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ORIGINAL RESEARCH

Impact of socio-economic status on tobacco consumption- a cross sectional survey-based research study

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ABSTRACT:
Tobacco is considered a major public health issue worldwide. Smoking and smokeless tobacco are hazardous worldwide, with India being the global capital of tobacco consumption. Earlier tobacco was considered a taboo but with the onset of the 21st century, there has been more commercialization of tobacco and many more factors which have contributed towards its increased prevalence in males and females. The prevalence of consumption of tobacco is relatively higher among the disadvantaged groups- groups with low socio-economic status and quit attempts are less likely to be successful in them. Lower educational levels, unemployment, meager wages, lack of ability to support the entire family, the influence of friends, lack of quitting programs, lack of proper social support to aid in quitting, lack of awareness, religious and cultural beliefs, and easy availability of tobacco at cheap prices are the main reasons that contribute towards the prevalence of tobacco consumption to be higher among low socio-economic groups. Analyzing the changes in trends by healthcare professionals can prove to be a valuable tool in devising strategies to control and limit the morbidity and mortality caused due to tobacco consumption. This is a questionnaire survey-based research study conducted in Community health care centers of rural districts of Chhattisgarh to analyze the prevalence of tobacco consumption among the different socioeconomic groups over a span of 6 months.

Keywords: tobacco consumption, rural areas, socioeconomic status, smokeless, cigarettes, awareness

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INTRODUCTION

Tobacco is the major cause of adult mortality in the world. India has a wide array of cultures, religions, and taboos thus the tobacco consumption issue is very complex with a variety of people using different forms of tobacco ranging from smoking to smokeless tobacco consumption. Smoking forms namely- bidi, cigarette, and Smokeless tobacco forms like gutka, paan, zarda, etc.[1] In a country like India, public spending on health is merely 1.04% of the gross domestic product. Thus, these financial constraints and economic burdens to tackle mortality and morbidity related to tobacco can take a major hit on a low-middle income and developing country like India. The frequency of tobacco consumption is mainly increasing due to poverty and lack of education. Globally, tobacco is responsible for more deaths compared to HIV and Tuberculosis.[1,2] A survey conducted by Thakur *et al*. in 2013 highlighted variations to geographical regions in the association between socioeconomic attributes with tobacco consumption and further revealed consistent inverse gradients for both smoking and smokeless tobacco use in India.[3]

Education, income patterns, and occupations are the most widely used socio-economic indicators in understanding patterns of tobacco use, they are often used interchangeably. Disadvantaged sections of society who are deprived of proper education are unaware of the fact that tobacco is deadly in any form and may lead to disability and death.[4] Glorian *et al*. in 2004 concluded that for researchers to gain a more complete understanding of socioeconomic indicators related to tobacco usage, others have noted the

importance of considering multiple indicators of socioeconomic position in understanding patterns of tobacco use. Education and occupation are likely to operate through differing pathways. Lack of proper income contributes to the stress levels of the underprivileged sections, Peer pressure, parental use, exposure, advertisements are some more factors thus target the disadvantaged groups, and tribes. The aim of this study was to highlight the association of socioeconomic status with tobacco consumption prevalence.[5]

MATERIALS AND METHODS

The study was a cross-sectional community-based design conducted for a span of 6 months from July 2019 to January 2020 in 8-9 community healthcare centers in Chhattisgarh. A dental camp was conducted for Oral Health checkups with a questionnaire survey form made to be filled for the type and prevalence of Tobacco Consumption among the resident population. A total of 200 candidates were included in the study. The inclusion criteria were the general population above the age of 18 years who had tobacco consumption as a habit with diversifying frequency. Exclusion criteria were pregnant women, disabled and handicapped population, the population having medical concerns, people above the age of 80 years, and those who were not willing to participate in the study. The sample size was large enough to provide reliable estimates of prevalence of tobacco consumption by sex and for different socioeconomic population groups for each of the Community health care centers.

DATA COLLECTION

Patients were encountered in dental camps. Questionnaire was made to be filled along with the regular dental checkup. Socioeconomic and demographic information were sought from the household informant at both household level (ownership of different assets, caste, religion) and at individual level (for example, age, sex, education, marital status) for all the household members. Socioeconomic differentials of tobacco prevalence were assessed with respect to three measures of socioeconomic status- per capita income, education and household wealth. Habit history of the patient was recorded along with dependency.

ETHICAL ISSUES

Informed consent was taken from the study participants after fully explaining the study in a language they understood well. No biological sample was taken. Confidentiality was maintained.

Data analysis

Data were entered in Microsoft Excel 2007. Data analysis was done using SPSS (version 20.0; SPSS Inc. Chicago, IL, USA) software. Statistical significance (P value) was set at a level of 0.023. Data were evaluated and proportions were obtained showing a correlation between tobacco consumption among low-income groups and low to middle-income group. Chi square test was performed to check the statistical significance.

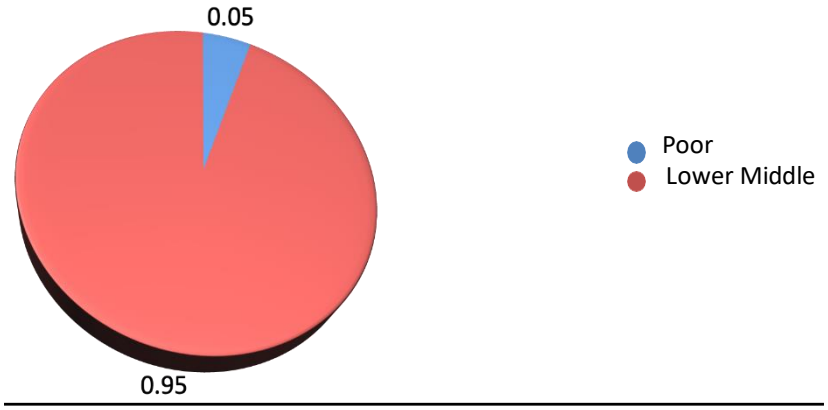
RESULTS

A total of 200 (N) participants were included in the study with consent making 100% response rate. Based on gender distribution 69% were the males and 31% of the subjects were the females. Based on the social class 5% were poor and 95% were Lower middle class. The age of the respondents interviewed was between 15-80 years. Highly significant statistical association was observed between the forms of tobacco consumption and socio economic status of the population in the study.

Table 1: Table depicting the prevalence of tobacco consumption in male and female and mean age of consumption in the study population

		N	%	Mean Age
Gender and Age	Male	138	69%	46.01±7.92
	Female	62	31%	44.08±6.84
Social Class	Poor	10	5%	
	Lower Middle	190	95%	

Figure 1: Bar graph depicting the tobacco consumption in the different socioeconomic groups

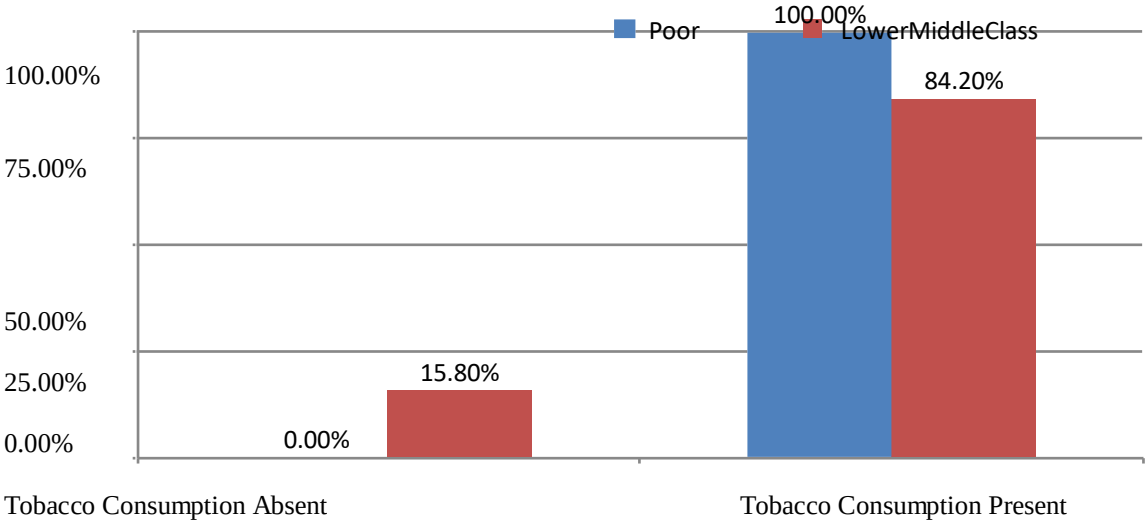


Among the poor subjects 100% were using tobacco and among the lower middle class 84.2% were using tobacco and15.8% were not using tobacco. The difference between the groups was statistically significant with a p-value of 0.023.

Table 2: table depicting the percentage of tobacco consumption in poor and lower middle class group of the study population.

	Tobacco ConsumptionAbsent	Tobacco ConsumptionPresent	Ch Sq	P value
Poor	0	10	11.892	0.023
	0.0%	100.0%		
Lower Middle	30	160		
	15.8%	84.2%		

Figure 2: Histogram presentation depicting the tobacco consumption in poor and lower middle class group



DISCUSSION

Tobacco consumption in any form is injurious to life and is mainly prevalent among the less privileged section of society. Smoking tobacco leads to COPD (chronic obstructive pulmonary disorder) and causes cancer of the lungs, oral cavity, nasopharynx, pancreas and kidneys. Smokeless tobacco predisposes a person to various premalignant conditions like OSMF, leukoplakia, tobacco pouch keratosis, and erythroplakia, all of these may ultimately progress to oral cancer.[6]

Lack of awareness and education among the underprivileged society regarding the hazardous effects of tobacco is responsible for their blindfolded consumption of tobacco. The low pay scale and unemployment among people heighten their stress levels- the stress of sustaining a family single-handedly, thus forcing people to consume tobacco. Society factors such as peer pressure are another important factor. Our study reveals that majority of the people consume tobacco in the company of their friends.[7] Socio-cultural factors play an important role in influencing tobacco consumption. Smoking by women in India is still considered taboo. Our study

reveals, out of the study subjects 69% were males and 31% were females with males having a mean age of 46.01years and females having a mean age of 44.08 years.[8] The relative risk of oral cancer among women who consume tobacco is eight times more than among men. The younger members of the family get attracted towards tobacco when they see the elders of the family smoking and this may even lead to the practice of men of different generations smoking together. In ancient times it was taboo to smoke in a joint family, but with the advent of the 20th century, the concept of nuclear families started dominating thus contributing to increased tobacco consumption.[9] Social acceptance and consumption of chewing paan are high these days. Easy availability of tobacco such as near factories- which is the hub of low-wage industry workers and, its availability at less, affordable prices makes the consumption of tobacco very common. Even tobacco industry marketing is yet another factor. Attempts to quit tobacco among the low socio-economic status groups are less likely to be successful because people have a low motivation to quit, lack of community support for quitting, lack of awareness about the tobacco-induced harms which make people unwilling to participate in interventions and awareness programs.[9,10]

The youth, people getting involved in tobacco consumption practices have a very strong addiction, making it difficult to quit. Low wages and a poor financial state may lead to incomplete pharmaceutical intervention. The lack of availability of health care services and de-addiction centers to these poor sections thus deprives them of proper behavioral interventions. Lack of proper tobacco control policies and variation in health care even contributed to the same.[10] According to a survey done by Corsi and Subramanian in 2014, they assessed the smoking behavior pattern among males in India thus assessing socio-economic inequalities, they reported that cigarette smoking was more prevalent among the wealthier males with decent jobs and beech smoking was more common among the lower socio-economic status. Evidence of interventions that work among low socio-economic groups is rare.[10,11]

The findings of this study demonstrate that Indian adults with low socioeconomic status generally have a high prevalence of cigarette smoking and tobacco consumption in relation to various socio demographic characteristics, irrespective of sex. Because disparities in tobacco use involve a complex interplay of demographic, social, and economic factors across the life course, comprehensive tobacco control efforts that consider social and economic contexts are important to advance progress in reducing cigarette smoking and smokeless tobacco consumption in socio economically
disadvantaged populations.[12]

CONCLUSION

Our study reveals that among the poor subjects, 100% were using tobacco and among the lower middle class 84.2% were using tobacco and 15.8 % were not. It clearly indicates the prevalence of tobacco is more among low socio-economic status. Certain measures should be taken both at the individual and government levels to improve this. There should be more awareness programs to educate people regarding the hazardous effects of tobacco consumption. Raising the price of tobacco products seems to be a tobacco control intervention with the most potential to reduce health inequalities from tobacco. Intervention programs at work, announcing incentives for people who succeed in quitting, targeted cessation programs, and mass media interventions can help. Establishing more de-addiction centers, and making a stronger easily accessible network of health care systems can really help. Warning signs be written and depicted on the packaging of tobacco products.

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