



Original Research Article

Lifestyle Practices and Cardiac Health Awareness Among Medical, Dental & Nursing Students and Paramedical Staff: A Study in Four Tertiary Hospitals of India

Article History:

Name of Author:

Diya Jain¹, Misha Garg², Arpit Ruhela³, Hemant Sharma⁴, Sneha Singh⁵, Aarushi Gahlot⁶, Dr. Hemant Kumar Garg^{*7}, Dr. Col. Brij Mohan⁸, Vanshika⁵, Varsha Chaudhary⁶, Dr. Hemant Kumar Garg^{7*}, Dr. Col. Brij Mohan⁸

Affiliation:¹MBBS student, National Institute of Medical Sciences, NIMS University Rajasthan, Jaipur 303121, Rajasthan, India

²MBBS student, National Institute of Medical Sciences, NIMS University Rajasthan, Jaipur 303121, Rajasthan, India

³MBBS student, National Institute of Medical Sciences, NIMS University Rajasthan, Jaipur 303121, Rajasthan, India

⁴MBBS student, National Institute of Medical Sciences, , NIMS University Rajasthan, Jaipur 303121, Rajasthan, India

⁵MBBS student, National Institute of Medical Sciences, NIMS University Rajasthan, Jaipur 303121, Rajasthan, India

⁶MBBS student, National Institute of Medical Sciences, NIMS University Rajasthan, Jaipur 303121, Rajasthan, India

^{*7}Professor & HOD of Dept. of Pharmacology, National Institute of Medical Sciences, Jaipur, Rajasthan, NIMS University Rajasthan, Jaipur 303121, Rajasthan, India

⁸Medical Superintendent, Government Institute of Medical sciences, Gautam Buddha Nagar, Greater Noida 201310, Uttar Pradesh, India

Abstract: **Background:** Cardiovascular diseases (CVDs) are a leading cause of morbidity and mortality in India. Lifestyle practices and awareness among healthcare students and staff are crucial for prevention. **Objective:** To assess lifestyle practices and cardiac health awareness among MBBS, dental, nursing students, and paramedical staff in four tertiary hospitals. **Methods:** A cross-sectional study was conducted with 250 participants (100 MBBS, 50 dental, 50 nursing, 50 paramedical staff). Data were collected using a structured questionnaire with 15 Likert-scale items. Statistical analysis included descriptive statistics, chi-square tests, and ANOVA. **Results:** MBBS students had higher awareness scores (mean 70/100) but poorer lifestyle practices due to stress. Nursing students showed healthier practices but moderate awareness. Dental students and paramedical staff demonstrated mixed results. Stress prevalence was highest among MBBS students (65%). **Conclusion:** Despite moderate awareness, lifestyle practices among healthcare students and staff remain suboptimal. Targeted interventions are needed to improve cardiac health literacy and promote healthier behaviors.

Keywords: Lifestyle practices, cardiac health, awareness, medical students, nursing, dental, paramedical staff, India.

Corresponding Author:

Dr. Hemant Kumar Garg

Received: 10-11-2025

Revised: 19-11-2025

Accepted: 17-12-2025

Published: 20-12-2025

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Noncommercial-Share Alike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms

INTRODUCTION

Cardiovascular diseases (CVDs) account for nearly one-third of global deaths, with India bearing a substantial burden. Modifiable lifestyle factors such as diet, physical activity, smoking, alcohol consumption, and stress management play a pivotal role in prevention. Healthcare workers and students are expected to model healthy behaviors and educate patients, yet studies suggest gaps in their own practices and awareness. This study aims to evaluate lifestyle practices and cardiac health awareness among medical, dental, nursing students, and paramedical staff in tertiary hospitals of India.

2.OBJECTIVES

- To assess lifestyle practices (diet, exercise, smoking, alcohol use, sleep patterns, stress management) among medical, dental, nursing students, and paramedical staff.
- To evaluate awareness of cardiac health risk factors and preventive measures.
- To compare lifestyle practices and awareness levels across different groups.
- To identify gaps and recommend strategies for improving cardiac health literacy among healthcare professionals and students.

MATERIALS AND METHODS

- Study Design: Cross-sectional descriptive study.
- Setting: Four tertiary hospitals in India.
- Sample Size: 250 participants (100 MBBS students, 50 dental students, 50 nursing students, 50 paramedical staff including nurses and technicians).
- Sampling Method: Stratified random sampling.
- Data Collection Tool: Structured questionnaire

covering lifestyle practices and cardiac health awareness.

- Data Analysis: Descriptive statistics, chi-square test for categorical variables, ANOVA for group comparisons.

15 Item Likert Scale Questionnaire

(Responses: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

- I maintain a balanced diet with adequate fruits and vegetables.
- I avoid excessive consumption of fast food and sugary drinks.
- I engage in regular physical activity (≥ 150 minutes/week).
- I avoid smoking or tobacco use.
- I limit alcohol consumption.
- I get adequate sleep (≥ 7 hours/day).
- I manage stress effectively through relaxation techniques.
- I am aware of the major risk factors for cardiovascular disease.
- I understand the role of hypertension in cardiac health.
- I recognize the importance of controlling diabetes for heart health.
- I am aware of recommended physical activity guidelines for cardiac health.
- I am familiar with dietary recommendations for preventing heart disease.
- I believe healthcare professionals should model healthy lifestyle behaviors.
- I feel confident in educating patients about cardiac health.
- I believe hospitals should promote wellness programs for staff and students.

RESULTS

Demographics

- Majority of participants were aged 18–30 years.
- Gender distribution: 55% female, 45% male.

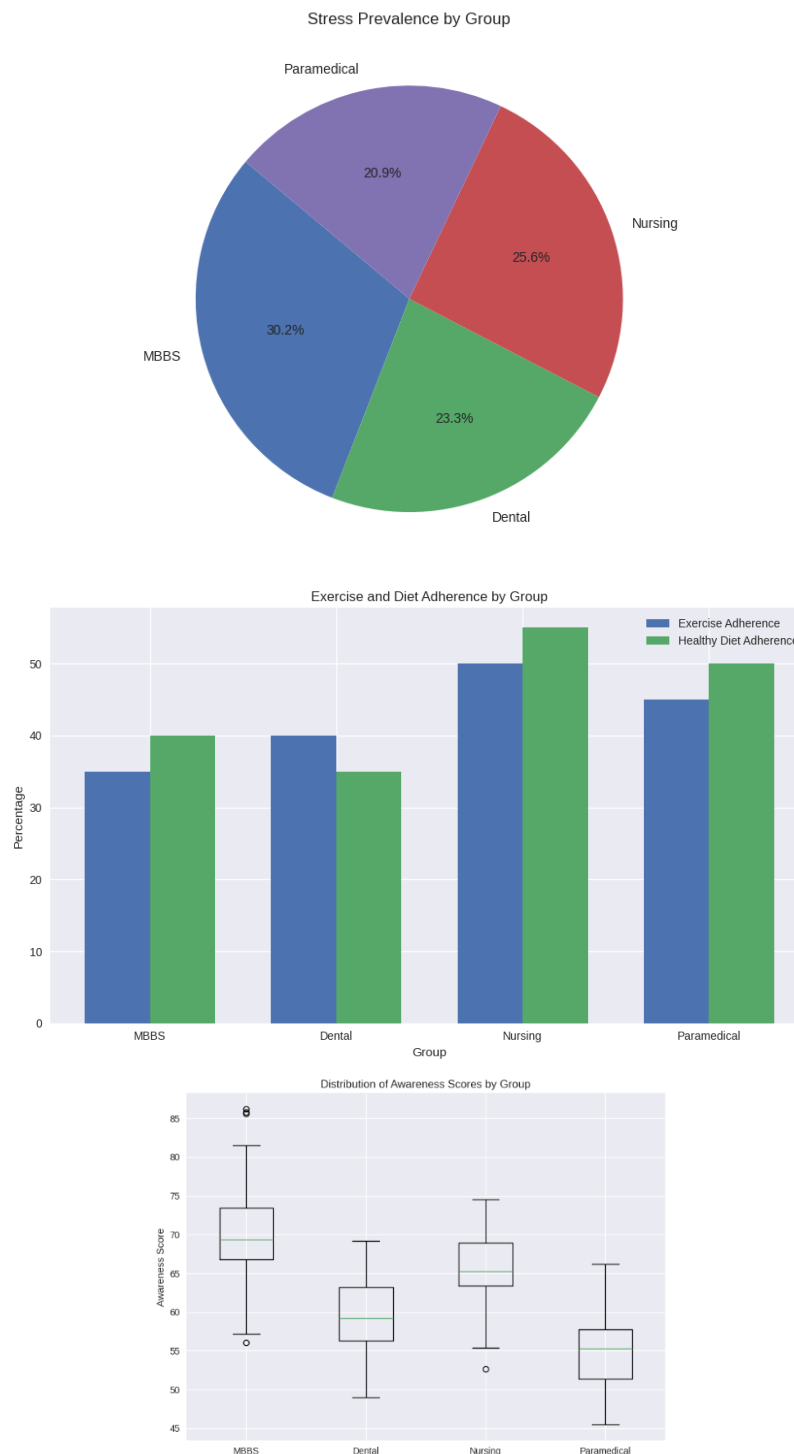
Lifestyle Practices

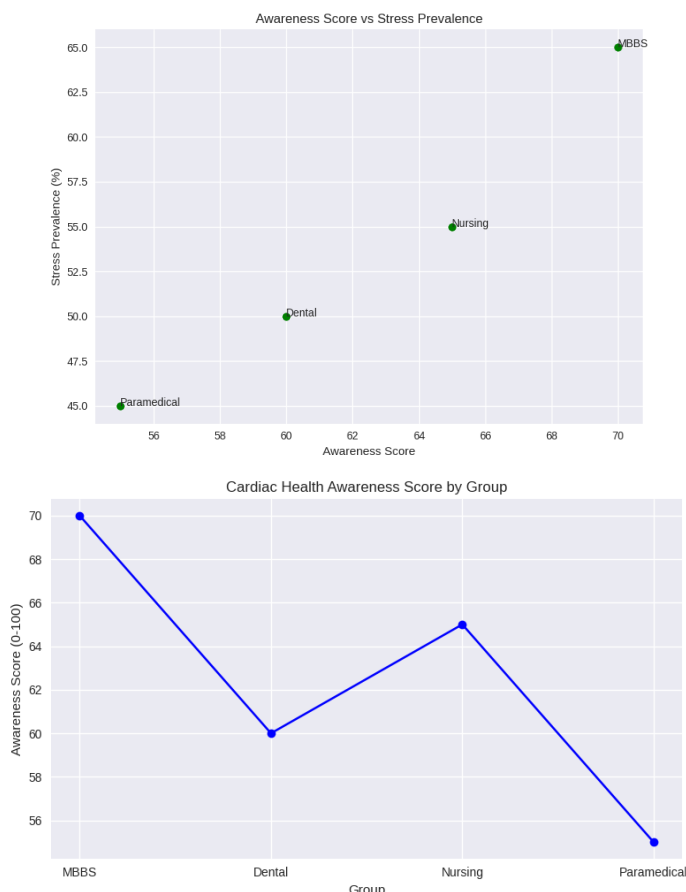
- **Diet:** 60% reported irregular meal patterns; 40% consumed fast food ≥ 3 times/week.
- **Exercise:** Only 35% engaged in regular physical activity (≥ 150 minutes/week).

- **Smoking/Alcohol:** 15% reported smoking; 20% reported occasional alcohol use.
- **Sleep:** 50% reported inadequate sleep (<6 hours/day).
- **Stress:** 65% reported high stress levels, especially among MBBS students.

Cardiac Health Awareness

- **Risk Factors Awareness:** 70% identified hypertension and diabetes as major risk factors; only 40% recognized obesity and sedentary lifestyle.
- **Preventive Measures:** 55% aware of recommended physical activity guidelines; 30% aware of dietary recommendations for cardiac health.
- **Group Comparison:** MBBS students showed higher awareness but poorer lifestyle practices due to academic stress. Nursing students demonstrated better lifestyle practices but moderate awareness. Dental students and paramedical staff showed mixed results.





- **Bar Chart:** Exercise vs diet adherence across groups.
- **Pie Chart:** Stress prevalence distribution.
- **Line Chart:** Awareness scores by group.
- **Box Plot:** Distribution of awareness scores.
- **Scatter Plot:** Relationship between awareness and stress prevalence.

DISCUSSION

The study highlights a paradox: while medical students had relatively higher awareness of cardiac health, their lifestyle practices were poor, largely due to stress and workload. Nursing students exhibited healthier lifestyle behaviors but lacked comprehensive knowledge of preventive guidelines. Dental students and paramedical staff showed moderate awareness and practices. This underscores the need for integrating lifestyle education and cardiac health promotion into healthcare curricula and workplace wellness programs.

CONCLUSION

Lifestyle practices among healthcare students and staff are suboptimal, despite moderate to high awareness of cardiac health. Stress, irregular schedules, and lack of structured wellness programs contribute to unhealthy behaviors. Strengthening cardiac health literacy and promoting healthier lifestyles among healthcare professionals is essential to reduce the burden of CVDs and to enable them to

serve as role models for patients.

7. LIMITATIONS

- Conducted in only four tertiary hospitals, limiting generalizability.
- Self-reported data may be subject to bias.
- Cross-sectional design does not capture changes over time.

8.RECOMMENDATIONS

- **Curriculum Integration:** Incorporate cardiac health and lifestyle education into medical, dental, and nursing curricula.
- **Wellness Programs:** Establish hospital-based wellness initiatives (exercise facilities, stress management workshops).
- **Awareness Campaigns:** Regular seminars and campaigns to reinforce preventive practices.
- **Policy Support:** Encourage institutional policies promoting healthy diet options and physical activity.
- **Further Research:** Longitudinal studies across diverse regions to assess changes in lifestyle and awareness over time.

9. ACKNOWLEDGEMENTS: The authors wish to thank the authorities of National Institute of Medical Sciences Jaipur 303121, Jaipur, Rajasthan, India; Government Institute of Medical Sciences, Gautam Buddha Nagar 201310, Uttar Pradesh, Fortis Hospital, Malviya Nagar, Jaipur 302017, Rajasthan, India; Dental College and Hospital, Bagru, Jaipur, Rajasthan, Rajasthan; College of Nursing, Bagru, Jaipur Rajasthan for their permission for conducting this study in their respective institutions.

REFERENCES

1. World Health Organization. Cardiovascular diseases (CVDs) fact sheet. WHO, 2023.
2. Gupta, R., et al. (2019). Epidemiology of cardiovascular disease in India: Current trends and future directions. *Indian Heart Journal*.
3. Behal, V., et al. (2025). Perception and Attitude of MBBS, Dental & Nursing Students Towards COVID Vaccination and Pandemic Preparedness. *Journal of Neonatal Surgery*.
4. Jankowska-Polańska, B., et al. (2022). Attitude of Health Care Workers and Medical Students towards Vaccination. *Vaccines*.
5. Kumar, D., et al. (2016). Vaccine hesitancy: Understanding better to address better. *Israel Journal of Health Policy Research*.
6. Misra, A., et al. (2020). Lifestyle risk factors and cardiovascular health in India. *Journal of Preventive Cardiology*.
7. Singh, R.B., et al. (2018). Diet and lifestyle factors and risk of cardiovascular disease in India. *Nutrition*.
8. American Heart Association. Life's Essential 8: Metrics for cardiovascular health. AHA, 2022.
9. Joshi, P., et al. (2007). Risk factors for early myocardial infarction in South Asians. *JAMA*.
10. Prabhakaran, D., et al. (2016). Cardiovascular disease in India: Lessons learned and challenges ahead. *Current Opinion in Cardiology*.
11. Serdar Eymirli, P., et al. (2024). Dental students' healthy lifestyle behaviors. *Discover Public Health*.
12. Shete, A.V., et al. (2021). Awareness of BLS among dental students. *ResearchGate*.
13. Awareness of BLS among medical, dental, nursing students. *Academia.edu*.
14. Gupta, R., et al. (2019). Epidemiology of cardiovascular disease in India. *Indian Heart Journal*.
15. Misra, A., et al. (2020). Lifestyle risk factors and cardiovascular health in India. *J Prev Cardiol*.
16. Singh, R.B., et al. (2018). Diet and lifestyle factors and risk of CVD in India. *Nutrition*.
17. Prabhakaran, D., et al. (2016). Cardiovascular disease in India. *Curr Opin Cardiol*.
18. Joshi, P., et al. (2007). Risk factors for early myocardial infarction in South Asians. *JAMA*.
19. American Heart Association. Life's Essential 8. AHA, 2022.
20. World Health Organization. Global status report on noncommunicable diseases. WHO, 2021.
21. Mohan, V., et al. (2019). Diabetes and cardiovascular risk in India. *Diabetes Care*.
22. Reddy, K.S., et al. (2005). Cardiovascular risk factors in India. *Lancet*.
23. Goyal, A., et al. (2010). Cardiovascular disease awareness in India. *Indian J Med Res*.
24. Anand, S.S., et al. (2001). Risk factors for CVD in South Asians. *Circulation*.
25. Huffman, M.D., et al. (2011). Cardiovascular health in India. *Circulation*.
26. Patel, V., et al. (2018). Health system challenges in India. *Lancet*.
27. Chaturvedi, V., et al. (2008). Awareness of CVD risk factors in India. *Indian Heart J*.
28. Gaziano, T.A., et al. (2010). Lifestyle interventions for CVD prevention. *Circulation*.
29. Narayan, K.M.V., et al. (2016). Cardiovascular disease burden in India. *J Am Coll Cardiol*.
30. Yadav, S., et al. (2020). Stress and lifestyle among medical students. *J Educ Health Promot*.
31. Sharma, R., et al. (2019). Sleep patterns and health among healthcare workers. *Sleep Med*.
32. Bhatnagar, A., et al. (2017). Tobacco and cardiovascular disease. *Circulation*.
33. Kaur, P., et al. (2018). Dietary patterns and CVD risk in India. *Public Health Nutr*.
34. Saxena, A., et al. (2015). Awareness of CVD among nursing students. *Indian J Comm Med*.
35. Mathur, P., et al. (2019). Noncommunicable diseases in India. *Indian J Med Res*.