

CORRESPONDENCE

Prevalence and Determinants of Tobacco Product Use Among the Tribal Community of West Bengal: A Cross-sectional Survey

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Sir,

Tobacco addiction is a global problem. Studies from South Asia have shown high rates of smoking (30-55%) among adult males¹. In females, the rate is generally lower, except in some areas.¹ While smoking is important, there are various smokeless forms of tobacco which are equally prevalent.

A study from Kerala, India have shown that the indigenous tribal population have a much higher rate of tobacco use compared to the general population.² Studies concentrating on tobacco use of specific population groups like indigenous tribal and ethnic minorities are scarce from Eastern India. In this study, we aimed to conduct a survey on the patterns of tobacco use among the adults of a tribal population in West Bengal.

Patients and Methods

This was a hospital-based, cross-sectional, questionnaire based survey. The study was conducted simultaneously in a tertiary care medical college of West Bengal and a peripheral rural hospital. Full ethics committee permission was taken.

The survey was conducted using

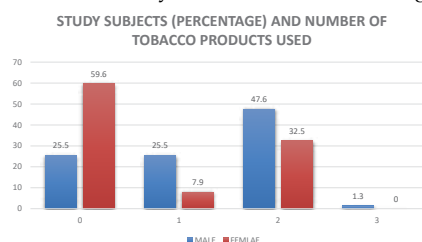


Fig. 1: Bar diagram showing the number of tobacco products used by each study subject

a pre-tested and validated structured questionnaire. The survey was conducted over a period of three months. Subjects were randomly chosen from the patients attending the outdoors of the two hospitals.

Calculation of sample size

In a recent survey from Eastern India, tobacco use prevalence in the rural population has been found to be 31.9%. Taking this as a reference, the sample size was calculated to be 334 (for a precision of 0.05). The data was entered from the patient data sheet in to SPSS (Ver. 19) worksheet. Appropriate statistical tests were done.

Results

We had 345 subjects in our study with male: female ratio of 231: 114. Mean age of the study subjects was 43.1± 8.7 years. Out of the study subjects, 175 (50.7%; 95% C.I.: 45.3–56.1%) had knowledge about the harmful effects of tobacco. In the female subset, 82 (71.9%) had the knowledge while in the male subset, only 93 (40.3%) were aware (p=0.0001).

Overall, 218 subjects (63.2%; 95% C.I.: 57.9-68.3%) used one or more tobacco products. 74.5% of the male subjects used tobacco products (one or more) while only 40.4% of the female subjects did so (p<0.0001 by two-tailed Chi square test). The number of tobacco products used by the study subjects (Figure 1). 68 (19.7%) used one product and 147 (42.6%) used 2 tobacco products. 47.6% of the male subjects used 2 tobacco products while only 32.5% of the female subjects did so. This gender difference in multiple product use was also statistically significant (p<0.0001).

Of the study subjects who used tobacco (n=218), 35 (16%) used only

the smoking form (biri or cigarette). The rest used either only the smokeless form or a combination of both. Of the tobacco products used in our study subjects, khaini was the most popular (n=95; 43.6%; 95% C.I.: 36.9–50.4%). The next most used products were gutkha (n=78), Biri (n=72) and Zarda (n=71). In the male subset, 80 (46.5%) preferred khaini. Tobacco use through smoking was done by 93 (40.3%) male subjects. But in the female subset, the most popular form of tobacco used was gutkha (n=26; 22.8%) followed by guraku (n=19; 16.7%). Only 6 female subjects (5.3%) reported smoking.

Among the study subjects, khaini-gutkha combination was the most popular (n=20), followed by gutkha-Zarda (n=18). Out of the female subjects who were labourers (n=27), rate of tobacco use was 77.8% (n=21).

The average age of initiation of tobacco use was 23.6± 4 years. Regarding the influence behind initiation of tobacco use, peer pressure was overall the most common factor (n=80; 36.7%; 95% C.I.: 30.3-43.5%). As Figure 2 shows, in females, family member influence was a more important factor in initiating tobacco use (34.8%) than male (26.7%).

Discussion

In a study from Kerala, India it was found that the prevalence of tobacco use among tribal population was 73.8%.² Of them, 82% used only smokeless forms of tobacco while only 8% were pure smokers.² The average age of onset was 16.4 years for smoking and 17.5 years for smokeless forms.² In our study, the average age of initiation was 23.6 years, considering all forms together. In the Kerala study, 40% of the subjects cited family influence and 23% cited peer pressure as factors in tobacco initiation.²

Another similar study was conducted among Tribal adolescents in Maharashtra.³ It was found that 50% of them used smokeless forms while 23% were smokers. In this study, chewing tobacco with betel quid was the most popular form of smokeless tobacco, followed by pan masala.³ But in our survey, khaini was the most popular form, followed by gutkha.

A study from Madhya Pradesh

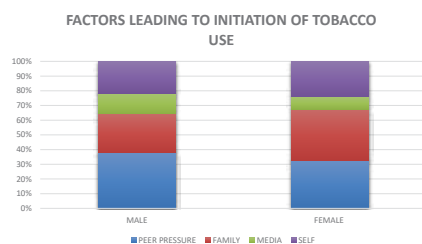


Fig. 2: Stacked bar diagram showing the primary influence behind tobacco use according to gender

found that the prevalence of tobacco use among tribal population was 43.4%.⁴ Khaini was the predominant form used and only 5% smoked biri or cigarette.⁴ In this study, 39.5% of the female subjects reported tobacco use, which is similar to our data.

Trends from national sample survey of India between 2000 and 2012 have found that while overall tobacco use may have decreased slightly by a few percentage points among the tribal population, the use of smokeless tobacco has actually increased.⁵ The trend in the use of multiple tobacco products has also increased in this time period.⁵

However, although India is the

world's largest market for smokeless tobacco, effective prevention strategies have often lagged behind the tobacco industry's aggressive marketing. Instead of using the term "Smoking is injurious to health", a better approach could be "Tobacco is injurious to health."

Conclusion

Tobacco use is significantly high among the tribal population of West Bengal. The use of smokeless tobacco is much higher compared to smoking. There is a gender difference in the preference for particular tobacco products.

Acknowledgement

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