Section: Community Medicine

Original Research Article

KNOWLEDGE, ATTITUDE AND PRACTICE OF PERSONAL HYGIENE AMONG MEDICAL STUDENTS OF A PRIVATE MEDICAL COLLEGE: A CROSS-SECTIONAL STUDY

Mohammed Majeed[1], Pissey Sai Kiran Santosh[2], Gangapatnam Sravan Kumar[3], Naidana Partha Sarathy[4], Uthakalla Vijaya Kumar[5], Yendapu Raja Sekhar[6], Devireddi C U Sivakumar[7]

[1]PG Resident, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.
[2]Assistant Professor, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.
[3]Associate Professor, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.
[4]Professor and HOD, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.
[5]Professor, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.
[6]Senior Resident, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.
[7]Statistician cum Assistant Professor, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.

Received *: 21/10/2024*
Received in revised form *: 19/12/2024*
Accepted *: 03/01/2025*

Corresponding Author:
Dr. Pissey Sai Kiran Santosh,
Assistant Professor, Department of Community Medicine, Alluri Sitarama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh, India.
Email: pisseysaikiransantosh@gmail.com

DOI: 10.70034/ijmedph.2025.1.20

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2025; 15 (1); 119-123

ABSTRACT

Background: The term "Personal Hygiene" refers to any behaviour that helps one stay healthy and avoid illness, particularly through personal cleanliness. In addition to promoting health and well-being, good hygiene is a major defence against many communicable diseases, including faecal-oral infections. Evaluating medical students' personal hygiene knowledge, attitude, and practice (KAP) in order to spot any gaps, raise awareness, and make sure they acquire the skills and information needed to be healthy role models in both their personal and professional lives in the future. **Objectives:** To assess the Knowledge, Attitude, and Personal hygiene practices among Undergraduate medical students. To compare the Knowledge, Attitude, and Personal hygiene practices among Undergraduate medical students of 1st and 3rd Professional years. To determine the association of Socio-demographic characteristics with Knowledge, Attitude and Personal Hygiene practices.

Material and Methods: A Cross-sectional analytical study was carried out in September and October 2024 among first and final-year Part 1 medical students at private medical college in Eluru city, Andhra Pradesh, using a semi-structured questionnaire that had been pretested and validated. Data was gathered using Google Forms from every student in the relevant batches, and SPSS trial version 29 and Microsoft Excel were used for analysis. We applied the t-test and the chi-square test. Less than p-Value < 0.05 was considered statistically significant.

Results: The study assessed the knowledge, attitude, and practices (KAP) regarding personal hygiene among 400 undergraduate medical students from 1st and 3rd Professional Years. The findings revealed that 99% of the participants demonstrated adequate knowledge, 80.5% displayed a positive attitude, and 94.8% reported good hygiene practices. A statistically significant difference was observed in knowledge and practice scores between the two study years (p-value < 0.0001). A positive correlation was observed among knowledge, attitude, and practice scores, with r-values of 0.119, 0.269, and 0.324, respectively (all p-values < 0.0001).

Conclusion: Medical students demonstrated a strong foundation in knowledge, attitude, and practices regarding hygiene. The positive correlation between knowledge and practice scores highlights the importance of a strong knowledge base for translating hygiene knowledge into action.
Key Words: Attitude, Knowledge, Medical Students, Personal-hygiene, Practice.

INTRODUCTION

Personal hygiene is an essential component of health that has a significant impact on both public and individual health. In order to avoid illnesses including diarrhoea, respiratory infections, and skin disorders, it involves a number of behaviours like hand washing, dental hygiene, taking a shower, and dressing in clean clothes.[1] Poor hygiene continues to be a major problem on a global scale, contributing to serious health issues. Public health crises are exacerbated and infectious diseases are transmitted widely as a result of roughly 2 billion people lacking access to basic hygiene amenities like soap and water as of 2022.[2] It is imperative to address poor hygiene practices because they are also strongly associated with chronic disorders such as dental caries, periodontal diseases, and malnutrition.[3] Due to their frequent exposure to healthcare settings and direct patient interactions, medical students place a greater emphasis on personal hygiene. The danger of healthcare-associated infections (HCAIs), which can be avoided with good hygiene habits, is increased by this close closeness. A safe healthcare environment can be promoted and infection risks reduced by practising good hand hygiene, wearing personal protection equipment (PPE) frequently, and keeping things clean.[4] Although medical students are typically aware of the importance of hygiene, research shows that they frequently struggle to put this understanding into practice.[5] These disparities could be caused by obstacles including time restraints, excessive workloads, and a lack of institutional support, underscoring the necessity of focused initiatives to close these gaps.[6] Knowledge of hygiene refers to comprehending the concepts of cleanliness and their function in illness prevention. Because of their educational background, medical students are required to have a thorough awareness of hygienic standards,[7] but studies indicate that there were significant flaws even within this group. For example, research has indicated that although students understand the value of frequent hand washing, many do not regularly follow this practice because of stress, exhaustion, or a lack of resources.[8] In order to improve compliance, these results highlight the need to strengthen hygiene education and remove structural obstacles. A favourable attitude toward hygiene has a major influence on adherence to hygiene routines. Personal views, values, and opinions on the significance of cleanliness in day-to-day living are all included in attitudes.[9] These views are mostly shaped by cultural norms, societal expectations, and individual experiences.[10] While students with negative or indifferent attitudes may overlook important hygienic behaviours, those with positive attitudes are more likely to integrate these practices into their daily routines.[11] Thus, promoting positive attitudes through awareness-raising initiatives and instructional programs can significantly alter hygiene habits, particularly in high-risk populations like medical students. The noticeable actions people take to keep themselves clean are known as hygiene practices. Routine tasks for medical students include hand washing, dental care, and maintaining personal and professional hygiene standards. Medical students' hygiene practices vary despite their high levels of knowledge, demonstrating a gap between awareness and application.[12] Limited institutional incentives, lack of oversight, and the hard nature of medical education all contribute to this inconsistency.[13]

Understanding medical students' knowledge, attitudes, and practices (KAP) regarding personal hygiene is crucial for a variety of reasons. First, it protects their own health and well-being. Second, it lowers the risk of HCAIs, which benefits patients and the entire healthcare system. Third, it lays the groundwork for future healthcare workers to promote and uphold high cleanliness standards in their careers.[14] Addressing gaps in knowledge, attitude, or practice through planned interventions and ongoing monitoring can result in better hygiene outcomes.

This study seeks to assess the KAP of personal hygiene among undergraduate medical students, specifically comparing the practices of students in their first and third professional years. The findings aim to provide actionable insights into strengthening hygiene teaching and establishing a culture of safety and health in medical institutions by identifying the factors influencing their hygiene practices and investigating the relationships with socio-demographic features.

Objectives

1. To assess the Knowledge, Attitude, and Personal hygiene practices among Undergraduate medical students of 1st and 3rd Professional years.
2. To compare the Knowledge, Attitude and Personal hygiene practices among Undergraduate medical students of 1st and 3rd Professional years
3. To determine the association between Socio-demographic characteristics with Knowledge, Attitude, and Personal hygiene practices

MATERIALS AND METHODS

An Analytical cross-sectional study was conducted at ASRAMS (Tertiary Care Hospital), Eluru, Andhra Pradesh during September and October 2024 with a study period of two months. The study population included all undergraduate MBBS students from the 1st Professional and 3rd Professional Part 1 years after explaining the importance of the study and took oral consent from all the students and e- mailed Google forms to all the students , with a total sample size of 400 and 2nd Professional year and 3rd Professional Part 2 were not included in the study as they were undergoing exams during data collection. A pre-designed, pre-tested, semi-structured, questionnaire was validated by two individual Professors and was used as the study tool, containing 10 questions each on knowledge, attitude, and practice. Responses were scored, with 1 point for a correct response and 0 for a wrong response. Scores were categorized as inadequate (<4), moderate (4–6), or adequate (≥7) for knowledge, attitude, and practice. Data was collected using Google Forms, extracted into Microsoft Excel (version 2020), and analysed using SPSS software (trial version 29) and by using the independent sample t-test, and Pearson's correlation test, with a p-value <0.05 considered statistically significant. Approval from the Institutional Ethics Committee was obtained prior to the commencement of the study. Committee approval no: ASRAMS BHR-EC/Approval No.176/2024.

RESULTS

The study assessed the knowledge, attitude, and practices (KAP) regarding personal hygiene among 400 undergraduate medical students i.e. from 1st (250) and 3rd (150) Professional Years. Among them males were 144 (36%) and females were 256 (64%), hostlers were 284 (71%) and day-scholars were 116 (29%). Overall Knowledge score among students found to be good i.e. 99%, overall attitude score found to be 80.5%,and overall practice score shows 94.8%.When first and final year part 1 medical students' knowledge, attitude, and practice scores were compared. The results showed that the differences in knowledge and practice scores between the first and final year students were statistically significant, with p values of 0.0002 and 0.0001, respectively. [Table 1]

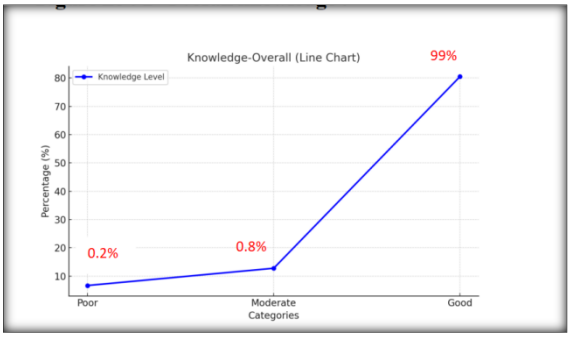

Figure 1: Overall knowledge

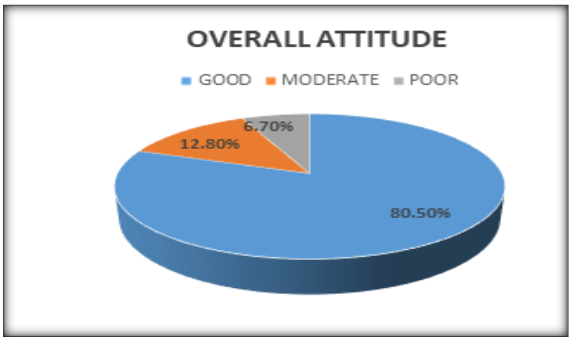

Figure 2: Overall Attitude

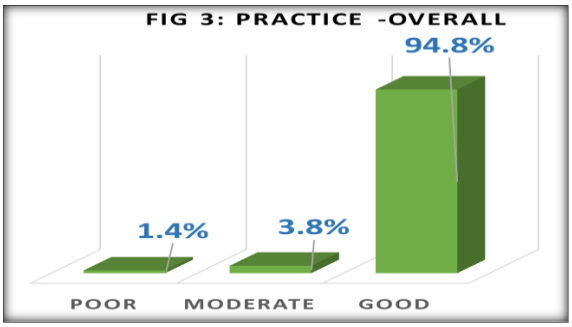

Figure 3: Overall Practice

Among first-year and final-year medical students, a significant correlation was observed between overall knowledge and attitude scores with r – value of 0.119 and p-value: 0.0001, overall attitude and practice scores with r – value of 0.269 and p-value: 0.0001, as well as overall practice and knowledge scores with r – value : 0.324 and p-value: 0.0001. [Figure 4]

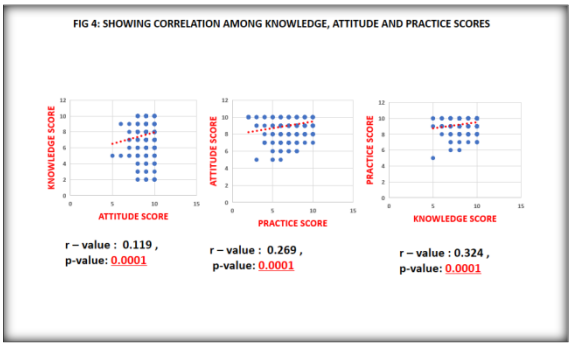

Figure 4: Correlation among Knowledge, Attitude and Practice score

Table 1: Comparison of Knowledge, Attitude and Practice score in First and Final year part-1 students

	First year	Final-year part 1	Mean difference ± Standard error	p value
	Mean ± SD	Mean ± SD		
Knowledge	9.496 ± 0.90	9.14 ± 0.92	0.356 ± 0.09	0.0002*
Attitude	7.784 ± 2.09	7.74 ± 1.61	0.044 ± 0.19	0.8249
Practice	9.384 ± 1.26	8.48 ± 1.42	0.904 ± 0.13	0.0001*

*statistically significant

DISCUSSION

Our study is to assess and analyse the Knowledge, attitude, and practice of personal hygiene among all first and third year medical students of a private medical college, Eluru, Andhra Pradesh. A total of 400 students were assessed among them males were 36%, females were 64%, hostlers were 71% and day scholars were 29%.

In our study, knowledge regarding personal hygiene was assessed and divided into good, moderate and poor. Overall good knowledge in our study was found to be 99% which was comparable with Hasan AM et al,[8] they got 97.3% conducted in Iraq, 80%, by Venkatasubramanyam NR et al,[6] they did in 100 medical students, 88.9% by Pramod singh et al,[5] they conducted study in young adults, 86.9% by Nurudeen AS et al,[9] 94.5% by Das D et al,[10] and 98.2 % in a nigerian study by Temitayo IO et al,[11] 89% by Shrestha S et al,[15] 96% in Dutta G et al,[14] they studied in undergraduates in Imphal, 83.7% in dental students done by Okoroafor CC et al,[13] and in contrast knowledge was very low i.e 11.16% in a study conducted by Naytitorn Chaovirachot et al,[12] in Bangkok .This contrast is due to Participants reported a moderate level of engagement in personal hygiene practice. This could be attributed to being a boy tend to less care about personal hygiene.

Attitude of medical students in our study towards personal hygiene was good in 80.5% which was similar with studies done by Hasan AM et al8 (80%) and Shrestha S et al,[15] (90.2%). In contrast to Okoroa for CC et al,[13] (62.8%) and Venkatasubramanyam NR et al,[6] (69%) this contrast is due to study on only on oral hygiene . Practice of personal hygiene in our study was 94.8% which was comparable with Hasan AM et al,[8] (94.2%), Shrestha S et al,[15] (97%), Dutta G et al,[14] (95.7%).

Correlation between knowledge and attitude, Attitude and practice, practice and knowledge was seen in our study and got statistical significance for all. For knowledge and attitude p value 0.017 and r =0.119 similar with Dutta G et al,[14] (0.001)., Attitude and practice p value 0.001 and r=0.269 it was comparable with Shrestha S et al,[15] (0.001), and practice and knowledge p value 0.001 and r =0.324 similar with Dutta G et al,[14] (0.001).

Knowledge and practice regarding hygiene was good but attitude was less comparably among most of medical students across India based on our study results. These results underscore the critical role of a strong knowledge base in driving improved hygiene practices, highlighting the need for targeted interventions to enhance attitudes and sustain good practices among medical students.

CONCLUSION

Medical students demonstrated a strong foundation in knowledge, attitude, and practices regarding hygiene. The positive correlation between knowledge and practice scores highlights the importance of a strong knowledge base for translating hygiene knowledge into action. Medical students demonstrated robust knowledge and practices in personal hygiene, underscoring the role of medical education. To further enhance outcomes, it is essential to focus on improving attitudes and ensuring institutional support.

Conflicts of interest: Nil

Declaration of Ethical clearance: Taken Ethics Committee Approval dated 14.8.2024.

Committee approval no: **ASRAMS BHR-EC/Approval No.176/2024**

Source of Funding: Self

Conflict of Interest: Nil

Recommendations

For Students

- Maintain consistent hand hygiene.
- Regularly practice personal cleanliness.
- Engage in periodic training sessions.

For Institutions

- Provide adequate hygiene facilities.
- Conduct regular awareness programs.
- Integrate hygiene education into curriculam.

REFERENCES

1. Compendium of WHO and other UN guidance on health and environment, 2022 update [Internet]. Who.int. World Health Organization; 2022. Available from: https://www.who.int/publications/i/item/WHO-HEP-ECH-EHD-22.01 [last accessed on 2024 Aug 13]
2. CDC. About hygiene [Internet]. Water, Sanitation, and Environmentally Related Hygiene (WASH).2024. Available from:https://www.cdc.gov/hygiene/about/index.html [last accessed on 2024 Aug 13]
3. Sihra J, Meena G, Meena N, Naroliya D, Saini L, Kaur M, Gaur K. Assessment of Knowledge and Practices regarding personal hygiene among students of Government schools of Jaipur city: A cross-sectional survey. International Multispecialty Journal of Health (IMJH). 2018;4(4):125-30.
4. Chutia L. Personal hygiene: Knowledge, attitude, and practice among higher primary school children in Urban Bengaluru, India.
5. Singh P, Faisal AR, Alam MM, Saeed A, Haider T, Asif HM, Rauniyar J, Rai N, Janjua MA, Pasha AR. An Assessment of Personal Hygiene Practices Among Young Adults: A Cross-Sectional, Descriptive Study. Cureus. 2023 Aug;15(8).

6. Venkatasubramanyam NR, Kalyanasundaram AV, Prabhakaran N. Assessment of Knowledge, Attitude, and Practice of Hand Hygiene Among Medical Students in a Tertiary Care Hospital. Cureus. 2024 Aug 13;16(8): e66820.
7. Kaira LS, Srivastava V, Giri P, Chopra D. Oral health-related knowledge, attitude and practice among nursing students of Rohilkhand medical college and hospital: A questionnaire study. Journal of Orofacial research. 2012;2(1):20-3.
8. Hasan AM, Abdulqadir MO. Assessment of knowledge, attitude and practices of personal and oral hygiene among undergraduate university students in Sulaimani city. Kurdistan Journal of Applied Research. 2017 Jul 30;2(2):71-7.
9. Nurudeen AS, Toyin A. Knowledge of personal hygiene among undergraduates. Journal of Health Education. 2020 Sep 30;5(2):66-71.
10. Das D, Mandal AK, Das J, Sardar S, Naskar S, Kole S. Practice of Personal Hygiene & Morbidity Pattern among Medical Students of a Rural Medical College, West Bengal, India. IOSR Journal of Dental and Medical Sciences (IOSR-JDMS). 2015;14(5):39-44.
11. Temitayo IO. Knowledge and practices of personal hygiene among senior secondary school students of ambassadors college, Ile-Ife, Nigeria. Texila Int. J. Public Health. 2016 Apr;4(4):648-60.
12. International Journal of Healthcare Sciences ISSN 2348-5728 (Online) Vol. 9, Issue 2, pp: (38-43), Month: October 2021 - March 2022, Available at: www.researchpublish.com
13. Okoroafor CC, Okobi OE, Owodeha-Ashaka M, Okobi E, Oluseye B, Ekpang OB, Aya LE, Owolabi OJ, Oru-Betem TE, Nwafor JN. Dental health knowledge attitude and practice among University of Calabar students. Cureus. 2023 Jun;15(6).
14. Dutta G, Singh TG, Kumar T. Knowledge and practice of hand hygiene among undergraduate students and junior doctors in the Regional Institute of Medical Sciences, Imphal. Journal of Family Medicine and Primary Care. 2020 Sep 1;9(9):4741-6.
15. Shrestha S, Pokhrel S, Karki R. Knowledge, Attitude and Practice in dental hygiene aids among Undergraduate students of different fraternities. J Kantipur Dent Coll. 2022;3(1):26-33.