

ORIGINAL RESEARCH

A cross sectional study on consumption tobacco among undergraduate and post graduate medical students of Deem University Jaipur Rajasthan

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ABSTRACT

Background: Tobacco consumption epidemic is one of the biggest public health threats that the world is facing and attracts the attention of researchers to identify the cause for the same in specific groups. Medical students act as mentors to fight against tobacco use, but several reports suggest that a good number of medical undergraduates are themselves addicted to tobacco use. Thus, the objective of the study was to determine the prevalence of tobacco consumption and its association with various factors among undergraduate medical & postgraduate students. **Materials And Methods:** A cross-sectional study was conducted on 150 undergraduate medical students and post graduate students from first to fourth year during November 2022 to January 2024. A pre-designed, pre-tested, structured and self-administered questionnaire was used. Statistical analysis was done using SPSS software version 20. Data was analyzed for percentage. **Result:** The mean age of the participants was 21.2 (SD=2.28) years with a male-female ratio of 1:3. The prevalence of tobacco use was 40% in male 39.3% & female is 60.7%. The overall prevalence of smoking and smokeless tobacco use was 86% and 14% respectively. Prevalence of hosteller is 86% & non hosteller is 18%. Among the ever tobacco users, initiation of tobacco consumption or smoking is highest in stress 78%. Prevalence of awareness about the diseases caused by smoking / consuming tobacco is 98%. **Conclusion:** The prevalence of tobacco use in smoking and smokeless form among undergraduate and post graduate medical students was high. This has important implications in the strict implementation and monitoring of smoking-related rules in hostels of medical colleges, especially those related to peer-support.

Keywords: Tobacco, Smoking, Medical students

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INTRODUCTION

Tobacco is a serious threat to health¹ and a proven killer² and ranks second as a cause of death³ in the world taking its toll by killing some 5 million people globally. Tobacco use is an emerging pandemic marching forward relentlessly^{4,5}. The figure is expected to increase to 10 million deaths per year by 2020, with 7 million of these deaths to occur in China and India⁶. In India, tobacco kills 0.8-1 million people each year and many of these deaths will occur in people who are very young. It has been estimated that an average of five-and-a-half minutes of life is lost for

each cigarette smoked⁷. As future physicians, medical students will be advocates of 'Tobacco Control Programs' so they should be trained to combat a social evil such as this. Hence, this study focused on the prevalence of tobacco consumption among medical students and post graduate medical students. The primary objective of the study is to determine the prevalence of tobacco consumption among undergraduate and post graduate medical students of National Institute of Medical Sciences & researchers, Jaipur Rajasthan.

AIM & OBJECTIVES

To study the prevalence of tobacco consumption in medical and post graduate medical students

OBJECTIVES

- 1) To find out prevalence of tobacco consumption among male and female medical students.
- 2) To study the peer group response for tobacco consumption.

MATERIAL AND METHODS

This study was undertaken among undergraduate and post graduate medical students who gave written consent for the study in a medical college at Jaipur Rajasthan year 2023 -2024. The sampling frame consisted of 150 medical students. The study was carried out from 14/11/23 to 14/2/24

Inclusion criteria - All the students who were willing to participate in study.

Exclusion criteria- All the students who were not willing to participate in the study.

The sample size was calculated using the formula: $N = 4pq/l^2$

$$= 4 * 46 * 54 / (9.2)^2$$

$$= 9936 / 88.64 = 117$$

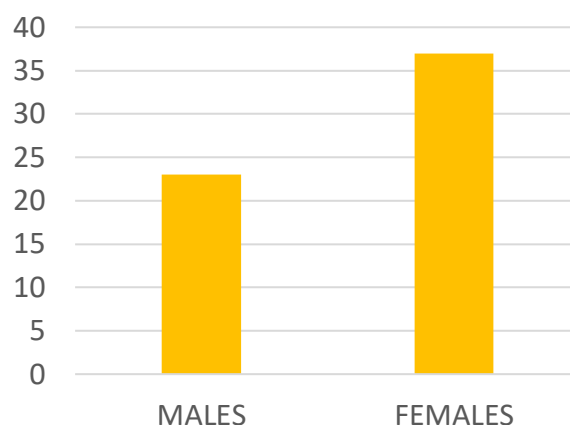
But a sample of 150 students have been enrolled for the study. A pre-designed, pretested, structured and self-administered questionnaire was used to collect data on sociodemographics (age, gender, parents' education, current residence, occupation, and income), personal history, tobacco consumption, tobacco use among peers and time spend with them, past history of tobacco use, reasons for initiation and cessation of tobacco use, parent history of tobacco consumption, source of information for tobacco use and hazards, and awareness of smoking related laws. Study participants were asked regarding their habits and duration of using smokeless tobacco like chewing tobacco, snuff inhalation, chewing guthkha etc. and were classified as (a) non-user: a person who had never used smokeless tobacco, (b) ever user: a person who was using smokeless tobacco in his/her life time

before one year and is not using it at present and (c) current user: a person who is using smokeless tobacco at present. Participants who used tobacco in smoking form were classified as a) non-smoker: a person who has never smoked tobacco or smoked 100 cigarettes/beedies/hookahs in his/her life time before one year and is not smoking since last one year and (c) current smoker: a person who has smoked ≥ 100 cigarettes/beedies/hookahs and is currently smoking every day. Ethical clearance was obtained from Institutional Ethics Committee on Human Subject Research, and written informed consent was obtained from the study participants. All participants were given a unique identification code to maintain confidentiality. Data was entered into Microsoft Excel 2007 and analyzed using SPSS software v.20 in the form of frequency and percentage. Quantitative variables were summarized using mean and standard deviation and qualitative variables in percentages. Association between dependent and independent variables were done using Chi-Square test and regression analysis. A p-value less than 0.05 was considered as significant.

RESULT

All the 150 participants completely filled out the questionnaire. Prevalence of tobacco use is 60.7% in female as male relative minority 39.3%. In this study hosteller 82% are more prone to the tobacco consumption as compare to non hosteller 18%. Medical students are more prone to consume cigarette in type of tobacco consume which is around 86%. stress is the main reason to start consume tobacco which is around 78% and in same percentage of students want to quite its consumption. 98% of students are aware regarding disease caused by tobacco. 41.6 % students found some what effective waring while consuming tobacco. In this study 86% immediate family member was not consuming tobacco in front of subjects. 56.6 % of the medical students are being provoke to continue because of the peer group.

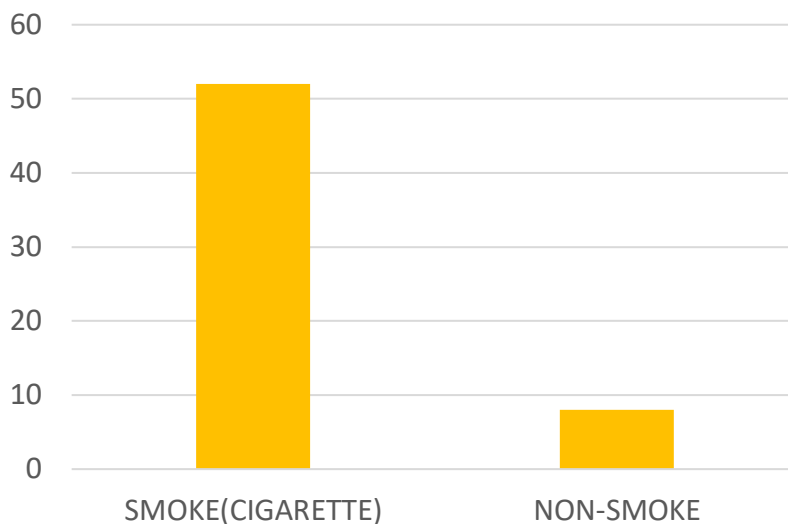
Numbers Of Males And Females Consuming Tobacco



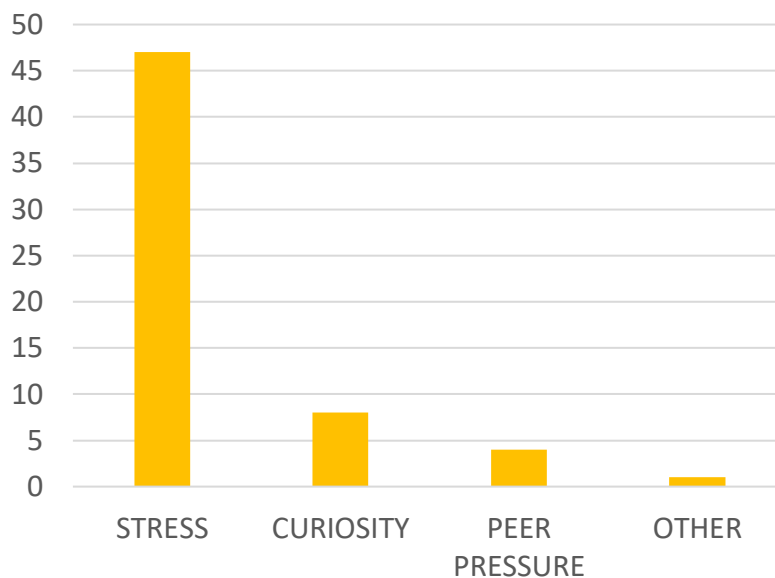
Consumption Of Tobacco Among Hostellers And Non Hostellers



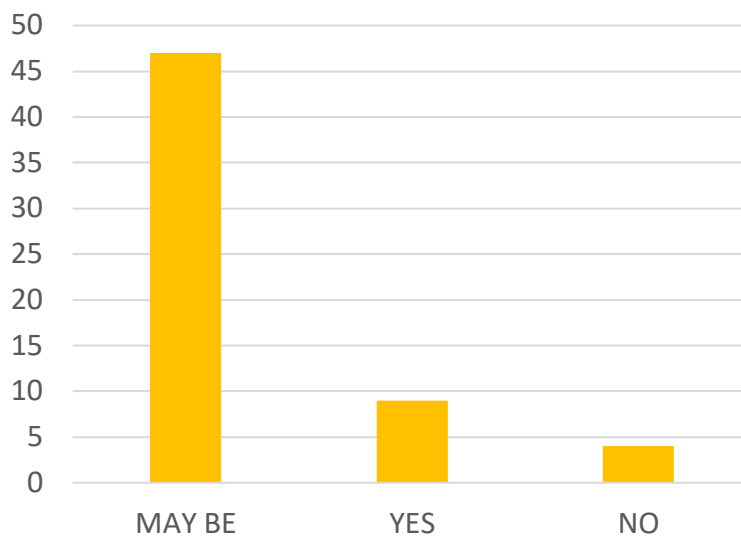
Types Of Tobacco Consumed



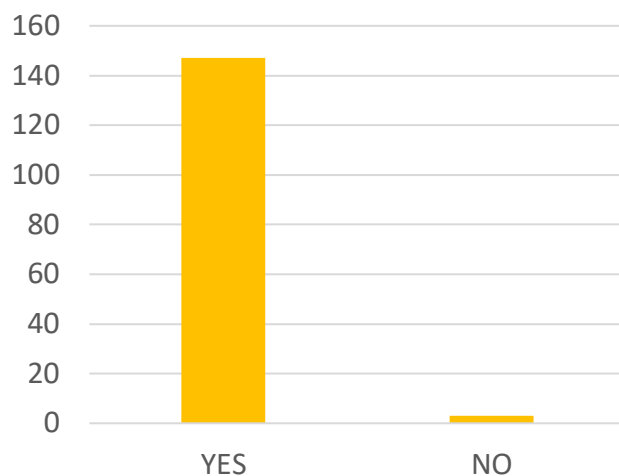
The Reason For Initiation Of Tobacco Consumption Or Smoking



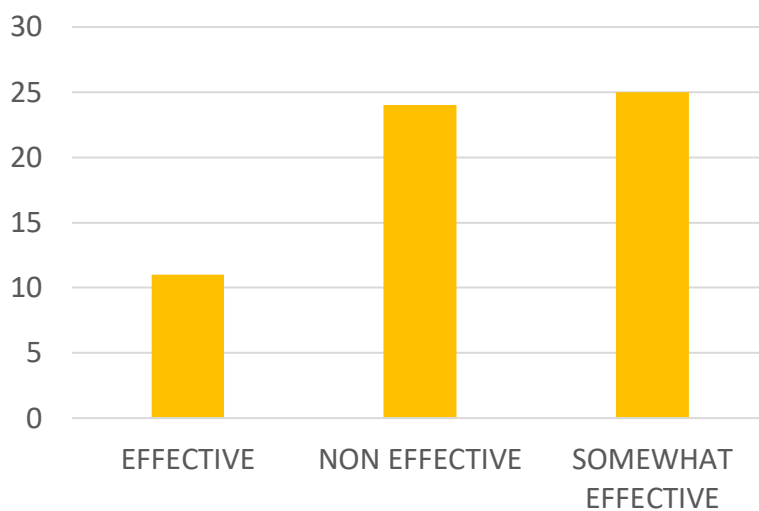
Intention To Quit Smoking/Tobacco Consumption



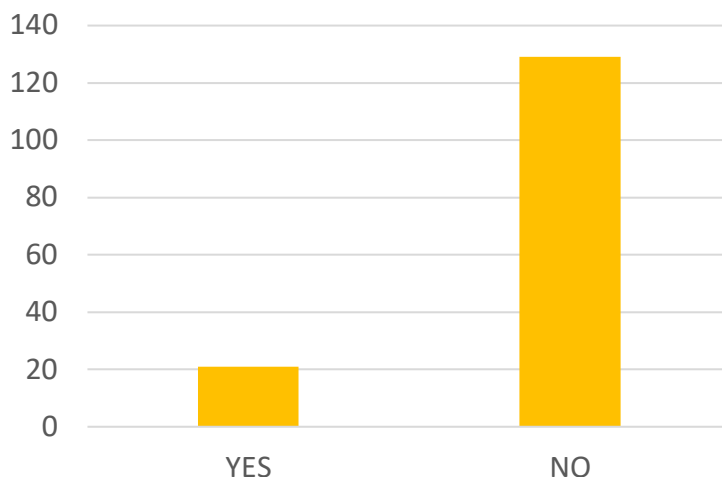
Awareness About The Diseases Caused By Smoking/Consuming Tobacc



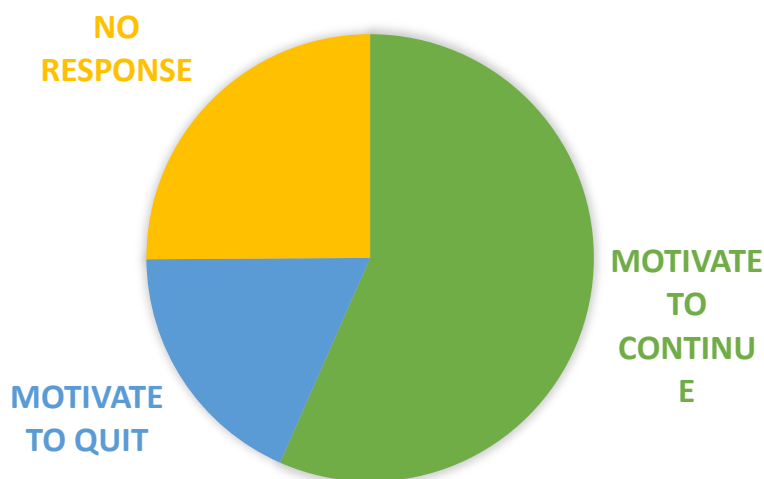
Effectiveness Of Warning Labels On Tobacco Product For Quitting Of Tobacco/Smoking



Immediate Family Member Smoking/Consuming Tobacco In Front Of The Subject



Response Of Peer Group To Smoking/Consuming Tobacco



DISCUSSION

The current study was conducted to estimate the prevalence of tobacco use and to measure the extent of tobacco usage among undergraduate and post graduate medical students in Jaipur, Rajasthan. The number of study participants was 150 students, The majority of participants was female and aged between 19 to 22 years. The mean age of the students was 20.46 years. In the present study, female students 60.7% were more smokers than male students 39.3%, in contrast finding were reported by Ramakrishna et al.⁸, with 12.4% of male and 0.8% of female medical students were current smokers. Similarly, Saulle et al.⁹ reported 20.4% of male and 19.1% of female medical students were smokers, and Jradi et al.¹⁰ reported 18% of male and 12% of female medical students were current smokers. All studies conducted among medical students reported higher rates of male smokers relative to females but in our study female reported higher. In our study, 78% of students had ever tried to stop smoking. Similarly, the

study done by other investigators found that more than 50% of medical students had tried to quit smoking^{11,12}. In this study, 82% of the study participants were hostellers which is almost similar to the study done in New Delhi¹³, revealing that 68% of students were hostellers. Another study conducted in Central India¹⁴, shows that 87% of students were hostelites during the study period. These findings reveal influence of environment on the tobacco consumption among medical students which should be targeted and intervened properly¹⁵. In present study, 78% of students started tobacco consumption because of the stress relief followed by peer's influence 56.6%. Study conducted in Kolkata¹⁶ shows curiosity 44% as common reason for initiation of tobacco consumption followed by Peer pressure 29% among medical students. Study conducted in Andhra Pradesh¹⁷ also shows 68% of peer's influence among the participants who were consuming tobacco in form of smoking. Thus stress reduction, peer education program and intervening influencing factors should be

targeted¹⁵. In our study, approximately one-third 14% of the students had exposure to smoke at home by immediate family member consuming tobacco in front of the subject. Similar findings were reported by Alkawari et al.¹⁸, where 27.9% were exposed to smoke at home. In contrast, Sinha et al.⁴ and Tacettin Inandi et al.¹² reported that upward of fifty percent of the students had exposure to smoke at home.

CONCLUSION

In the present study prevalence of tobacco product consumption is 40% and out of these 60.7% were females. Consumption of tobacco products was seen most among hostellers as compared to non hostellers. Smoked form of tobacco products that is cigarette was the most common product consumed and stress was the most common reason for initiation of tobacco product consumption.

Maximum of the medical students were aware that consumption of tobacco product causes diseases. 40% of medical students believe that the warning label on tobacco products were not effective for quitting of tobacco whereas only 18.3% believe that warning labels are effective.

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