



A CROSS-SECTIONAL STUDY TO ASSESS THE KNOWLEDGE, ATTITUDE, AND PRACTICE ABOUT TOBACCO USAGE AMONG PREGNANT WOMEN ATTENDING THE ANTENATAL CARE OUTPATIENT DEPARTMENT IN A TRIBAL DISTRICT OF MAHARASHTRA

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ABSTRACT The number of tobacco-related deaths among women aged 20 years and older is likely to increase from 1.5 million in 2004 to 2.5 million by 2030. Almost 75% of these projected deaths will occur in low- and middle-income countries. Tobacco usage during pregnancy has a negative impact on maternal and newborn health. As there is limited literature available regarding tobacco usage among pregnant women in tribal areas, the current study aimed to assess the knowledge, attitude, and practice of tobacco usage among pregnant women in a tribal district of Maharashtra. **Methods:** A cross-sectional study was conducted in a tribal district at the Rural Health Training Centre (RHTC) attached to the Government Medical College in Maharashtra. A sample of 190 pregnant women coming to the Antenatal Care Outpatient Department of RHTC was taken based on the prevalence of tobacco usage among women in the selected tribal district. The selected participants were interviewed face-to-face with the help of a semi-structured, pre-tested questionnaire after obtaining informed consent. The results were analysed in Microsoft Excel. **Results:** In the present study, out of 190 participants, 90 (47.4%) were primigravida and 100 (52.6%) were multigravida. Out of 190 participants, 145 (76.3%) were aware of the risks associated with direct tobacco usage, while 161 (84.7%) knew about the dangers of Second-Hand Smoke (SHS) during pregnancy. A total of 47 (24.7%) participants were exposed to SHS during the current pregnancy; the majority, 31 (66%), were exposed at home. Eleven (5.8%) participants practiced tobacco use during pregnancy. Out of 6 (3.1%) participants who were currently using tobacco, 2 (33.3%) of them were ready to quit tobacco. **Conclusion:** There is a gap between knowledge, attitude, and practices related to tobacco and tobacco cessation among the participants.

KEYWORDS : Tobacco, Pregnant women, Tribal district.

INTRODUCTION

Tobacco use causes 8 million deaths globally.⁽¹⁾ It is among the leading causes of many cardiovascular diseases and cancer-causing Daily Adjusted Life Years lost (DALY). Tobacco usage in both smoking and smokeless forms is more common among low-income nations, particularly in Southeast Asian countries. Even tobacco usage among men is dropping globally but growing among women, particularly in low-income nations.^(2,3) Tobacco-related deaths among women aged 20 and older are expected to rise from 1.5 million in 2004 to 2.5 million by 2030, with about 75% of these anticipated deaths occurring in low- and middle-income nations.⁽⁴⁾

Female tobacco users face gender-specific health hazards as compared to men. Direct tobacco usage and exposure to second-hand smoke during pregnancy are extremely dangerous for both the mother and the fetus.⁽⁵⁻⁸⁾ The serious negative consequences of smoking may be reversible if it is quit early in pregnancy, according to data showing that women who stopped smoking before 15 weeks of pregnancy had similar spontaneous preterm delivery rates and smaller gestational-age newborns as non-smokers. The need for smoking cessation efforts targeted specifically at expectant women has been confirmed by these findings.⁽⁹⁾

When compared to non-users, tobacco users had much lower reported awareness of the harmful effects of tobacco use.⁽¹⁰⁾ Assessing pregnant women regarding tobacco use during pregnancy and its detrimental effects on pregnancy outcomes is crucial. Due to a mother's increased incentive to safeguard her fetus, pregnancy presents a particularly crucial time to begin tobacco cessation assistance for women.

Low socioeconomic status, a lack of comprehensive medical treatment, and illiteracy in tribal communities put tribal people's health in danger. In tribal regions, maternal and child health have remained a very sensitive subject.

The global prevalence of smoking during pregnancy was estimated to be 1.7%⁽¹¹⁾. As opposed to low and middle-income countries, research on the

negative consequences of tobacco consumption and the advantages of quitting during pregnancy has tended to emerge from high-income nations. Although high-income nations like Canada have studied the pattern of tobacco use and its correlates during pregnancy,⁽³⁾

According to the National Family Health Survey (NFHS-5) in India, 5.4% of urban and 10.5% of rural women aged 15–49 years used some form of tobacco.⁽¹²⁾ In a study conducted in tribal areas of India, 46% of the tribal population was estimated to use any form of tobacco.⁽¹³⁾ In Maharashtra, it was 6.6% in urban areas and 14.7% in rural areas, while in tribal areas of Maharashtra, it was 43%. In one of the largest tribal districts of Maharashtra, Palghar, 8.3% of women aged 15–49 reported doing so.⁽¹⁴⁾

Though tobacco is an important risk factor for health, especially among pregnant women, there is a dearth of published literature about the same in this second-largest tobacco consumer country. Hence, the study was conducted to assess the knowledge, attitudes, and practices of pregnant women in a tribal district about tobacco, its use, and tobacco control activities.

MATERIAL AND METHODS

A health-facility-based cross-sectional study was conducted in the antenatal care outpatient department of a Rural Health Training Centre (RHTC) in a selected block of a tribal district of Maharashtra.

The study's sample size was calculated using the formula $4pq/L^2$, where the prevalence of tobacco usage among women between the ages of 15 and 49 years in the selected tribal district was 8.3%.⁽¹⁴⁾ A permitted error of 4% was considered. Therefore, the sample size comes out to be 190.

The desired participants were approached after obtaining the necessary permissions from the concerned authorities to conduct the study. The study was conducted for a duration of 3 months (February 2023 to April 2023) in the Antenatal Care Outpatient Department after receiving written informed consent from the study participants. Strict

confidentiality for the participants was maintained during the data collection and analysis. The responses were collected, entered, and analysed in Excel version 2021; the results were calculated in the form of frequency and percentages.

RESULTS

In the present study, out of 190 participants, 90 (47.4%) were primigravida and 100 (52.6%) were multigravida. The majority of the participants, 167 (87.9%), were in the age group of 19–30 years. 90 (47.4%) participants completed the secondary level of education. The distribution of the study participants is given in **Table 1**.

Out of 190 participants, 11 (5.8%) have ever used tobacco. From 11 participants, only 5 (45%) knew about tobacco cessation facilities, and only 2 (18.1%) were aware of the National Tobacco Quit Line Number. Knowledge about tobacco use, its harms, and control activities among study participants is shown in **Table 2**.

Tobacco products use in past and current pregnancies are given in **Table 3**.

Attitude of the participants about quitting tobacco/tobacco products is given in **Table 4**.

Table 1: Socio-demographic Characteristics of The Study Participants

Socio-demographic characteristics		Primigravida (n=90)	Multigravida (n=100)	Total (N=190)
Age	Less than or equal to 18 Years	1 (1.1%)	0	1 (0.5%)
	19-30 Years	83 (92.2%)	84 (84%)	167 (87.9%)
	More than 30 Years	6 (6.7%)	16 (16%)	22 (11.6%)
Education Level	Illiterate	10(11.1%)	13(13%)	23 (12.1%)
	Primary level of education	5(5.6%)	9(9%)	14 (7.4%)
	Secondary level of education	33(36.7%)	57(57%)	90 (47.4%)
	Higher secondary level of education	20(22.2%)	13(13%)	33 (17.4%)
	Graduate	20(22.2%)	8(8%)	28 (14.7%)
	Post Graduate	2(2.2%)	0	2 (1.1%)
Type of family	Nuclear	50(55.6%)	53(53%)	103 (54.2%)
	Joint	40(44.4%)	47(47%)	87 (45.8%)
Gravida status	Primigravida	-	-	90 (47.4%)
	Multigravida	-	-	100 (52.6%)

(Note: Percentage in above table calculated column wise)

Table 2: Knowledge About Tobacco Use, It's Harms And Control Activities Among Study Participants

Knowledge about tobacco use, it's harms and control activities (N=190)			Primigravida (n=90)	Multigravida (n=100)	Total (N=190)
i.	Tobacco uses during pregnancy is harmful for	Both mother and unborn child	60(66.7%)	62(62%)	122 (64.2%)
		Mother	1(1.1%)	0	1 (0.5%)
		Unborn child	7(7.8%)	15(15%)	22 (11.6%)
		Don't know	22(24.4%)	23(23%)	45 (23.7%)
ii.	Diseases caused by Tobacco use	Cancer	85(94.4%)	94(94%)	179 (94.2%)
		TB	0	1(1%)	1 (0.5%)
		Asthma	5(5.6%)	5(5%)	10 (5.3%)

iii.	Aware of second-hand smoking	Yes	80(88.9%)	81(81%)	161 (84.7%)
		Not aware	10(11.1%)	19(19%)	29 (15.3%)
iv.	Second hand smoke exposure is harmful during pregnancy	Yes	60(66.7%)	93(93%)	153 (80.5%)
		Don't know	30(33.3%)	7(7%)	37 (19.5%)
iii.	Knowledge about tobacco cessation facilities	Yes	82(91.1%)	98(98%)	180 (94.7%)
		Not aware	8(8.9%)	2(2%)	10 (5.3%)
iv.	Knowledge about National Tobacco Quit Line Number	Yes	9(10%)	4(4%)	13 (6.8%)
		Not aware	81(90%)	96(96%)	177 (93.2%)

(Note: Percentage in above table calculated column wise)

Table 3: Tobacco/tobacco Products Use In Past And Current Pregnancy

Tobacco/tobacco products use				Frequency (%)	
i.	Tobacco/tobacco products use in past pregnancy (N=100) *	Yes		5 (5%)	
		No		95 (95%)	
		Primigravida (n=90)	Multigravida (n=100)	Total (N=190)	
ii.	Tobacco/tobacco products use in current pregnancy (N=190)	Yes	2(2.2%)	4(4%)	6 (3.1%)
		No	88(97.8%)	96(96%)	184 (96.9%)

(* Number of multigravida participants in the study=100)

(Note: Percentage in above table calculated column wise)

Table 4: Attitude of The Participants About Quitting of Tobacco/ Tobacco Products

			Frequency (%)
I.	Ever tried to quit tobacco (N=11) *	Yes	1 (9.1%)
		No	10 (90.9%)
ii.	Want to quit tobacco presently (N=6) **	Yes	2 (33.3%)
		No	4 (66.7%)

(*Ever used tobacco/tobacco products=11)

(**number of participants using tobacco/tobacco products in current pregnancy)

(Note: Percentage in above table calculated column wise)

DISCUSSION

In the present study, 122 (64.2%) participants were aware of the harms of tobacco use during pregnancy, which was more compared to the study conducted among 213 (53.3%) rural women elsewhere in India. (3) In this study, 179 (94.2%) participants answered that tobacco use causes cancer, the results of which could not be compared. About 161 (84.7%) participants were aware of the harms of second-hand smoke compared to the study conducted in the urban slums of Karnataka, where it was around 50%. (15) The level of awareness about SHS was almost equal in primigravida (49.7%) and multigravida (50.3%). About 47 (24.74%) participants were exposed to second-hand smoke, out of which 31 (66%) were exposed at home by their husbands, compared to 81% in a study conducted in the Municipal Region of Nepal (16), and 12 (26%) were exposed at home by their father-in-law. The percentage of individuals who were aware of the facilities for tobacco cessation was higher in multigravida 98 (98%) than in primigravida 82 (91.1%). 13 (6.8%) of the participants were aware of the National Tobacco Quit Line Number, and all of them got this information from advertisement results. The results of awareness about specific harms of tobacco as well as the National Tobacco Quit

Line number could not be compared with the studies published.

About 11 (5.79%) of the participants ever used tobacco during their pregnancy, compared to 59 (14.8%) participants who ever used tobacco during pregnancy in a study conducted in rural and tribal Jharkhand.⁽³⁾ In another study conducted in rural India, the prevalence of tobacco use among pregnant women was 4.6%.⁽¹⁷⁾ Of 100 (52.6%) multigravida women, 5 (5%) participants had previously used tobacco during pregnancy. About four (80%) participants used smokeless forms of tobacco in their past pregnancies. None of the pregnant women who ever used tobacco gave a reason for initiation.

All six (3.1%) participants who were using smokeless tobacco in their current pregnancy started using tobacco for no reason. About 90 (47.4%) participants were primigravida, out of which 2 (2.2%) were using tobacco and were not ready to quit. Out of 100 (52.6%) multigravida participants, 4 (4%) were using tobacco in their current pregnancy, and 2 (50%) of them were ready to quit. These results were compared to a study conducted in Jordan where 13 (2.9%) quit tobacco once pregnancy was confirmed and 77 (17.6%) continued to use tobacco.⁽¹⁰⁾

CONCLUSIONS

Knowledge about the harmful effects of tobacco use was fair among pregnant women. However, none of the pregnant women who used tobacco sought services for tobacco cessation despite having awareness about the same. Hence, there was a gap between knowledge of tobacco use and control measures, which needs to be addressed. SHS exposure to pregnant women signifies the need to sensitize family members about the harmful effects of tobacco. This, in turn, will have a positive impact not only on the health of the pregnant mother but on the health of family members too.

RECOMMENDATIONS

More research should be conducted to get baseline data on tobacco usage during pregnancy and its impact on maternal and child health. Further exploring the knowledge, attitude, and practices of pregnant women towards tobacco and tobacco control activities may help further strengthen the Information, Education, and Communication (IEC) of tobacco and tobacco control activities. Sensitization of family members and other important stakeholders is of vital importance to reduce the tobacco-induced maternal and child health burden.

LIMITATIONS

Due to time constraints and feasibility considerations, this study only included tribal pregnant women coming to one health facility. As a result, its findings cannot be generalized to all pregnant women in the tribal area.

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