

## **Pattern of Smoking and Chewing Tobacco Use in a Slum of Durgapur: An Industrial City**

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### **I. Introduction**

Smoking of tobacco is one of the most dangerous acquired bad habits of human beings. Tobacco was introduced to India in the 1600s<sup>1</sup>, later it merged with existing practices of smoking (mostly cannabis)<sup>2</sup>. Tobacco is derived from the leaves of tobacco plant within the genus *Nicotiana* of the Solanaceae family.<sup>3,4</sup> Tobacco contains nicotine alkaloid which is a stimulant responsible for the tobacco addiction but other substances in tobacco likely play a bigger part as disease causing agents.<sup>5</sup> Smokers may develop tolerance and dependence because of nicotine only.<sup>6,7</sup> More than 4,000 different chemicals have been found in tobacco and tobacco smoke. More than 60 of these chemicals are known to cause cancer (carcinogens).<sup>8</sup> Some of the chemicals are polycyclic aromatic hydrocarbons (benzopyrene), formaldehyde, cadmium, nickel, arsenic, tobacco specific nitrosamines, phenol etc.<sup>9</sup>

Dried tobacco leaves are mainly smoked in beedi, cigarettes, cigars, pipe tobacco, hookah etc. They may also be consumed as smokeless products, such as snuff, chewing tobacco, gutkha, khaini, dipping tobacco etc. In India, beedi smoking is the most popular form of tobacco smoking (54%); cigarette smoking is the second most popular form of tobacco smoking (16%); while tobacco chewing accounts for 30% of the total consumption.<sup>10</sup> There are nearly 1.3 billion smokers in the world, 80% of them are in the developing countries. India has more than 300 million smokers.<sup>10</sup> As per GATS India, 34.6% of Indian adults were tobacco user among which 47.9% were males and 14% Indian adults were tobacco smoker, among them 24.3% were males and 2.9% were females.<sup>11</sup>

Tobaccosis due to tobacco use resulting into cancers of the mouth, nasopharynx, larynx, trachea, bronchi, lungs, esophagus, stomach, liver, pancreas, kidney, bladder, prostate, cervix and brain; colorectal cancer; leukemia.<sup>10</sup> In India, tobacco consumption is responsible for half of all the cancers in men and a quarter of all cancers in women.<sup>12</sup> In addition, Tobacco smoking also plays the important role of a risk factor for cardiovascular diseases and chronic obstructive pulmonary diseases.<sup>13,14</sup> India has one of the highest rates of oral cancer in the world, partly attributed to high prevalence of tobacco chewing.<sup>15,16,17,18</sup> According to the World Health Organization (WHO), tobacco is the single greatest cause of preventable death globally.<sup>19</sup> Worldwide tobacco use causes nearly 6 million deaths per year, and current trends show that tobacco use will cause more than 8 million deaths annually by 2030.<sup>20</sup> On average, smokers die 10 years earlier than non-smokers.<sup>21</sup> Nearly one million people die in India every year due to tobacco use.<sup>11</sup> The world Health Organization predicts that tobacco deaths in India may exceed 1.5 million annually by 2010.<sup>22</sup>

This study was done among the adults aged 18 years or more to know their pattern of tobacco use in relation to their socio-demographic profile in a slum of Durgapur, an industrial city in West Bengal and the study results may be applied to decrease new smoker, rehabilitation of the addicted and diseases people in that locality.

### **II. Methodology**

This was a cross sectional study in a slum of Industrial city Durgapur, West Bengal. This slum is the field practice area under Urban Health Training Centre of IQ City Medical College, Durgapur. The study duration was about 3 months.

126 sample houses were chosen by systematic random sampling. From each sample house only single adult were interviewed by applying modified kish table. Only permanent residents were interviewed who gave informed consent using a pre designed and pretested schedule. Some operational definitions were adopted in the study.

**Operational definitions:**

**Current smoker:** Current smokers were defined as who were smoking at the time of survey and had smoked more than 100 cigarettes in their lifetime.

**Current user of chewing tobacco:** Current user of chewing tobacco was defined as persons either chewing tobacco at present or had chewed tobacco 20 and more times in their lifetime.

After collecting 126 samples, result was analyzed using SPSS 20.

### **III. Results And Analysis**

Out of the study population (126) most were of the age group 18-28 (40.48%), males (80.16%), and Hindus (99.21%). The majority of the study population was illiterate (47.62%). Also, most of the study population were unskilled workers (50.79%). Only 1 semi-professional (0.79%) was found in the entire study population. 80.95% of the people were married. 54.76% of the study population were from Joint families and the rest (45.24%) were from Nuclear families. According to Modified B. G Prasad classification of socio economic status, the majority of the study population belongs to Class IV (48.44%). (Table 1.)

Out of the study population, 105 people use tobacco. 41.90 % only smoke, 38.10 % only chew and 20 % used both forms of tobacco. (Figure1). Out of 105 people who used tobacco 65 were smokers.81.53% of the smokers smoked daily. Maximum people have started smoking in the age group 15-23 years. But a very small percentage (4.62%) of the smokers has started smoking at later ages (31-55 years). Out of the 65 smokers, 52.30 % tried to quit smoking. (Table 2). Out of the 105 people who used tobacco 61 people were tobacco chewers.86.88 % of them chewed tobacco daily. Most of the tobacco chewers started chewing tobacco in the age group 15-23years. 39.34 % of the people who used chewing tobacco tried to quit. (Table 2). 70.47 % of the tobacco users were aware of the statutory warnings of tobacco use. (Figure 2).

### **IV. Discussion**

In the study population 51.58% were current smokers which is slightly higher than the NFHS 3 survey report of West Bengal.<sup>25</sup> Even the percentage of chewing tobacco users came out to be 48.41% in comparison to 34.5% as per NFHS 3 report of West Bengal.<sup>25</sup> Both for smoking and chewing tobacco users the age of starting the practice was between 16 to 23 years predominantly. This is in conformation with another study conducted by Saha et al. in Hooghly district of West Bengal.<sup>24</sup> In this study, 52.3% of smokers and 39.3% of chewing tobacco users tried to quit the habit. This is slightly higher than the percentage of smokers who tried to quit smoking in the study quoted previously.<sup>2</sup> In this study it was seen that 70.4% were aware of the statutory warning regarding harmful effects of tobacco and even with this awareness they continued using tobacco products.

### **V. Conclusion**

From this study we can conclude that use of tobacco products begins at a young age and inspite of being aware of the statutory warning they continue with the habit. Also, major percentage of the people attempted at quitting tobacco use though they were unsuccessful. This again stresses at the importance of availability of proper programs which focuses on preventing relapse among tobacco users.

**TABLE 1: Distribution of study population according to socio-demographic characteristics.**

Variables / Dimensions	Character	Frequency/No	Percentage (%)
Age ( year)	18-28	51	40.48
	29-38	31	24.60
	39-48	22	17.46
	49-58	14	11.11
	>59	8	6.35
	Total	126	100
Sex	Male	101	80.16
	Female	25	19.84
	Total	126	100
Religion	Hindu	125	99.21
	Muslim	1	0.79
	Others	0	0
	Total	126	100
Education	Illiterate	60	47.62
	Literate	66	52.38
	Total	126	100
Occupation	Unemployed	13	10.32
	Student	6	4.76
	Housewives/Home-makers	18	14.29
	Unskilled worker	64	50.79
	Skilled Worker	17	13.49
	Semi-Professional	1	0.79
	Petty Business	7	5.56
	Total	126	100
Marital Status	Married	102	80.95
	Unmarried	21	16.67
	Widow/Widower	3	2.38
	Total	126	100
Socio-Economic status (modified B.G. Prasad Scale)	Below Class III	24	19.05
	Class IV	61	48.41
	Class V	41	32.54
	Total	126	100

**TABLE 2: Distribution of smokers according to certain characteristics related to smoking.**

Variables	Character	Frequency	Percentage
Frequency of Smoking	Daily	53	81.53
	Occasional	12	18.47
	Total	65	100
Age of starting of smoking (Year)	7-15	19	29.23
	16-23	31	47.69
	Above 24	15	23.78
	Total	65	100
Tried to quit smoking	Yes	34	52.30
	No	31	47.70
	Total	65	100

**TABLE 3: Distribution of chewing tobacco according to certain characteristics related to chewing tobacco use.**

Variables	Character	Frequency	Percentage
Frequency of tobacco chewing	Daily	53	86.88
	Occasional	8	13.12
	Total	61	100
Age of starting tobacco chewing (year)	7-15	23	37.70
	16-23	24	39.34
	Above 24	14	22.96
	Total	61	100
People tried to quit chewing tobacco	Yes	24	39.34
	No	37	60.66
	Total	61	100

FIGURE 1: Pie diagram showing distribution of population according to type of tobacco use.

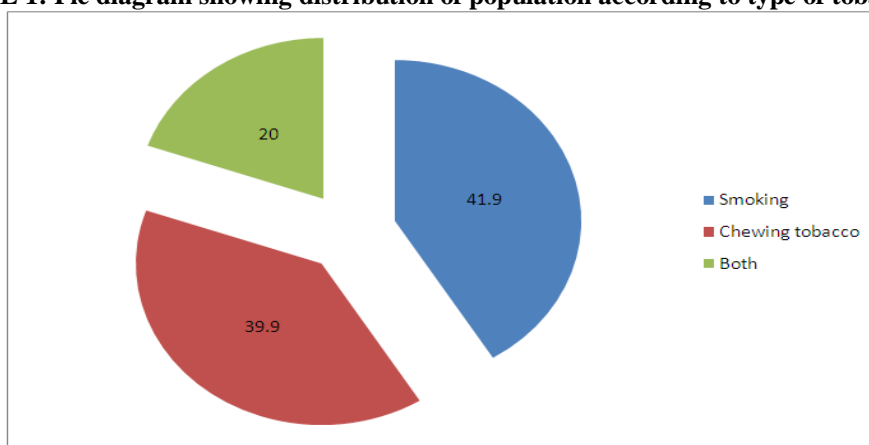
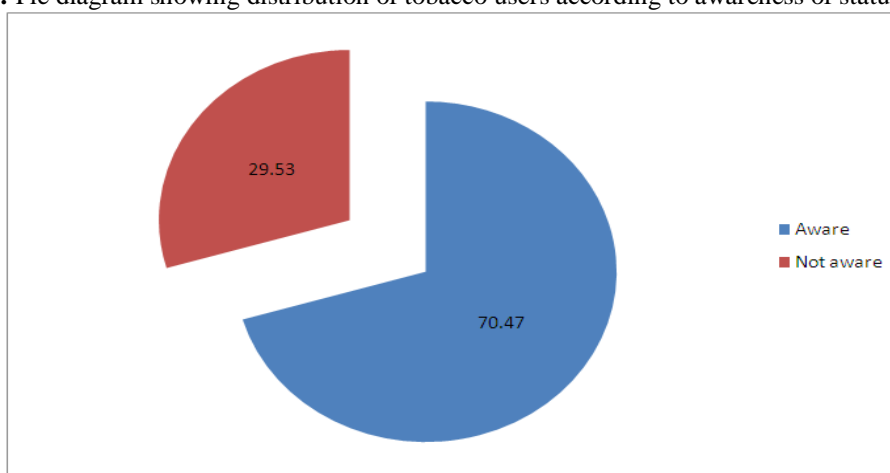


FIGURE 2: Pie diagram showing distribution of tobacco users according to awareness of statutory warning.



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