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Epidemiological correlates of tobacco consumption among women in reproductive age group- a community based cross sectional study in the rural area of Belgaum District, Karnataka, South India

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ABSTRACT

Background: Tobacco kills both men and women but sex-specific differences exist. The disease burden, health care costs as well as other social losses resulting from premature deaths attributable to tobacco consumption are rapidly increasing not only in men but even among children, teenagers, women of reproductive age group. The use of multiple forms of tobacco in India complicates the efforts to reduce its overall impact on public health. This study was done to know the socio demographic correlates of tobacco consumption among the rural women in the reproductive age group.

Methods: A community based cross sectional study, conducted from January 2011 to December 2011 among 1200 rural women aged between 15 years to 49 years residing in Primary Health Centre (PHC) Vantmuri area, Belgaum, Karnataka, India. Statistical analysis was done using rates, ratios and chi square tests.

Results: Tobacco consumption was seen in 9.7% of the study participants. Amongst the users, tobacco consumption was more i.e. 38 (19.3%) in women belonging to the older age group of 45 to 49 years. A very high prevalence of tobacco use of 98 (15.9%) was observed out of 615 study participants who were illiterate suggesting that women with no education are at a higher risk of consuming tobacco than the women with high school education. A high proportion 100 (10.2%) of people consuming tobacco was seen in women belonging to Class V socio economic class.

Conclusions: Prevalence of tobacco consumption was quite high. Poor and illiterate women living in rural area are at the maximum risk of using tobacco. There is a need for appropriate interventions to create awareness among the women about the hazards of tobacco use and to help them eventually to stop tobacco consumption. There is a need for appropriate intervention to create awareness among the women about the hazards of tobacco use and to help them eventually to stop tobacco consumption.

Keywords: Epidemiological correlates, Reproductive age group, Sociodemographic factors, Tobacco

INTRODUCTION

"Tobacco" appears as old as human civilization. Tobacco use is world's number one killer and it kills up to half of its regular users. It is claiming the lives of nearly 5.4

million people a year worldwide. Burden in South East Asia region is one of the highest among WHO regions. Estimated number of tobacco users in India is 274.9 million with a lot of regional variation. In India, each year nine lakh people die due to tobacco related diseases

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and more than 2200 Indians die every day due to tobacco use. Tobacco use is responsible for 40% of all cancers in India. India is having highest number of oral cancer cases in the world among which 90% are tobacco related.¹

Coming to the women's toll, about 250 million women in the world are daily smokers and around 22 percent of women in developed countries and 9 percent of women in developing countries smoke tobacco. In addition, many women in south Asia chew tobacco.³

Tobacco kills both men and women but sex-specific differences exist. A high prevalence of smokeless tobacco use is an additional risk for premature death, especially among women.

Tobacco use is one of the top six leading attributable risk factors for chronic diseases in women aged 20 years and above.³ Second hand smoking (SHS) exposure leads to added morbidity in pregnant women and their newborns. Studies have also shown association of SHS with low birth weight and genetic mutations in the newborn. Poor pregnancy outcomes from tobacco use during pregnancy include still births, increase in placental weight, male fetus wastage, low birth weight, lower gestational periods (preterm), delayed conception, sudden infant death syndrome, premature rupture of membranes, abruptio placenta and placenta previa.³⁻⁵

The use of multiple forms of tobacco in India complicates the efforts to reduce its overall impact on public health.

Women are one of the biggest targets of the tobacco industry

The tobacco industry has long fostered the false idea that tobacco is linked to women's empowerment by suggesting that cigarette smoking symbolizes high fashion, freedom, and "modern" styles and values, and that it even promises weight reduction. The industry actively targets women because comparatively few women currently use tobacco, and women are increasingly able to afford tobacco. Ironically, despite known dangers of tobacco, the tobacco industry promotes cigarettes to women using seductive but false images of slimness. modernity, emancipation, sophistication and sexual allure. In reality, it causes disease and death. Tobacco companies have now produced a range of brands aimed at women.³

India, has now become the signatory nation to "Framework Convention on Tobacco Control" (FCTC-WHO, 2003), a first ever international public health treaty on any one health issue, and is coming out with stringent tobacco control policies. It has become the need of the hour to provide enough evidence on the correlates of tobacco use in the community to assist government policy makers, health professionals and the public in developing realistic models towards effective

tobacco control to cater to different sections of community in need.

Objectives of this study

To assess the socio-economic and demographic correlates of tobacco consumption among rural women in the reproductive age group.

METHODS

A community based cross sectional study was conducted from January 2011 to December 2011 among 1200 rural women aged between 15 years to 49 years residing in PHC Vantmuri area, Belgaum, Karnataka, India. The total population of Vantmuri PHC was 34190. There were 17 villages under the Vantmuri PHC under 5 subcentres. Considering the population of women under the reproductive age group as 22%, accordingly the total population of women under the reproductive age group is 7522 under the PHC Vantmuri area. The sample of 1200 was taken proportionately from all the 17 villages depending upon the population of the each village and women selected using systematic random sampling. With approval from the Ethics committee and taking written informed consent from the study subjects, data regarding tobacco consumption and socio-demographic variables including age, education, and occupation was collected.

According to NFHS 3, 15-49 years aged women were considered as women under reproductive age group. So, all women in the age group of 15-49 years and girls less than 15 years who have attained menarche were in the inclusion criteria. Socio-economic status was determined using Modified B G Prasad's classification for the study period (2011-12) with average consumer price index for the year 2011-12=887. Subjects are categorized as never user/ non users who have never tried tobacco any time in life in any form and Ever user being one who has consumed tobacco atleast once in her life time. 10,11

Data analysis

The data was tabulated using Microsoft Excel Worksheet and analyzed using mean, proportions and percentages. The statistical analysis was done with SPSS 18 statistical software using chi-square test.

RESULTS

Out of the 1200 study participants, 117 had ever consumed tobacco. The prevalence of tobacco consumption was 9.7%. 100 (8.4%) of study participants were currently pregnant and 11 (10.9%) of currently pregnant women were consuming tobacco.

Amongst the users, tobacco consumption was more i.e. 38 (19.3%) in women belonging to the older age group of 45 to 49 years. It was 15 (8%), 11 (13.3%), and 11 (17.7%) among the users of the age groups 15 to 19

years, 20 to 24 years and 25 to 29 years respectively. Tobacco consumption was 10 (9.4%), 13 (3.4%) and 19 (10.4%) in women belonging to 30 to 34 years, 35 to 39 years and 40 to 44 years. This difference was statistically significant (χ 2=44.299, df=6, p<0.001) Table 1.

Table 1: Distribution of the study participants according to their age and tobacco use.

Age (in	Study participants		Total
years)	Non-users	Users	
15-19	173 (92%)	15 (8.0%)	188 (100%)
20-24	72 (86.7%)	11 (13.3%)	83 (100%)
25-29	51 (82.3%)	11 (17.7%)	62 (100%)
30-34	96 (90.6%)	10 (9.4%)	106 (100%)
35-39	369 (96.6%)	13 (3.4%)	382 (100%)
40-44	163 (89.6%)	19 (10.4%)	182 (100%)
45-49	159 (80.7%)	38 (19.3%)	197 (100%)
Total	1083	117	1200
	(90.3%)	(9.7%)	(100%)

In this study, a very high prevalence of tobacco use of 98 (15.9%) was observed among the 615 study participants who were illiterate, followed by 6 (1.9%) out of total 350 study participants educated up to primary school, as against 7 (5.6%) out of 125 women educated up to secondary school. 6 (6%) out of 94 high school educated women consumed tobacco. Women educated up to high school and college and above were grouped together to find the association. The difference that was observed between those educated up to high school and above and educated below high school level and illiterates was statistically significant (χ 2=57.172, df=3, p <0.001) Figure 1.

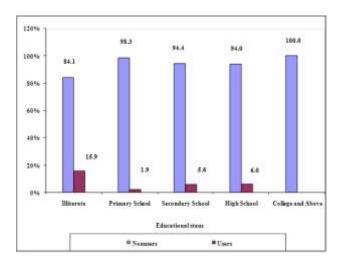


Figure 1: Distribution of study participants according to their educational status and tobacco use.

A higher prevalence of 73 (20.6%) was seen among 355 working women who worked in the farms or doing field work. 25 (4.1%) of the 605 housewives consumed tobacco whereas 18 (8.5%) of those doing other work like tailoring, clerical job, factory work, etc were consuming

tobacco. This difference was statistically significant (χ 2=68.308, df=2, p<0.001) Table 2.

Table 2: Association between prevalence of tobacco consumption and occupation of study subjects.

Occupation	Study participants		Total
Occupation	Nonusers	Users	n=1172
Housewife	580	25	605
nousewife	(95.9%)	(4.1%)	(100%)
Agricultural	282	73	355
labors	(79.4%)	(20.6%)	(100%)
Other	194	18	212
Other	(95.5%)	(8.5%)	(100%)
Total	1056 (90.1%)	116 (9.9%)	1172 (100%)

Out of 1200 study participants, 28 were students out of whom 1 (3.6%) person consumed tobacco.

Percentage of women consuming tobacco steadily increased across the groups from 1 (4.8%) in Class II to 4 (7.5%) in Class III, to 12 (9.6%) in Class IV. A high proportion 100 (10.2%) of people consuming tobacco was seen in women belonging to Class V socio economic class. However this difference was statistically not significant. (χ 2=2.799, df=4, p=0.592) Figure 2.

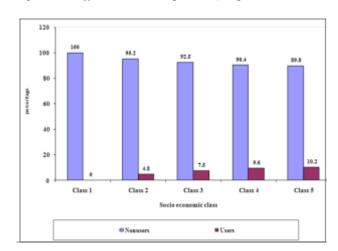


Figure 2: Distribution of study participants according to their socio economic class.

A significant association was found between women living in joint families and tobacco consumption. 740 women out of 1200 belonged to nuclear family and 61(8.2%) of them consumed tobacco whereas there was high prevalence of tobacco use in women belonging to joint family with 56(12.2%) out of 460 women consuming tobacco (χ 2=4.981, df=1, p= 0.026).

DISCUSSION

In our study, the prevalence of tobacco consumption was 9.7%. This is less when compared to that of NFHS 3 where the prevalence of tobacco among women in rural

areas was 13% in India and more than of Karnataka, 6.6% of the women used some form of tobacco in Karnataka. As compared to NFHS3, NFHS4 states that 5% of rural women use tobacco in Karnataka. In our study, 10.9% of the currently pregnant women were consuming tobacco as against 8.5% and 1% in India and Karnataka respectively according to NFHS 3. Global Adult Tobacco Survey (GATS) in 2010 reported current tobacco use in any form in females was 20.3%. ICMR study reported 11.7% ever use of tobacco among the women aged 15 to 49 years.

A higher prevalence of tobacco use was observed with elderly/higher age groups i.e. 40 to 44 years and 44 to 49 years in our study which goes along with NFHS 3⁷ and ICMR study also reporting that tobacco use increases with increasing age group. ¹⁰

The prevalence of tobacco consumption was more than double among the illiterates in our study when compared to those educated upto high school. Illiterates showed a higher use of tobacco than those with education. This is consistent with NFHS3⁷ and other studies. ^{10,11} However, it also suggests that only education does not provide full protection against tobacco use as there were significant tobacco users even with high school education than with primary education. Women with no education are at a higher risk of consuming tobacco than the women with high school education.

A high prevalence of tobacco consumption was seen in women who worked in the farms/agricultural labors than the housewives and women doing other work. Thus occupation was a very significant determinant in the current study for tobacco consumption by the women. This may be because agricultural workers are more exposed to physical labor and associated stress and they believe that tobacco use helps them work consistently for long duration.

Though the association was not statistically significant, socio economic status was an important determinant of tobacco use in this study. The tobacco consumption was inversely proportional to the socio economic class. Poor socio economic status predisposes women to lead a compromised life in terms of education, standard of living and her social belongings. It is likely that poor and less educated people are less aware of health hazards of tobacco consumption; more likely to find themselves in condition predisposing to them to initiation of smoking and chewing of tobacco, and more likely to have higher degree of fatalism or higher overall risk taking behaviour.² A high prevalence of 10.2% of tobacco use was seen in women belonging to Class V socio economic class. NFHS 3^7 also reported that 21.6% of the women belonging to lowest wealth index consume tobacco as compared to 3.3% women belonging to highest index. Similar observations were made by the other studies.

There was high prevalence of tobacco consumption in women belonging to joint family. Thus type of family was a major determinant of tobacco use which could be due to the fact that the elderly members in the joint family in the rural area are usually in the habit of consuming tobacco, especially if the tobacco consumption is prevalent since long time in the family and is culturally accepted.

CONCLUSION

The epidemic of tobacco-related diseases has expanded from developed to developing countries and tobacco use is increasingly becoming a major health issue for women as well as men. Women under the reproductive age group constitute an important segment of the population. It was evident from this study that the tobacco use is widespread among the women under reproductive age group in the study area. Tobacco consumption varied with age and by the forms of tobacco. It was more in the women of lower socio economic class. It was significantly associated with age, education, occupation, and type of family. Inspite of statutory/pictoral warnings, people remain less or no impressed as they fail to correlate tobacco with morbidities. Poor and illiterate women living in rural area are at the maximum risk of using tobacco. There is a need for appropriate interventions to create awareness among the women about the hazards of tobacco use and to help them eventually to stop tobacco consumption.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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