses were using Hand Washing with Water technique. While 14 nurses were using Hand Washing with Soap and Hand rub For 15 Seconds. 26 nurses were Frequently Changing Gloves after Every Use. 12 nurses agreed that they Use PPE for Suspected Cases with Correct Disposal. 6 nurses clean their hands haphazardly while 1 nurse clean their hands thrice in a day.

**Conclusion:** The responses were very imperative as they reflected the present scenario of personal hygiene practices among nurses at their working tenures. The overall condition of personal hygiene practices amongst nurses was at moderate level. Many of the nurses were cleaning their hands using water only. Therefore working nurses should be appropriately counseled about the significance of personal hygiene practices.



## INTRODUCTION

Hand hygiene in literal words refers to elimination of microorganisms which are temporary or killing them. This practice also removes all noticeable entities from hands without creating any harm to skin.<sup>1-2</sup> Personal hygiene practices among nurses achieved by various techniques and hand washing agents. Literature has well evidenced about the personal hygiene practices among nurses at their working places/hospitals.<sup>3-4</sup> Momentary microorganisms found in external skin were attained during contact with external environment such as between infected apparatus, patient. These types of microorganisms were easier to be removed by simple practice of hand hygiene.<sup>5-6</sup> Many of the pioneer workers in the literature have demonstrated that inhabitant types of microorganisms found in deeper part of skin were difficult to remove by only hand hygiene method.<sup>7-8</sup> Therefore, this questionnaire based study aimed to assess the personal hygiene practices among nurses at their working tenures. Here authors have genuinely endeavored to explore the existing outcomes by analyzing their responses made through pre-formed questionnaire.

## MATERIALS & METHODS

The present study was conducted on total 30 nurses at their working tenures. All working nurses have been explained about the relative significant of the study. All nurses were informed about the study and written consents were obtained accordingly. A self framed, close ended questionnaire was set which have 8 questions about the personal hygiene practices, knowledge and other related parameters of hygiene practices. Authors have determined to perform this study on questionnaire basis since they are remarkably helpful to obtain comprehensive information about personal and group views and opinions. Questionnaire based studies are also capable of saving time and wealth because it assesses the nurses at personality levels. Additionally, Questionnaire based studies also offer wide range of data with improved elucidation and thoughtfulness. The confidentiality of 30 nurses and their freedom of expression were completed accordingly. All nurses were given a set of 8 questions and asked to answer honestly. The questionnaire exercises were finished at nurses routine working hours

and or duty visits. To make sure totally relaxed responses, the study was conducted in an anxiety free environment. Results thus obtained was tabulated and subjected to basic statistical analysis. P value less than 0.05 was considered significant ( $p < 0.05$ ).

## STATISTICAL ANALYSIS AND RESULTS

All the intended factors and data were assembled and sent for statistical analysis using statistical software Statistical Package for the Social Sciences version 22 (IBM Inc., Armonk, New York, USA). The finalized data was subjected to relevant statistical tests. Total 30 nurses were belonging to 5 different age groups. Only 3 nurses were falling in the age range of 25-30 years thus we can assume that most of the working nurses were belonging to older age groups. P values was significant for first age group. Maximum 11 nurses were belonging to >45 years of age. P values was not significant for last age group. Table 2 showed about the questionnaire responses evaluation with related statistical inferences. All nurses were following cleaning practices but not identical. 20 nurses were using Hand Washing with Water technique. While 14 nurses were using Hand Washing with Soap and Hand rub For 15 Seconds. 26 nurses were Frequently Changing Gloves after Every Use. 12 nurses agreed that they Use PPE for Suspected Cases with Correct Disposal. Table 3 and Graph 2 showed about the distribution of nurses according to frequency of cleaning. 18 nurses clean their hands after each handling. 6 nurses clean their hands haphazardly while 1 nurse clean their hands thrice in a day. P values was highly significant for distribution of nurses according to frequency of cleaning.

**Table 1: AGE WISE DISTRIBUTION OF NURSES**

Age Group (Yrs)	Female	Total	P value
25-30	3	3 [10 %]	0.01*
31-35	4	4 [13 %]	1.00
36-40	5	5 [16 %]	0.80
41-45	7	7 [24 %]	0.20
>45	11	11 [37 %]	0.10
Total	30	30 [100 %]	*Significant



		%]	
*p<0.05 significant			

**Table 2: QUESTIONNAIRE RESPONSES EVALUATION WITH RELATED STATISTICAL INFERENCE**

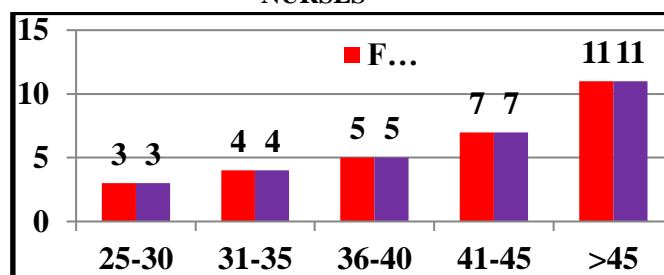
Questionnaire	Variables	No. of Respondents	p Value
1	No Cleanliness Practice	Yes=0, No=30	0.010*
2	Hand Washing With Water	Yes=20, No=10	
3	Hand Washing With Soap And Hand Rub For 15 Seconds	Yes=14, No=16	
4	Hand Washing With Alcohol Based Hand Rub	Yes=12, No=18	
5	Hand Washing With Warm Water Only	Yes=11, No=19	
6	Use Of Gloves When Handling Contaminants	Yes=21, No=9	
7	Frequent Changing Of Gloves After Every Use	Yes=26, No=4	
8	Use of PPE For	Yes=12, No=18	

	Suspected Cases With Correct Disposal		
*p<0.05 significant			

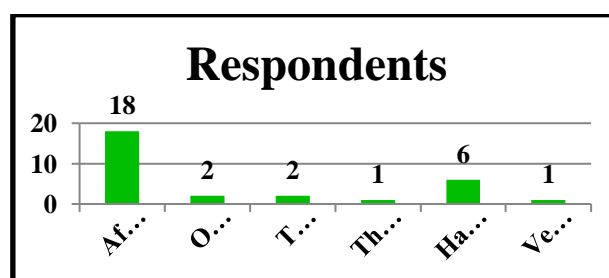
**Table 3: DISTRIBUTION OF NURSES ACCORDING TO FREQUENCY OF CLEANING**

S. No	Frequency	Cleaning Frequency	p value
1	After each handling	18	0.020*
2	Once in a days	2	
3	Twice in a day	2	
4	Thrice in a day	1	
5	Haphazardly	6	
6	Very rarely	1	
*p<0.05 significant			

**Graph 1: AGE WISE DISTRIBUTION OF NURSES**



**Graph 2: GRAPHICAL REPRESENTATION OF NURSES ACCORDING TO FREQUENCY OF CLEANING**





## DISCUSSION

As we all are aware that the World Health Organization (WHO) has made quality and patient safety one of its priorities. WHO is also in the process of launching the 1<sup>st</sup> World Challenge for Patient Safety the motto of this program is “Clean care is safer care”. This program predominantly highlights the hand hygiene as an indispensable constituent to decrease healthcare-associated infections. Nurses are at very high risks at these regards and they can easily contaminate their hands with different types of microorganism during various procedural activities in the hospital during their duty hours. Yallem and other researchers have studied about the Point prevalence of hospital-acquired infections in two teaching hospitals of Amhara region in Ethiopia. Their results were highly significant and applicable to present conditions.<sup>5</sup> Al-Wazzan and other co workers have experimented about the Hand hygiene practices among nursing staff in public secondary care Hospitals in Kuwait. Their inferences were highly comparable and predictable as our study. It was in accordance and agreement with our findings.<sup>6</sup> Tobi and other pioneer workers have studied in detail about the Hand Washing Practices and Compliance among Health Care Workers in the Intensive Care Unit of a Teaching Hospital in Nigeria. Their outcomes were having high clinical significance and applicability.<sup>7</sup> Bello and other researchers have studied in detail about the Hand-washing practice among healthcare providers in a teaching hospital in Southern Nigeria. They also highlighted the significant role of personal hygiene in avoiding any cross infection in hospital setups.<sup>8</sup> Other researchers have also studied and experiment about the intricate role of personal hygiene practices among nurses at their workplaces during duty hours.<sup>9-18</sup>

## CONCLUSION

Our study results clearly showed the present scenario of personal hygiene practices among nurses at their working tenures. The overall status of personal hygiene practices among nurses was at moderate level. Most of the nurses were cleaning their hands using water only. Thus working nurses must be correctly counseled about the importance of personal hygiene practices. Our study results could be used as suggestive for forecasting scientific effects for such critical situations. However,

we expect some other large scale studies to be conducted that could further set certain standard norms.

## REFERENCES

1. Mathai E., Allegranzi B., Kilpatrick C., Pittet D. Prevention and control of health care-associated infections through improved hand hygiene. *Indian Journal of Medical Microbiology*. 2010;28(2):100–106.
2. WHO (World Health Organization) Guidelines on Hand Hygiene in Health Care. First Global Patient Safety Challenge Clean Care is Safer Care, 2009.
3. CDC (Center of Disease Control) Guideline for Hand Hygiene in Health-Care Settings Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. U.S Department of Health and Human Services, Atlanta.
4. Longtin Y., Sax H., Allegranzi B., Schneider F., Pittet D. Videos in clinical medicine. Hand hygiene. *The New England Journal of Medicine*. 2011;364(13):p. e24.
5. Yallem W. W., Takele A. K., Yehuala F. M. Point prevalence of hospital-acquired infections in two teaching hospitals of Amhara region in Ethiopia. *Journal of Drug, Healthcare and Patient Safety*. 2016;8:71–76.
6. Al-Wazzan B., Salmeen Y., Al-Amiri E., Abul A., Bouhaimed M., Al-Taiar A. Hand hygiene practices among nursing staff in public secondary care Hospitals in Kuwait: Self-report and direct observation. *Medical Principles and Practice*. 2011;20(4):326–331.
7. Tobi K., Enyi-Nwafor K. Hand Washing Practices and Compliance among Health Care Workers in the Intensive Care Unit of a Teaching Hospital in Nigeria. *Nigerian Medical Practitioner*. 2013;63(4):82–89.
8. Bello S., Effa E. E., Okokon E. E., Oduwole O. A. Handwashing practice among healthcare providers in a teaching hospital in Southern Nigeria. *International Journal of Infection Control*. 2013;9(4).
9. WHO (World Health Organization) Hand hygiene technical reference manual: to be used by health-care workers, trainers and observers of hand hygiene practices. 2009



10. Mathai A. S., George S. E., Abraham J. Efficacy of a multimodal intervention strategy in improving hand hygiene compliance in a tertiary level intensive care unit. *Indian Journal of Critical Care Medicine*. 2011;15(1):6–15.
11. Korniewicz D. M., El-Masri M. Exploring the factors associated with hand hygiene compliance of nurses during routine clinical practice. *Applied Nursing Research*. 2010;23(2):86–90.
12. Karaaslan A., Kepenekli Kadayifci E., Atici S., et al. Compliance of healthcare workers with hand hygiene practices in neonatal and pediatric intensive care units: Overt observation. *Interdisciplinary Perspectives on Infectious Diseases*. 2014;2014:5.
13. Awoke N, Geda B, Arba A, Tekalign T, Paulos K. Nurses Practice of Hand Hygiene in Hiwot Fana Specialized University Hospital, Harari Regional State, Eastern Ethiopia: Observational Study. *Nurs Res Pract*. 2018 Apr 16;2018:2654947.
14. Toney-Butler TJ, Gasner A, Carver N. Hand Hygiene. [Updated 2023 Jul 31]. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470254/>
15. Kamanga P, Ngala P, Hebron C. Improving hand hygiene in a low-resource setting: A nurse-led quality improvement project. *Int Wound J*. 2022 Mar;19(3):482-492.
16. Stuart JP, Gannon PR, Dotto VR, Regina R, Mumma JM. Visualizing the WHO "My Five Moments for Hand Hygiene," framework: A virtual reality training program for improving hand hygiene adherence among nurses. *Am J Infect Control*. 2025 Jan 15:S0196-6553(25)00009-4.
17. Baseer AQ, Usmani A, Mushfiq S, Hassand MH, Rahimi BA, Monib AW, Daqiq MS, Niazi P. Assessment of hand hygiene practices among nurses at a regional hospital in Kandahar, Afghanistan: A cross-sectional study based on the World Health Organization (WHO) 'Your 5 Moments for Hand Hygiene' guidelines. *Belitung Nurs J*. 2025 Jan 26;11(1):83-90.
18. Sahiner P. Is there a relationship between nurses' hand hygiene beliefs, practices and ethical sensitivity? *Appl Nurs Res*. 2024 Aug;78:151813.