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Review Article

Tobacco Use and Women in India

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Abstract

Tobacco consumption has become a cause of major concern globally. India has shown an increase in tobacco use not only among males but also tobacco use, especially smoking has been on a rise in urban Indian females over the past two decades. The use of smokeless tobacco (SLT) among the rural females has also been greatly increased. The major determinant for the SLT use has been the social and cultural acceptance of tobacco use and taboos among rural population. The lower SES population in India has shown an increased incidence of SLT use due to easy availability and access to these products. Furthermore, tobacco industries have a major stake in the economics of the country as well as in the employment of the population from lower SES strata. This paper reviews the statistics and determinants of tobacco use in Indian women along with tobacco addiction, tobacco use cessation strategies, and various tobacco control policies by the Government of India targeting the female population of the country.

Key words: COTPA, Smokeless tobacco, Smoking, Tobacco use cessation

INTRODUCTION

Tobacco consumption is a growing concern around the globe from many decades and has been regarded as one of the most common causes of morbidity and mortality. According to the International Classification of Diseases-10, "TOBACCO DEPENDENCE" has been recognized as a disease. Globally, about 6 million people die due to tobacco use annually. By 2030, unless urgent action is taken, this toll is expected to rise to more than 8 million. India is one of the largest producer and consumers of tobacco in the world. The prevalence of tobacco use among the adult Indian population is 34.6% overall, 48% of males and 19.3% of females, respectively.[1]

In well-developed countries, such as the United States and the United Kingdom, the rates of tobacco users among men and among women are nearly equal. In some Asian countries, only a small percentage of women smoke, while the majority of men are smokers. In India, smoking is not prevalent among women because of social disapproval, but smokeless tobacco (SLT) use has been widely accepted and is fairly common among women.

In India, about 18.4% (70 million) of adult women age 15 and above use SLT. In the country as a whole, the prevalence of SLT use is higher among men than women, but in most of the states in three regions (Eastern, Northeastern, and Southern), SLT use prevalence in women is about equal to or higher than in men. Women are more likely to use SLT products for oral application in some regions (Central, Eastern, and Western) than others, and prevalence of oral application is higher among women than men. In India, 24.1 million women use tobacco as a dentifrice or to alleviate oral problems.[1]

The data from diseases burden of India showed significant rise in tobacco-related health disparities.[2] While ischemic heart disease and chronic pulmonary obstructive disease that are etiologically linked to smoking[3,4] were ranked 6th and 8th, respectively; in disease burden in India during the 1990s, whereas they were in the first two positions in the data of 2016. Therefore, sensitization for tobacco control and tobacco use cessation has a substantial role in public health of India.

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At least 9–10 million women in India are engaged in underpaid or unpaid tobacco-related occupations, ensuring low production costs for tobacco companies but suffering serious health consequences.[5] Women have a major role as a caretaker in the house and can make a significant impact on the psyche of their children. Indulgence of women/mothers in tobacco use can influence the children at a very young age and initiate tobacco use among them at such a tender age. Tobacco use in women has been a neglected matter in India and relatively very little focus has been given for the current tobacco control scenario in India. Because tobacco use and its production create major issues for Indian women and subsequently the future generations, it is important to carefully document the impact of this use and production, and design policies and strategies to combat them.

TRENDS IN WOMEN TOBACCO USERS IN INDIA

Across the world, more and more women are taking to tobacco. In India, while the number of women using tobacco may be a small fraction of the total, it is nevertheless a large absolute number. Till quite recently, tobacco use among women was rare, especially in traditional households. Although rural women consumed tobacco, in some parts of India, tobacco use by women was not socially sanctioned. However, among urban women, smoking is now more often seen as a symbol of the emancipated, "modern" woman. These changing perceptions of women to smoke are due to a "cool" or "modern" image as educated young women and attractive models "light up." [6]

According to the National Family Health Survey 2005–2006, tobacco use is more prevalent in rural areas than in urban areas both among men and women.[7] Among women, 0.5% in urban areas and 2% in rural areas used smoking form of tobacco products and about 6% of urban women and about 12% of rural women used SLT. About 8% of Indian women aged 15–49 years chewed tobacco in the form of paan masala and gutka. About 5% of antenatal mothers and 10.8% of breastfeeding women use tobacco in some form.[8]

Most recently, GATS 16-17 data showed about 14.2% of women aged 15 years and older in India are using tobacco in some or other form on a daily basis. However, around 12.8% of women are indulged in use of a SLT. Among women, the three most commonly used tobacco products are betel quid with tobacco (2.0 crore), tobacco for oral application (2.0 crore), and khaini (1.0 crore). Looking at the GYTS 2009 data, there was exponential rise in use of smoking tobacco (6.1%) in below 15 years of aged girls across the country.[9]

Yet, the socioeconomic gradients for tobacco use are steeper for women than for men. The prevalence of smoking is higher among urban women and SLT use in rural women.

DETERMINANTS OF TOBACCO USE IN WOMEN

Most tobacco use begins in early adolescence – almost all first use occurs before the age of 18. In most countries, few people start smoking after the age of 21; however, in India, the mean age of initiation of tobacco use has been found to vary from 8 to 15 years.[10] The initiation of tobacco use is influenced by a complex interplay of personal, social, and cultural factors which can vary overtime and stage of development and may vary in impact on women.

Lower Socioeconomic Status

It characterized by lower education, unemployment, manual occupations, rural residence, living in poorer or slum neighborhoods, and other factors – was associated with higher prevalence of tobacco use.[11-13] Social disadvantage was also associated with lower age of tobacco initiation. According to GATS India 2009–2010, the mean age of initiation of tobacco use was 2 years lower among those with no formal education, in comparison to those with secondary or higher educations.[14]

In the Mumbai Cohort Study of over 8000 people, the odds ratios for SLT use after adjustment for age and occupation among illiterate women and men in comparison with the college educated were 21.02 (95% CI 16.63–26.56) and 7.75 (95% CI 6.55–9.18), respectively.[15]

Personal Factors

It characterized by different beliefs that tobacco use improves oral hygiene 3, weight reduction, ease gastric problems 65, reduce menstrual pain 66, freshen breath, alleviate fatigue 65, and for manifold other medicinal or imaginary benefits. However, use of SLT by women seems to have deeper underpinnings.[16,17]

Hunger Factor

For women who face economic difficulties, SLT can be a great value for the money. It is scientifically proven that the use of tobacco and/or areca nut causes a biological suppression of hunger and reduces caloric intake.[18-20] Women report that they use SLT to alleviate hunger and help them skip a meal or two.[17] (It should be noted that food is far more expensive than SLT.) In fact, a study of Mumbai pavement dwellers highlighted the fact that the poor choose tobacco over food.[21]

Psychosocial Stress

It is an important contributor to SLT use by Indian women. Women in India often lack equality with the men in the family, may have low levels of control over their lives, and may be frequently abused. Some 19% of ever-married women reported physical or emotional abuse in the family in an analysis of the NFHS-2 in 1998–99, and these women were more likely to use SLT than women who did not experience domestic violence (OR=1.36, 95% CI 1.28–1.44) after accounting for age, standard of living, caste, religion, residential and living environment, body mass index (BMI), employment, and pregnancy status in multilevel models.[22]

Easy Availability

A study in Mumbai (2009–10) reported in a typical low-income community, all residents could reach a tobacco outlet within 30–100 feet of their homes.[5] This study also documented that, in general, grocery shops selling SLT were much more numerous in the community than shops that only sold tobacco products. GATS India 2009–2010 showed that 64% of women (compared to 50% of men) purchased SLT products from stores that sell daily use commodities.[22]

In addition, tobacco-based toothpastes, toothpowders, and herbal dentifrices that contain tobacco are commonly available in "medical" or pharmaceutical shops, along with stocks of other toothpastes, toothbrushes, health drinks, muscle-building foods, and medicines.[23]

Low Self-Esteem

One of the studies on schoolchildren claimed that girls have lower self-esteem than boys. Moreover, a significant association was observed between low self-esteem and smoking behavior in girls only.[24,25]

TOBACCO USE AND HEALTH EFFECTS IN WOMEN

Underweight

Smoking as well as SLT has been closely related with lower body weight in Indian women. Low BMI is an independent determinant of all-cause mortality, however, low BMI associated with tobacco use to increase all-cause mortality, deaths due to tuberculosis, and cancer in women.[26] Maternal anemia and underweight in women of reproductive age are independent determinants of low birthweight, preterm birth, small for gestational age, and reduced fetal iron stores.[7,27] Experimental studies suggest biological plausibility of the association between SLT use, underweight, and anemia. Nicotine in SLT affects hypothalamic dopamine and serotonin, which reduces hunger.[28] Tobacco use increases production of free radicals and systemic oxidative stress 29'30 and reduces antioxidant levels, potentially damaging red blood cell (RBC) viability. A direct hemolytic effect of nicotine and cotinine on RBCs has been demonstrated.[29] Social disadvantage in women SLT users can prevent access to nutritious food, and reduced plasma levels of several antioxidant vitamins have been reported in SLT users.[30-32]

Oral Disease

Although pan masala and tobacco products are often advertised as mouth fresheners, women who use these products have severe oral health problems in comparison with non-users. Users experience more plaque and inflammation in the oral cavity, recession of gums, exposed root surfaces of teeth, increased periodontal pockets, and tooth loss.[33,34] Clinical loss of attachment of periodontal fibers increases with duration of SLT use.[35] Oral inflammation from tobacco and areca nut use further increases the risk of oral cancer, probably because of an increase in endogenous nitration and the formation of toxins.[36-38]

Women consuming tobacco products with areca nut can also develop an extremely debilitating and potentially malignant and precancerous condition called oral submucous fibrosis (OSF). Women may have more symptomatic difficulty associated with OSF than men – for example, difficulty opening the mouth, difficulty eating, burning sensation, altered taste sensation, and difficulty in swallowing.[39]

Cancer

Women who use SLT or pan masala have an increased risk of oral and pharyngeal cancers, and this risk increases with the duration and frequency of SLT use.[40] Women appear to be more vulnerable to the carcinogenic effects of SLT and pan masala than men.[41] In a meta-analysis that included 12 published studies of oral cancer, women had a substantially higher risk of oral cancer (OR=12.4 [5.7–27.1] compared to 4.7 in men [2.9–7.8]). Women's greater risks of oral cancer may have a variety of causes, which can only be hypothesized at this time.

Stillbirth/Pre-term Low Birthweight Child

Numerous studies suggested tobacco use by pregnant women results in a significantly higher risk of complications for the woman and the fetus. An interventional study on pregnant women in rural population reported a higher risk associated with pregnancy complications – including fetal distress, pregnancy-induced hypertension, antepartum hemorrhage, oligohydramnios, polyhydramnios, and postpartum hemorrhage – among users in comparison to non-users.[16]

Hence, tobacco users suffer increased episodes of hospitalization and out-of-pocket expenditures for health care, which threaten their financial well-being and their ability to provide essential nutrition for their families, which adversely affects family health.

TOBACCO: ADDICTION, WITHDRAWAL, AND CESSATION IN WOMEN

Women continue to smoke because of a complex interplay of factors, including physiological addiction to nicotine and psychological and social factors. It is well known that cigarettes and other forms of tobacco are addictive and that nicotine is the drug in tobacco that leads to addiction. Furthermore, withdrawal symptoms together with trying to managing life's extreme stresses make it doubly difficult for disadvantaged women to quit.

Several studies have suggested that women may have a harder time quitting smoking than men, which may be due in part to the greater tendency for women to smoke in response to negative affect, stress, or depression, or to control weight.[42,43] A recent study found that nicotine metabolism was faster among women than among men and faster among women taking oral contraceptives, which may have relevance for the efficacy of nicotine replacement medications for women.[44]

Women appear to be less interested in quitting tobacco use compared to men. According to GATS India 2009–2010, about 50% of tobacco user women were not interested in quitting, compared with 40% of males who were not interested in quitting. About 29% of daily user women had made an attempt to quit in the past 12 months, in contrast to 39% of males. Women also experience more anxiety and stress than men while trying to quit. They worry whether they will be able to continue their chores when they quit because they believe that using tobacco gives them energy and motivation and compensates for lack of food. They fear how difficult it could be to control the urge to chew when feeling depressed or depleted of all energy.[17]

GENDER-BASED TOBACCO CONTROL POLICIES

The increase in tobacco use among women has typically followed weakening social, cultural, and political constraints, which have been exploited by multinational tobacco companies. Recent estimates of tobacco use among youth show similar patterns among boys and girls in many areas of the world, suggesting that these differences may be narrowing. Although effective tobacco control policies are available, they could be optimized by understanding the factors that influence uptake and maintenance of tobacco use and how these factors may differ between boys and girls.[45]

It is recommended to develop culturally sensitive and gender-specific community programs to prevent initiation and cessation of tobacco use. Furthermore, to develop tobacco control strategies, one should take into consideration of the changing cultural, psychosocial, and environmental factors that influence initiation and cessation of tobacco use among girls and women of all ages as well.

CONCLUSION

The issues related to tobacco use among women are distressing. Well-organized and stringent women-centered policies are urgently required to curb and regulate the ease of availability and indirect advertisement. Despite higher pricing of tobacco products, lower SES population women are still exposed to substandard and raw tobacco products which ultimately affect the health and wealth of the entire family later on. Women-specific tobacco control policies are urgently required to enable India "Tobacco Free Nation" and improvement of the health status of its women and children.

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