ABSTRACT

Introduction: Tobacco use is one of the important preventable causes of death and a leading public health problem all over the world. According to the World Health Organization (WHO), tobacco is the second major cause of death worldwide and is currently responsible for about 5 million deaths each year. This figure is expected to rise to about 8.4 million by the year 2020, with 70% of deaths occurring in developing countries.

Objectives
• To study the prevalence of tobacco use
• To assess the socioeconomic factor of tobacco use

Materials and methods: A community-based cross-sectional study was carried out in rural field practicing area of Rohilkhand Medical College and Hospital (RMCH), Bareilly. Multistage sampling design was used and 400 males, aged above 15 years, were randomly selected belonging to the field practice area of RMCH. The data were recorded in predesigned and semi-structured questionnaire.

Results: In the study prevalence of tobacco use, “current user” was 183 (45.75%) and past user was 19 (4.75%); thus, the overall prevalence of tobacco use was 202 (50.50%). Among the tobacco user, maximum participants belong to age group 15 to 24 years. The data were analyzed by applying chi-square test.

Keywords: Current user, Past user, Smoked, Smokeless.


Source of support: Nil

Conflict of interest: None

INTRODUCTION

The tobacco epidemic is one of the biggest public health threats the world has ever faced. It kills nearly six million people a year, of whom more than 5 million are users and ex-users and more than 600,000 are nonsmokers exposed to second-hand smoke.1 The death toll from tobacco is expected to increase to eight million a year by 2030 and if the current trend continues unchecked, there will be up to one billion tobacco-related deaths during 21st century, many of which will be from developing countries.2 Eighty-two percent of the world’s 1.1 billion smokers now resides in low- and middle-income countries where, in contrast to the declining consumption in high-income countries, tobacco consumption is on the rise.3 India has the highest number of oral cancer cases in the world, and 90% of all oral cancers are related to tobacco use. Half of the total cancers among men and 20% of cancers in women are tobacco related.4 In India, tobacco use is estimated to cause 800,000 deaths annually. The World Health Organization (WHO) predicts that tobacco deaths in India may exceed 1.5 million annually by 2020.3 Considering the social and economic impact of tobacco consumption, the government of India introduced “Cigarettes and other tobacco products (Prohibition of Advertisement and regulation of Trade and Commerce, Production, Supply and Distribution) Bill 2001,” which was enacted in 2003.5 In India, the most susceptible age groups for tobacco use are during adolescence and early adulthood of 15 to 24 years.6 Strong evidence is available in India from large-scale studies on the association between tobacco use and mortality. Although various other health problems have been addressed, there is paucity of data regarding tobacco use among rural males of Bareilly district. Therefore, this study was undertaken to assess association between socioeconomic status and prevalence of tobacco use in males of rural field practice areas of Department of Community Medicine, Rohilkhand Medical College and Hospital (RMCH), Bareilly.

MATERIALS AND METHODS

Study Design

This is a community-based cross-sectional study.

Sampling Method

The proposed study was conducted in the rural field practice area of RMCH, Bareilly. A pretested schedule was used to interview the subjects. The interview was conducted after obtaining an informed consent in local language. The sample size was calculated by using standard
formula. Multistage sampling design was used. In the first stage, one block will be randomly selected out of the total two blocks in field practice area of Rural Health Training Center, Department of Community Medicine, RMCH, Bareilly. In the second stage, a random selection of 50% village panchayat was done using a random number table. Within each selected second stage unit, an optimum size of males will be selected randomly as third stage unit. Sample will be selected by proportional allocation from different villages to ensure a minimum desired sample size of 400.

**Data Analysis**

The data shall be statistically analyzed utilizing Statistical Package for the Social Sciences (SPSS) (version 22.0) for Windows. Suitable tests like chi-square analysis were used.

**RESULTS**

The study was conducted in the rural field practicing area of RMCH in which 400 males above 15 years were interviewed. The data were analyzed using SPSS (version 22.0).

From Table 1, it was observed that out of total 400 participants, the overall prevalence of the tobacco use was found to be 50.50%, out of which 45.75% are current users and 4.75% are past users, whereas 49.50% of the total population never used tobacco in any form.

Further, the table also revealed that the most common form of tobacco use among the tobacco user was found to be smokeless form of tobacco, i.e., 19.5% followed by smoked form, and both smoked and smokeless, i.e., 16.0 and 10.25% respectively.

From Graph 1, it was observed that 31% of the total tobacco user (202) lie in the age group of 15 to 24 years followed by 26.24 and 17.24% in the age group of 25 to 34 years and 35 to 44 years respectively.

It was observed from Table 2 that according to Modified BG Prasad Socioeconomic Classification (2014), maximum number of tobacco users, i.e., 37.62%, belong to grade IV socioeconomic status, followed by 35.64 and 15.84% that belong to grade V and grade III respectively. On applying chi-square test, no significant association was found between tobacco use and socioeconomic status of the participants (p-value = 0.255).

It was also observed that out of 9 participants in grade I socioeconomic class, 77.77% are tobacco users and 22.23% are nonusers.

**DISCUSSION**

Prevalence of current tobacco user in this study was 50.50%. The finding of this study is consistent with a study conducted by Mohan et al7 in which they reported

<table>
<thead>
<tr>
<th>Tobacco use</th>
<th>Users (%)</th>
<th>Past (%)</th>
<th>Total (%)</th>
<th>Nonusers (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>183 (45.75)</td>
<td>19 (4.75)</td>
<td>202 (50.50)</td>
<td>198 (49.5)</td>
<td>400 (100)</td>
</tr>
<tr>
<td>Past</td>
<td>64 (16.0)</td>
<td>78 (19.5)</td>
<td>41 (10.25)</td>
<td>6 (1.5)</td>
<td>9 (2.25)</td>
</tr>
</tbody>
</table>

**Table 1: Distribution of participants according to tobacco use (n = 400)**

<table>
<thead>
<tr>
<th>Grades</th>
<th>Users (%)</th>
<th>Non users (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>7 (77.77) (3.47)</td>
<td>2 (22.23) (1.01)</td>
<td>9 (100) (2.30)</td>
</tr>
<tr>
<td>II</td>
<td>15 (55.55) (7.43)</td>
<td>12 (44.45) (6.06)</td>
<td>27 (100) (6.80)</td>
</tr>
<tr>
<td>III</td>
<td>32 (42.11) (15.84)</td>
<td>44 (57.89) (22.22)</td>
<td>76 (100) (19.0)</td>
</tr>
<tr>
<td>IV</td>
<td>76 (50.33) (37.62)</td>
<td>75 (49.67) (37.88)</td>
<td>151 (100) (37.80)</td>
</tr>
<tr>
<td>V</td>
<td>72 (52.55) (35.64)</td>
<td>65 (47.45) (32.83)</td>
<td>137 (100) (34.28)</td>
</tr>
</tbody>
</table>

| Total   | 202 (50.50) (100) | 198 (49.50) (100) | 400 (100) (100) |

Chi-square 5.331, df = 4, p = 0.255
the prevalence of tobacco in 21 years and above as 51% and Khan et al\(^8\) who found prevalence of tobacco use as 53.6%.

The finding of this study was also found to be consistent with a study conducted by Garg et al\(^1\) in which they reported the prevalence of tobacco in 15 to 49 years age group was 52.4%.

The finding of the indexed study was inconsistent with a study conducted by Ravishankar et al\(^10\) where they found prevalence of tobacco to be 19.3% and Jushi et al\(^12\) who found about 37.2% were ever tobacco user and 32.9% were current user.

The difference in the prevalence of tobacco use may be due to the fact that the abovementioned studies included all age groups and both sexes, and those included were younger. The age groups covered by the various types of studies are diverse and since tobacco use varies greatly with age, comparison is problematic.

Among the tobacco users, most of the subjects were using smokeless form of tobacco followed by smoking form of tobacco, which is not similar to Gupta et al\(^11\) who found that smoking among men was 38%.

In the study, 31% of current users had tried the use of tobacco in the age of 15 to 24 years, which is consistent with Breslau and Peterson\(^12\) study where their young adults reported that 33.6% smoked their first cigarette at the age 13 or before, 43.2% at 14 to 16 years of age, and 23.2% began at age 17 or later.

Similar finding was also reported by Muttappallymyalil et al\(^13\), Narain et al\(^14\), Johnston et al\(^15\), which provides evidence that the age of starting tobacco use is decreasing and these new starters will probably smoke for more number of years as compared with the present users of tobacco.

Among the smokers, maximum population belong to grade IV socioeconomic status, but an interesting finding was found in which among grade I population 77.77% were users. The reason for this hypothesis needs to be verified by further studies.

CONCLUSION

Tobacco use in any form (smoking or smokeless) is prevalent among the study population. It was observed that large number of participants have started tobacco use in younger age group, i.e., 15 to 25 years of age, followed by 24 to 35 age group. Legislation on the use of tobacco products need to be strengthening to decrease availability, accessibility, and affordability of tobacco products to these age groups.

It was also seen that overall use of tobacco is more in lower socioeconomic class but we also observed that in grade I socioeconomic class, maximum number of participants are tobacco user; thus, there is no role of the socioeconomic status in the use of tobacco.

ACKNOWLEDGMENT

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REFERENCES