SOCIO-DEMOGRAPHIC PROFILE OF PREGNANT WOMEN USING MISHRI

PRAVEEN GANGANAHALLI, ASHA PRATINIDHI, SATISH V. KAKADE

ABSTRACT

BACKGROUND: “Mishri” is one among the various smokeless tobacco products used in the central and southern part of India. The use of newer tobacco products is increasing not only among men, but also among children, teenagers, and women of the reproductive age-group. OBJECTIVES: To study socio-demographic profile of mishri users among pregnant women admitted for delivery into Krishna Hospital, Karad – Satara, Maharashtra. MATERIALS AND METHODS: All the consecutive pregnant women admitted for delivery in Krishna Hospital, Karad over a period of 6 months were enrolled and a detailed history of use of tobacco was obtained from them. A representative sample of mishri used by them for each application was collected and weighed on an electronic weighing machine. The socio-demographic information was collected among all mishri users and age-, parity-matched controls of non-mishri users during pregnancy. RESULTS: A total of 258, i.e., (12%) of the women delivering in Krishna Hospital were using mishri. The mean duration of mishri use was 2 years with a standard deviation (SD) of 1.09 years, frequency of daily application being 1.4 times with an SD of 0.55, dwell time in mouth being 10 min with an SD of 2.9 min, and the quantity of each application being 236 mg with an SD of 66.2 mg. 29% of the teenagers and 68% of the primiparas were found to be using mishri, and a majority of them were housewives, having minimum education and belonging to the middle and lower socio-economic class. It was also found that the family members played a role in influencing the habit of mishri use. INTERPRETATION AND CONCLUSION: A small but significant number of women who deliver in the hospital used mishri during pregnancy and were in need of de-addiction counseling.

Key words: Mishri, pregnant women, smokeless tobacco, socio-demography
INTRODUCTION

The term “smokeless tobacco” is used to describe tobacco that is consumed in un-burnt form. Smokeless tobacco can be used orally or nasally. Over one-third of tobacco consumed regionally is in smokeless form. Traditional forms like betel quid, tobacco with lime, and tobacco tooth powder are commonly used and the use of new products is increasing, not only among men, but also among children, teenagers, and women of reproductive age.

“Mishri” is a roasted, powdered preparation made by baking tobacco on a metal plate until it is uniformly black. It is subsequently powdered. Women who use mishri to clean their teeth initially, soon start applying it several times a day. Generally, mishri is carried in a metal container, taken out with the index finger, and applied to teeth and gums often for the purpose of cleaning the teeth. Users then tend to hold it in their mouths (due to nicotine addiction).

This habit is common in Maharashtra. In a survey of 100,000 individuals in this area, 22% were mishri users; the prevalence was 39% among women and 0.8% among men. Women use it more commonly, predominantly in lower socio-economic groups.

Tobacco use usually begins in adolescence; at a time when individuals possess limited understanding and face numerous challenges. Prevalence of tobacco use in India continues to increase with considerable changes in the method of its use. The habit of tobacco abuse is developed as a result of peer pressure, friends, and elders or for recreational use.

The determinants of tobacco use among the youth are many and varied. First of all, socio-demographic factors such as gender, state, region, and rural versus urban residence are found to be related to tobacco use.

Women who use tobacco, in addition to sharing the same health risks as men, also experience difficulty in becoming pregnant, with an increased risk of pregnancy-related complications like premature birth, low birth-weight infants, still births, and infant death.

MATERIALS AND METHODS

This study was conducted to determine the socio-demographic profile of pregnant women who were using mishri at Krishna Hospital, Karad, situated in Satara district of Maharashtra. All the pregnant women who were admitted into Krishna Hospital, Karad, for delivery were enrolled for the study. The pregnant women who were using mishri during pregnancy were the study subjects and similar number of pregnant woman from consecutive deliveries who were not using any form of tobacco were included in the study as controls during the period of 6 months from 1st January 2011 to 30th June 2011. A pre-structured questionnaire was used to obtain the data regarding the particulars of the pregnant woman and details of mishri use among the users. A representative sample of “mishri” used by them on one occasion was obtained which was weighed on an electronic weighing machine to know the quantity used by each mishri user for one application. The data were analyzed using e Statistical Package for the Social Sciences-18 (SPSS-18) software for the averages and the tests of significance.
Observations

In all, 258 pregnant women with ongoing mishri use were enrolled in the study. This study group constituted around 12% of the total deliveries at Krishna Hospital during the study period. Similar number of age- and parity-matched control subjects were selected for the study.

Analysis of the data showed that 57.8% of the pregnant women using mishri were in the age group of 20 to 25 years, whereas 29% were teenagers (less than 20 years) and remaining (13.2%) were above the age of 25 years. Parity-wise distribution showed that 68.6% were primiparas, 24% were para 2, and 7.4% had parity of 3 or more. The mean age of subjects was found to be 22 years (±2.79).

Figure 1 shows that a high proportion of mishri users were primis under the age group of 25 years whereas those who were above the age of 25 years were having the parity of 2 and above.

Table 1 shows that around 50% of the mishri users were from rural places of Karad taluka, whereas remaining the 50% belonged to surroundings places like other talukas of Satara district, Sangli, and Kolhapur district. By religion, the higher proportion of mishri users comprised Hindu.

Table 1: Comparison of socio-demographic variables among the study and control subjects

<table>
<thead>
<tr>
<th>Socio-demographic variables</th>
<th>Study group (n=258) Number (%)</th>
<th>Control group (n=258) Number (%)</th>
<th>Total (n=516) Number (%)</th>
<th>χ² value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Karad taluka</td>
<td>131 (50.8)</td>
<td>166 (64.3)</td>
<td>297 (57.5)</td>
<td>9.718</td>
<td>0.002*</td>
</tr>
<tr>
<td>Outside Karad taluka</td>
<td>127 (49.2)</td>
<td>92 (35.7)</td>
<td>219 (42.5)</td>
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<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Hindu</td>
<td>250 (96.9)</td>
<td>230 (89.1)</td>
<td>480 (93)</td>
<td>11.94</td>
<td>0.001**</td>
</tr>
<tr>
<td>Muslim</td>
<td>08 (3.1)</td>
<td>28 (10.9)</td>
<td>36 (07)</td>
<td></td>
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<tr>
<td>Socio-economic status</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Class I</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6.52</td>
<td>0.038*</td>
</tr>
<tr>
<td>Class II</td>
<td>04 (1.6)</td>
<td>03 (1.2)</td>
<td>07 (1.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class III</td>
<td>201 (77.9)</td>
<td>223 (86.4)</td>
<td>424 (82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class IV and below</td>
<td>53 (20.5)</td>
<td>32 (12.4)</td>
<td>85 (16.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
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<tr>
<td>Illiterate</td>
<td>30 (11.6)</td>
<td>11 (4.3)</td>
<td>41 (8)</td>
<td>14.2</td>
<td>0.003**</td>
</tr>
<tr>
<td>Primary education</td>
<td>77 (29.8)</td>
<td>104 (40.3)</td>
<td>181 (35)</td>
<td></td>
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</tr>
<tr>
<td>High school education</td>
<td>146 (56.6)</td>
<td>141 (54.7)</td>
<td>287 (55.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-high school</td>
<td>05 (1.9)</td>
<td>02 (0.8)</td>
<td>07 (1.4)</td>
<td></td>
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<tr>
<td>Occupation</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Not working</td>
<td>202 (78.3)</td>
<td>192 (74.4)</td>
<td>394 (76.4)</td>
<td>2.64</td>
<td>0.267</td>
</tr>
<tr>
<td>Agriculture</td>
<td>36 (14)</td>
<td>35 (13.5)</td>
<td>71 (13.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other labor work</td>
<td>20 (7.7)</td>
<td>31 (12.1)</td>
<td>51 (9.9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant, **highly significant
Hindus. Above two-thirds of users and non-users were class III according to modified B.G Prasad classification, but the proportion was significantly lower among users in class III. A significantly higher proportion of mishri users was class IV. There was no subject in class I.

Education-wise, a significantly higher proportion of mishri users (11.6%) were illiterate as compared to the control group (4.3%). All other literacy groups did not differ significantly.

A high proportion of pregnant women comprised housewives and only 14% were found to be working in agricultural occupation and 7.7% were in other occupations. There was no significant difference in the study and control groups by occupation.

Table 2 shows practices related to mishri use. It was observed that mishri use ranged from 1 to 5 years with 2 years mean use. The mean age at the onset of mishri use was 20 years. The frequency of mishri use ranged from 1 to 3 times, whereas the duration of keeping in the mouth ranged from 5 to 20 minutes. The amount of mishri used each time as given by each subject was weighed and ranged from 90 mg to 405 mg.

Table 3 shows frequencies of other family members using Tobacco in one or the other forms among the study and control subjects. A significantly higher proportion of husbands (31%) were using tobacco among the non-users, whereas the proportion of mothers-in-law (27.5%) using tobacco was high among the users of mishri. The proportion of husbands using tobacco in the form of smoking and proportion of mother-in-law using mishri was found to be high among both groups. The use of tobacco by more than one member in the family was significantly associated with the use of mishri by the pregnant women.

Figure 2 shows the reasons to start using mishri. Most (39%) of the users stated the reason to start using mishri was friends/neighbors/co-workers, whereas nearly 4% of the users did not give any reason for the starting of use of mishri. Other reasons included were after marriage, as a routine practice of using mishri for cleaning teeth (29%) in their in-laws’ houses, whereas influence of mother-in-law (19%) was found more compared to other family members like mother, husband, or other-in-laws.
DISCUSSION

The proportion of pregnant women using mishri as has been reported by Gupta, et al.\[7\] in their population-based study in Mumbai is 17.1%. Pardeshi, et al.\[8\] have reported in their study conducted at Sassoon general hospital, Pune that there are 51.3% mishri users among the hospital deliveries, whereas Pratinidhi, et al.\[9\] have reported 30.9% of pregnant women using mishri among deliveries taking place at Primary Health Centres in Pune District of Maharashtra State. The proportion of 12% in this study is lower than that in the previous studies.\[7-9\] This could be due to variation in place and time.

This study reports that around 29% of pregnant women using mishri are under the age of 20 years (teenage group) which is comparable to other studies like Pardeshi, et al.\[8\] (27.3%) and Pratinidhi, et al.\[9\] (26.1%), whereas Gupta, et al.\[7\] has reported that around 10.4% of teenage pregnant women were using mishri.

This study also has shown that around 68.6% of pregnant women had parity one (Primipara) which is much higher than the studies reported by Pardeshi, et al.\[8\] (27.3%) and Pratinidhi, et al.\[9\] (26.1%).

Pratinidhi, et al.\[9\] have reported proportion of illiteracy among mishri users as 30.7% and Pardeshi, et al.\[8\] have reported as 48.1% which is three times more than that in the present study (11.6%). This study reports high proportion of literates among both groups (88.4% vs. 95.7%) which is comparable to Gupta, et al.\[7\] study (94% vs. 78%). The studies by Pardeshi and Pratinidhi have been conducted more than two decades before the present study. Over this period of time the female literacy has improved, and family size has decreased. To some extent, these changes could be responsible for the differences observed in the literacy status and parity.

This study has found a high proportion of housewives both in mishri users (78.3%) and non-users (74.4%). This finding is comparable to other studies by Pardeshi, et al.\[8\] (90.9% vs. 79.5%), Pratinidhi, et al.\[9\] (88.9% vs. 89%).

This study has also found a higher number of subjects using mishri in the middle socio-economic class (77.9%) followed by lower class (20.5%), according to the modified B G Prasad Classification which is comparable to Gupta, et al.\[7\] study (60.5% Followed by 39.5%). There were no mishri users in...
Class I among both the studies. Pardeshi, et al.\textsuperscript{[8]} reported 35.1% mishri use in lower class.

Most of the study and control subjects belonged to the Hindu religion (96.9\% and 89.1\%) which is similar to the study by Pardeshi, et al.\textsuperscript{[8]} which is 75.3\% and 83.6\% Hindus among the users and non-users of mishri respectively.

The present study has indicated that on an average, mishri users have been habituated for 1-5 years of use, 1-3 times/day, using about 90-400 mg of mishri which is kept in the mouth for about 5-20 min. Pratinidhi, et al.\textsuperscript{[9]} have found maximum duration of use up to 6 years.

Gupta and Ray\textsuperscript{[1]} comments that the habit of tobacco abuse is developed mainly from peer pressure, friends, and elders for recreational purpose. The determinants of tobacco use among the youth are first of all, socio-demographic factors such as gender, state, region, and rural versus urban residence. Other factors affecting social behavior are family influence, tobacco use by friends, an exposure to advertisements in the media and community, access and availability of tobacco products in the area of residence. Level of awareness about the harmfulness of tobacco, as well as the availability of tobacco products to minors, tobacco control strategies, and the tactics to attract the youth used by the tobacco industry also play a major role.

There is a need to proactively educate adolescents as well as engaged and newly married women about refraining from tobacco use, as they are at a higher risk of beginning mishri use. All the women folk in general, and mothers-in-law in particular, should be educated about the ill effects of tobacco for mothers and their babies. In addition, they should be motivated to participate in ongoing de-addiction drives covering the socially deprived groups in all the rural and urban areas.

**CONCLUSION**

There is a need to impart health education to adolescents, newly married women, and mothers-in-law for prevention of use of mishri by the prospective mothers.

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