



Knowledge, Attitude, and Practice of Women in Slums of Pimpri, Chinchwad, Pune, Maharashtra, India, regarding Usage of Mishri

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ABSTRACT

Introduction: Mishri is one of the form of smokeless tobacco, which is a roasted, powdered preparation made by baking tobacco on a hot metal plate until it is uniformly black, after which it is powdered. It is noted that mishri use is more commonly used by the women of low socioeconomic status, hence the need was felt to conduct this study among women mishri users of slums. Also, the consequences of mishri use are little known, hence an effort is made to find out its ill-effect on oral health.

Objective: To assess knowledge, attitude, and practice (KAP) among women using mishri regarding its effects on their oral and general health.

Materials and methods: A 6-month KAP study was conducted among 100 women who were using mishri. Snowball sampling was used. Oral examination of the participants was also done for oral potentially malignant disorders, such as leukoplakia, erythroplakia, oral submucous fibrosis, and hyperkeratinized pouch.

Results: About 61% of the population used mishri for cleaning the teeth and others used it as quid; 0.85% of the total participants knew that the use of mishri may lead to precancerous lesions/conditions. Only 17% knew that mishri use can cause gum disease; 84% of the population was willing to quit the habit of using mishri.

Conclusion: It is concluded that all the participants had poor knowledge. Attitude toward quitting mishri use was found to be good. About 4% of the participants reported about quitting the habit.

Clinical significance: There is need to create awareness regarding harmful effects of mishri usage in this particular area to improve oral health status.

Keywords: Mishri, Oral health, Women.

How to cite this article: Chawla RM, Mitra P, Shetiya SH, Agarwal DR, Narayana DS, Bomble N. Knowledge, Attitude, and Practice of Women in Slums of Pimpri, Chinchwad, Pune, Maharashtra, India, regarding Usage of Mishri. J Contemp Dent Pract 2017;18(3):218-221.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

For ages, various forms of smokeless tobacco, such as betel quid, leaf with lime, and tobacco and areca nut preparation and tobacco water, zarda, khaini, mishri, gutkha, and tobacco in dentifrices have been used in spite of alarming health hazards. These smokeless tobacco products can be chewed, sucked, and applied to the teeth and gums. Smokeless tobacco products are often made at home but can also be purchased. Increasing use of smokeless tobacco has been reported among men and women.¹

Mishri is one of the forms of smokeless tobacco, i.e., a roasted, powdered preparation made by baking tobacco on a hot metal plate until it is uniformly black, after which it is powdered and used by low socioeconomic women

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Table 1: Knowledge of participants toward effects of mishri use on oral health

Questions	Percentage (n = 100)
Mishri use can cause gum disease	17
Mishri use can lead to complications during pregnancy	5
Use of mishri can cause oral cancer	85
Mishri use can cause staining of teeth	98
Mishri can be used for cleaning teeth	96
Mishri usage has addictive property	92
Mishri use is more common in women	56
	38% – culture
	18% – tradition
Mishri usage relieves toothache	65

Table 2: Attitude of participants toward mishri usage

Questions	Percentage (n = 100)
Mishri usage gives me pleasure	95
Mishri relieves stress after its usage	98
Willing to quit the habit of using mishri	84
Ever tried to quit mishri use	51
Kind of problems in your routine activities you think will arise if you try to quit mishri	Constipation – 10 Unable to work – 74 Both – 16
Will you try to quit mishri use if you are made aware of its harmful effects	89
The government should ban sale of mishri	88

in Maharashtra. Its use is also prevalent in Goa and North India.^{2,3} In general, it is homemade and is carried in a small metal container; it is taken out with the index finger and applied to teeth and gums. As there is a social sanction for the use of tobacco in the form of “Mishri,” the habit is very often inculcated by parents in their offspring from early childhood itself.

As from the literature search, it is seen that there are very few studies done on mishri and its effect on oral health.¹⁻⁴ It is also noted that mishri is more commonly used by the women of low socioeconomic status. The consequences of the use of mishri were less known among these women. Hence, the need was felt to conduct this study among women mishri users living in slums.

MATERIALS AND METHODS

A 6-month questionnaire study was conducted in 100 women mishri users residing in the slums of Pimpri-Chinchwad, Pune, Maharashtra, India. Demographic details, such as name, age, socioeconomic status, and another habit history like consumption of other smokeless tobacco and alcohol were assessed through questionnaire. Women who were smokeless tobacco users other than mishri were not included in the study. Oral examination of the participants was also done for oral potential malignant disorders, such as leukoplakia, erythroplakia, oral submucous fibrosis (OSMF), and hyperkeratinized pouch.⁵ Dentists and doctors with postgraduate degree qualification (Public Health Dentistry and Oral Medicine and Radiology, Oral Pathology and Preventive and Social Medicine) were included for the face and content validation of the questionnaire. Test–retest for reliability of questionnaire was done among 10 participants before commencing the study.

Approval was obtained from the Institutional Review Board and Ethical Committee. A written informed consent was obtained from each participant. Reliability of the questionnaire was checked using WINPEPI software. Kappa value was found to be 0.9. Assuming 50%

prevalent use of mishri and 10% standard error, sample size was calculated to be 100. Snowball sampling technique was adopted for data collection, which was done by going to the slums from house to house. Data were analyzed using Statistical Package for the Social Sciences version 17. The demographic details, such as age, sex, education, occupation, income, and the questions based on knowledge, attitude and practice (KAP) among participants were analyzed using frequencies and percentages.

RESULTS

The age distribution of participants was found to be 19 to 62 years (mean = 34.09 years). In this study, 4% were found to have leukoplakia in buccal mucosa. Results of KAP of the mishri users are shown in Tables 1 to 3.

Based on knowledge (Table 1), only 17% of participants knew that mishri usage might cause gum disease. Only 5% were aware about the complications during pregnancy caused due to use of mishri; 85% of the participants knew that mishri use may cause precancerous lesions/conditions or oral cancer; 92% of the participants knew that mishri usage has addictive property; 38% considers culture as a reason behind the usage of mishri;

Table 3: Practice of participants related to mishri usage

Questions	Percentage (n = 100)
Aid for cleaning teeth is mishri	96
Mode of use	63 – dentifrice 6 – quid 31 – both
Mishri usage	59 – roasted 41 – unroasted
Age of onset of using mishri	40% at age 10 years
Influence for using mishri	72 – family members 27 – peer pressure
Frequency of mishri usage	31 – twice 29 – thrice
Mishri juice	100 – spit out
How long do you keep mishri in the mouth?	50% – 10 minutes
How long does one packet last?	42% – 10 days

0.95% of the participants agreed that mishri usage gives pleasure; 98% of the participants believed that mishri usage relieves stress; 84% of the participants were willing to quit the habit of using mishri, while only 51% had tried ever to quit the habit; 89% of the participants assured that they will try to quit mishri use if made aware of its harmful effects; 88% of the participants agreed that the government should ban sale of mishri (Table 3); 63% of the participants use mishri as a dentifrice; 40% of the population started using mishri at the age of 10 years; 72% of the participants started using mishri under the influence of family members, while only 27% started using mishri under peer pressure (Table 3).

DISCUSSION

Mishri is a roasted, powdered preparation made by baking tobacco on a hot metal plate until it is uniformly black after which it is powdered. In this study, 59% of the participants use mishri in roasted form. Women were using "masheri" which was bought from nearby "Kirana store" and it was available in the roasted form.

Sinalkar et al² in their study stated that tobacco consumption was directly associated with age and inversely with educational level. Mean age for women using tobacco was 35 years. He also stated that mishri is the most common form of smokeless tobacco being used. In this study, mean age of the participants was similar to the study conducted by Sinalkar et al.²

In this study, 4% of the participants had leukoplakia. Gupta and Ray⁶ stated that due to a lack of reported studies, the International Agency for Research on Cancer working group had stated that there was inadequate evidence that oral use of mishri was carcinogenic in humans. Gupta et al⁷ stated that the use of oral tobacco has been found to be associated with various oral lesions, such as leukoplakia, erythroplakia, OSME, tobacco-pouch keratosis. She also stated that habitual use of oral tobacco can increase the risk of oral cancer, such as squamous cell carcinoma and verrucous carcinoma. This showed that the prevalence of oral potentially malignant disorders may vary depending on the type of smokeless tobacco.

In this study, knowledge was found to be poor among women regarding mishri use and gum disease, mishri use and complications during pregnancy, mishri use for cleaning of teeth, and mishri usage for relieving toothache. Mani et al⁸ found that the effect of duration of using mishri was directly proportional to clinical attachment loss of periodontium. Pratinidhi et al³ found that the complications among mishri users during delivery were significantly high ($p < 0.05$). Chatufale and Goyal⁹ stated in their study that people think that mishri can be used for cleaning teeth. However, mishri should not be used

for cleaning the teeth as it can cause staining of teeth,¹⁰ periodontal disease,⁹ precancerous lesions,⁷ complications during delivery.³ Mishri usage was more common in women as they were getting influenced by the family members and they considered usage as a part of their culture. This was also found by Keluskar et al,¹¹ and Sinalkar et al² stated that mishri use was more common among women.

Most of the participants were willing to quit the habit of using mishri if they are made aware of its harmful effects and they feel that government should ban the sale of mishri and this is the only way they can stay away from it. Counseling was done for all the participants. They were educated about the ill-effects of mishri use, and they were asked to quit the habit; 4% quit the habit and 2% reported to dental college to undergo oral treatment. Pratinidhi et al³ found that 70% of women mishri users never stopped using mishri even after counseling. Kasat et al¹² in their study found that 76.56% women never attempted to quit the habit of tobacco. Most common trigger for tobacco use in females was "after meals." Nalgundwar et al¹³ in their study found that 84.3% of the patients opined that banning tobacco products and advertisements was the best strategy to curb the habit. In this study, 98% of the participants believed that mishri relieves stress after its usage (Table 2). However, Nalgundwar et al¹³ found that 31% of patients used tobacco to get relief from high-stress situation.

About 61% of the participants used only mishri for cleaning the teeth; 72% of the participants were influenced by family members to use mishri; 90% of the participants used mishri for more than twice in a day. It was being more commonly used for cleaning the teeth and during working hours. Kasat et al¹² found that 68.75% of women were using mishri to clean the teeth; 91% of females used tobacco four to five times a day. In this study, 40% of the participants started using mishri at 10 years of age (Table 3). However, Ganganahalli et al¹ in their study stated that 29% women started using mishri after marriage.

CONCLUSION

It was concluded that women mishri users had poor knowledge toward effects of mishri use on oral health, where some questions were concerned, while in few areas their knowledge was good. Attitude of participants toward quitting mishri usage and banning sale was good but unfortunately three-fourths of the participants feel they will be unable to do their routine work without using mishri. They are accustomed to its stress-relieving property and its use gives them pleasure. The practice of mishri use was not good among all the participants, though 50% of the participants tried to quit the mishri use in the past. At the end of the 6-month study, 4% of the participants reported that they quit the habit, which

showed that counseling played an important role. Future interventional studies can be planned to improve the KAP and oral health status of the mishri users.

ACKNOWLEDGMENTS

Author would like to thanks Dr Arishka Devadiga, Dr Amit Mahuli, and Dr Simpy Mahuli for their guidance during the study period.

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