
A study of the prevalence of Risk factors of Non-Communicable diseases amongst medical students in Rama Medical College, Kanpur

Research Article

Lakshmi Singh,¹Anju Gahlot,²Atul Kumar Singh³

¹Senior Resident, ²Professor, ³Professor

^{1,2,3} Department of Community Medicine, RMCHRC, Kanpur, U.P, India.

Submitted: 29 June 2024; Accepted: 15 July 2024; Published: 20 July 2024

Corresponding Author: Dr Lakshmi Singh, Sen Resident, Rama Medical College Hospital & Research Centre, Mandhana, Kanpur, India. Email: lakshmi.singh6481@gmail.com

INTRODUCTION

• Noncommunicable diseases (NCDs) are slowly progressive. They are of long duration and responsible for more than 50% of the global burden of disease, including heart disease, stroke, cancer, diabetes, and chronic lung disease.

• few studies to date have examined the prevalence of tobacco and alcohol use among UGs and PGs. Out of the available studies, tobacco and alcohol use prevalence was 9.0% in UGs and 7.1% in PGs; however, they may be at a higher risk of substance use problems due to higher stress levels.

• Few studies on NCDs and their risk factors have been conducted among medical students in Kanpur, so we have planned this study in this area.

AIM: To study the prevalence of risk factors for noncommunicable diseases among medical students at Rama Medical College, Kanpur.

MATERIAL AND METHODS

• Cross-sectional analytical study was conducted on undergraduate medical students at Rama Medical College, Kanpur, from January 2021 to September 2022.

• This study used simple random sampling, prepared using the total MBBS student list of four batches from their attendance register.

• 362 students were randomly selected in MS EXCEL by random number table.

• First year to final year MBBS were included while those who were unwilling excluded.

• Data analysis was done by using the software SPSS version 20. The prevalence of NCD risk factors was presented in frequencies and percentages. Most of the variables in this study were categorical, so statistical significance was tested using the Chi-square test and p-value (p-value ≤ 0.05 is statistically significant, and > 0.05 is not important), and also, the strength of association was tested between risk factors using the independent t-test.



A STUDY OF PREVALENCE OF RISK FACTORS OF NON COMMUNICABLE DISEASES AMONGST MEDICAL STUDENTS IN RAMA MEDICAL COLLEGE, KANPUR

Dr. Lakshmi Singh,¹ Dr. Amjughlot,² Dr. Atul Kumar Singh³

¹Senior Resident, ²Professor, ³Professor

Department of Community Medicine, RMCHRC, Kanpur, U.P. India.



INTRODUCTION

• Noncommunicable diseases (NCDs), are slowly progressive and are of long duration responsible for more than 50% of the global burden of disease, including heart disease, stroke, cancer, diabetes and chronic lung disease.
• There are few studies to date that have examined the prevalence of tobacco and alcohol use among UGs and PGs. Out of the available studies, tobacco and alcohol use prevalence was 9.0% in UGs and 7.1% in PGs; however they may be at a higher risk of substance use problems due to higher stress level.
• Scanty studies on NCDs and their risk factors have been conducted among medical students in Kanpur. So we have planned this study in this area.

RESULTS

Gender	Frequency(No.)	Percentage(%)
Male	163	45.02%
Female	199	54.97%
Total	362	100%
Age (in years)		
18 – 20 years	126	34.80%
21 – 23 years	213	58.83%
24 – 26 years	23	6.35%
Total	362	100%
Religion		
Hindu	327	90.33%
Muslim	28	7.73%
Other	07	1.93%

Table 1: Demographic profile of study subjects

Variable	Frequency(No.)	Percentage(%)
Physical exercise(n=362)		
yes	284	78.5%
No	78	21.5%
Time spent for exercise (n=284)		
<150 mins/week	181	64.06%
>150 mins/week	103	35.94%

Table 2: Distribution of status of physical exercise(n=362)



Figure 1: Distribution of diet

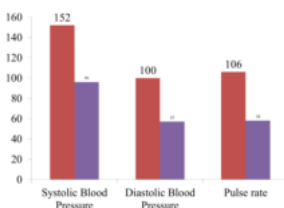


Figure 3: Graph showing distribution of blood pressure and pulse rate

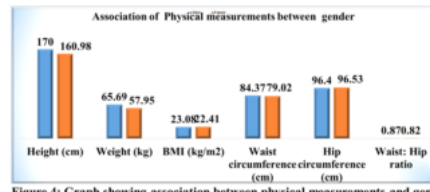


Figure 4: Graph showing association between physical measurements and gender

AIM : To study the prevalence of risk factors of Non Communicable Diseases amongst Medical students of Rama Medical College Kanpur.

MATERIAL AND METHODS

• Cross sectional analytical study conducted on Undergraduate Medical Students at Rama Medical College, Kanpur, from January 2021 to September 2022.
• The sampling method used in this study was simple random sampling, prepared by using the total MBBS student's list of four batches from their attendance register.
• 362 students were randomly selected in MS EXCEL by random number table.
• First year to final year MBBS were included while those who were unwilling excluded.
• Data analysis was done by using software SPSS version 20. Prevalence of NCD risk factors was presented in the form of frequencies and percentages. Most of the variables in this study were categorical so statistical significance tested using Chi-square test and p value (p value ≤ 0.05 is statistically significant, and > 0.05 not significant), and also strength of association was tested between risk factors using independent t test.

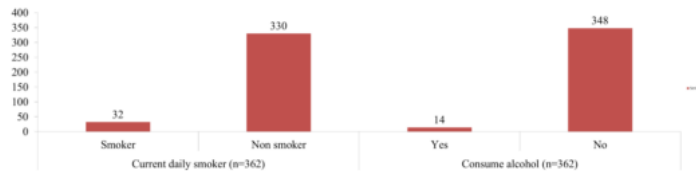


Figure 2: Graph depicting comparison of smoking and alcohol consumption

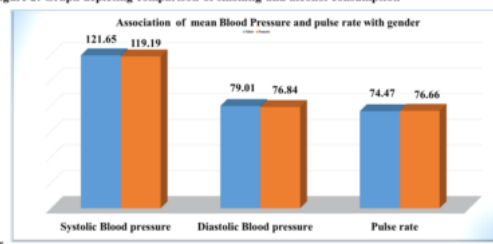


Figure 5: Showing association of mean blood pressure and pulse rate with gender

CONCLUSION:

Prevalence of physical activity in female students was 51.05% and in male students it was 48.94%. A large segment of students was non smokers (91.16%). Among students who were smoking i.e. 15.15% were smoking more than 3 packets per week. The prevalence of smoking was highest among male students (93.75%), with most common age group being 21-26 years. Only 3.87% students agreed of consuming alcohol. Out of which 71.43% were taking < 2 pgs/week. Dietary assessment further revealed 59.12% were of mixed diet and 69.34% gave history of junk food consumption whereas 73.48% took snacks in between meals.

RECOMMENDATION:

Outdoor activities should be encouraged. Junk foods to be restricted. Government policy: Increasing taxes on cigarettes; Decreasing advertisement of tobacco and alcohol. Vegetable and fruits intake. Avoidance of snacks in between meals. Avoidance of junk food. Avoidance of smoking and alcohol intake. Blood Pressure screening should be in the form of regular health checkups among medical students. Screening for raised blood sugar at the time of admission and at regular intervals.

REFERENCES:

1. Noncommunicable disease and their risk factors. Available at: <https://www.who.int/ncds/en/>. Accessed on 31 May 2019
2. Ramakrishna GS, Sankara Sarma P, Thankappan KR. Tobacco use among medical students in Orissa. Natl Med J India. 2005 Nov-Dec;18(6):285-9. PMID: 16483025
3. Seshadri S. Substance abuse among medical students and doctors: A collaboration. Natl Med J India. 2008;21(2):57-59
4. British Medical Association. *The Misuse of Alcohol and Other Drugs by Doctors*. London: British Medical Association; 1998

CONCLUSION:

The prevalence of physical activity in female students was 51.05%, and in male students, it was 48.94%. A large segment of students was nonsmokers (91.16%). Among students who were

smoking i.e., 15.15% were smoking more than 3 packets per week. The prevalence of smoking was highest among male students (93.75%), with the most common age group being 21-26 years. Only 3.87% of students agreed to consume alcohol. Out of which 71.43% were taking < 2 pegs /week. The dietary assessment further revealed that 59.12 % were on a mixed diet, 69.34 % had a history of junk food consumption, and 73.48% took snacks between meals.

RECOMMENDATION:

Outdoor activities should be encouraged, and junk food should be restricted. Government policy: Increase taxes on cigarettes; decrease the advertisement of tobacco and alcohol. Vegetable and fruit intake. Avoid snacks in between meals. Avoid junk food. Avoid smoking and alcohol intake. Blood pressure screening should be done through regular health checkups among medical students. Screening for raised blood sugar should be done at admission and at regular intervals.

REFERENCES:

1. Noncommunicable diseases and their risk factors. Available at: <https://www.who.int/ncds/en/>. Accessed on 31 May 2019
- 1.
2. Ramakrishna GS, Sankara Sarma P, Thankappan KR. Tobacco use among medical students in Orissa. *Natl Med J India*. 2005 Nov-Dec;18(6):285-9. PMID: 16483025
3. Seshadri S. Substance abuse among medical students and doctors: A call for action. *Natl Med J India*. 2008;21(2):57-59 4.
4. British Medical Association. *The Misuse of Alcohol and Other Drugs by Doctors*. London: British Medical Association; 1998

- **Acknowledgment:** We would like to express our deepest gratitude to our project supervisor, Dr. Anju Gahlot, for their invaluable guidance and support throughout the research process. Their expertise and dedication were instrumental in shaping this project.

Not applicable

- **Funding**

Not applicable

- **Informed Consent**

Not applicable

- **Conflict of Interest Statement**

All the authors declared "No Conflict of Interest" with this publication.

- **Additional Information**

Not applicable

This open-access article is distributed under the terms of the Creative Commons Attribution License CC-BY 4.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

- DOI: 10.62996/daj.08072024

Cite this article: **Lakshmi Singh,¹Anju Gahlot,²Atul Kumar Singh³**. A study of the prevalence of Risk factors of Non-Communicable diseases amongst medical students in Rama Medical College, Kanpur. Diabetes Asia Journal. 2024; 1(1):56-59

