

Study on prevalence of use of Tobacco Consumption among males aged 15 and above in Kanchipuram Town, Tamil Nadu

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Abstract

Aim and Background: In the present study was to find out the prevalence of tobacco consumption and factors contributed for tobacco consumption among males aged 15 years and above in Kanchipuram town. Human beings have been using tobacco since 600 A.D. It was introduced in Europe by Columbus who came to know about it from the Caribbeans during his historical journeys. It was introduced in India by the Portuguese. **Materials and Methods:** This is Community based cross sectional study was conducted in Kanchipuram town. All the study subjects were explained in detail about the purpose and methodology of the study and were fully assured of strict confidentiality. Informed oral consent was obtained. Personal interview questionnaire is administered and obtained the demographic details and tobacco consumption. Kanchipuram district has been divided into 4 revenue divisions comprising of 11 taluks with 1137 revenue villages. For development reasons, it is divided into 13 development blocks with 648 Village Panchayats. **Results:** The present study showed a high prevalence of 55.4% tobacco use among male ever users aged 15 years and above in Kanchipuram town. A prevalence of 34% has been noted in male current users of the same age group. **Conclusion:** In the Present study we conclude that the high prevalence of use of tobacco among males age 15-and above is a major and public health problems. This affects the coming generation also. Hence steps need to be taken right now to tackle this problem.

Keywords: Tobacco, Kanchipuram District, Village Panchayat.

1. INTRODUCTION

Human beings have been using tobacco since 600 A.D. It was introduced in Europe by Columbus who came to know about it from the Caribbeans during his historical journeys. It was introduced in India by the Portuguese. Earlier, tobacco was generally smoked using different types of pipes or as cigars or was consumed orally (smokeless tobacco). Paper cigars and cigarettes were introduced in the mid nineteenth century. Nicotine was isolated from the tobacco leaves as early as 1828 A.D.

Harmful effects of tobacco have been recognized over the last 1000 years. Historically, three contemporary rulers, King James I of England, Shah Abbas of Persia and the Mughal emperor Jahangir of India (father of Shah Jehan, the builder of Taj Mahal) in 16th century had noticed the harmful effects of tobacco and tried to ban it. King James had commented on smoking as being "a custom loathsome to the eye, hateful to the nose, harmful to the brain, and dangerous to the lungs".³

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Jahangir had even passed orders prohibiting smoking tobacco. Khalil Pasha was more stringent and had passed a prohibitory decree against tobacco smoking that "anybody caught smoking tobacco would have his lips cut and eyes taken out". In 1014 Hijri, Russia had also passed certain regulations against smoking.⁴

India has a distinct tradition of enforcements against tobacco use being initiated by the past kings (like Jahangir) and the religious leaders at different times in the history. The great Indian Sikh Guru Gobind Singh prohibited smoking for the members of the Sikh community. He said, "Wine is bad, Indian hemp (bhang) destroys one generation, but tobacco destroys all generations". Tobacco use has been considered a religious taboo by the Sikhs since then. However, despite historical attempts to legally ban tobacco, its use has continued to grow in popularity as a nonproductive pastime.

In the modern medicine, its harmful effects have been recognized over the last 4 decades. Although its use has declined in developed nations in the recent years, it continues to be popular in developing countries. India is the third largest producer of tobacco in the world. A total of 450 million kgs of tobacco was produced in 1995. Only 80 million kgs were used for domestic cigarette production and 55 million kgs exported as cigarette tobaccos.

Developments in the Indian tobacco industry have not been in line with international trends. The share of cigarettes in the total tobacco consumption in India is about 20%, compared with 85% globally. Internationally, there has been a shift from traditional forms of tobacco - chewing tobacco, snuff, pipe, cigar/cheroot - to cigarettes, which is recognized to be the modern and more acceptable form of tobacco usage. For example, the share of cigarettes in the US increased from 2% in 1880 to 84% currently. In the UK, cigarette share went up from 12% in 1890 to 79% in 1995. In Italy, cigarettes constitute 98% of consumption today compared to 5% in 1900. Even in neighboring Pakistan, the share of cigarettes has increased significantly - from 40% in 1971 to 58% today. Quite the opposite, however, has happened in India. The share of cigarettes has declined to 20% from 23% in 1971, while overall tobacco consumption has grown. In fact, industry volumes of cigarettes declined

by 12.5% between 1984/85 and 1994/95 before staging a recovery in 1995/96.

Whilst the annual per capita consumption of all tobacco products in India stands at 0.83 kg, about 45% of the world average of 1.85 kg, the per capita consumption in cigarette form is barely one-tenth of world levels i.e. 101 cigarettes per annum compared to a global average of 1,030. Per capita consumption in Japan is 26 times higher, over 18 times higher in the United States, and in China almost 15 times higher.

There are approximately 200 million tobacco consumers in India, of which only 25 million smoke cigarettes, whereas 275 million in China smoke cigarettes out of 330 million tobacco consumers. Therefore, the Chinese tobacco industry contributes 7 times more revenue at US\$ 7 billion, even though tax rates per 1,000 cigarettes in China are half those in India.⁵

2. Materials and Methods

This is a community based cross-sectional study was conducted among males aged 15 years and above residing in Kanchipuram town. This study was conducted in department of community medicine, Meenakshi Medical College Hospital and Research Institute, Kanchipuram. After getting institutional ethical committee approval, sample size was calculated using the formula. Kanchipuram district is situated on the northern East Coast of Tamil Nadu and is adjacent by Bay of Bengal and Chennai city and is bounded in the west by Vellore and Thiruvannamalai district, in the north by Thiruvallur district and Chennai district, in the south by Villuppuram district in the east by Bay of Bangal. It lies between 11° 00' to 12° 00' North latitudes and 77° 28' to 78° 50' East longitudes. The district has a total geographical area of 4393.37 Sq.Kms and coastline of 57 Kms. Kancheepuram, the temple town is the district headquarters. For administrative reasons, the district has been divided into 4 revenue divisions comprising of 11 taluks with 1137 revenue villages. For development reasons, it is divided into 13 development blockswith 648 Village Panchayats.

Ward wise Male population of Kanchipuram town

Ward number	Male Population	Cumulative population	Clusters selected	Cluster Population
1	2143	2143	1	1250
2	1751	3894		
3	1687	5581	2	5135
4	2060	7641		
5	1837	9478	3	9020
6	2297	11775		
7	2813	14588	4	12905
8	1794	16382		
9	1824	18206	5	16790
10	1589	19795		
11	1008	20803	6	20675

12	1342	22145		
13	1762	23907		
14	1610	25517	7	24560
15	1834	27351		
16	2028	29379	8	28445
17	2078	31457		
18	2165	33622	9	32330
19	2095	35717		
20	2218	37935	10	36215
21	1843	39778		
22	2619	42397	11	40100
23	1506	43903		
24	1175	45078	12	43985
25	1169	46247		
26	1351	47598		
27	1332	48930	13	47870
28	1676	50606		
29	1835	52441	14	51755
30	1145	53586		
31	2394	55980	15	55640
32	1921	57901		
33	1463	59364		

Selection procedure of clusters

Calculate cumulative population and divide by 30 (number of clusters to be studied) that gives sampling interval. Select a random number that is less than are equal to sampling interval that will be the first cluster. First cluster plus sampling interval gives second cluster. Such that twenty ninth cluster plus sampling interval gives thirtieth cluster. In second stage: from these selected clusters we will select randomly 33 male individuals from each cluster for the study aged 15 years and above.

Tools for the study

Personal interview questionnaire was prepared in consultation with the experts in the field and under supervision of the guide. Informed oral onset

Method of Data Collection

All the study subjects were explained in detail about the purpose and methodology of the study and were fully assured of strict confidentiality. Informed oral consent was obtained. Personal interview questionnaire is administered and obtained the demographic details and tobacco consumption.

Data Analysis

All the data's were collected and fed into the computer and analysis was made with help of Microsoft Excel spread sheets (version2007) and SPSS (version 17.0). Descriptive data are presented as frequency and univariate analysis using χ^2 test was done to determine significant differences and associations of various parameters with immunization status. P value < 0.05 was considered significant and a P

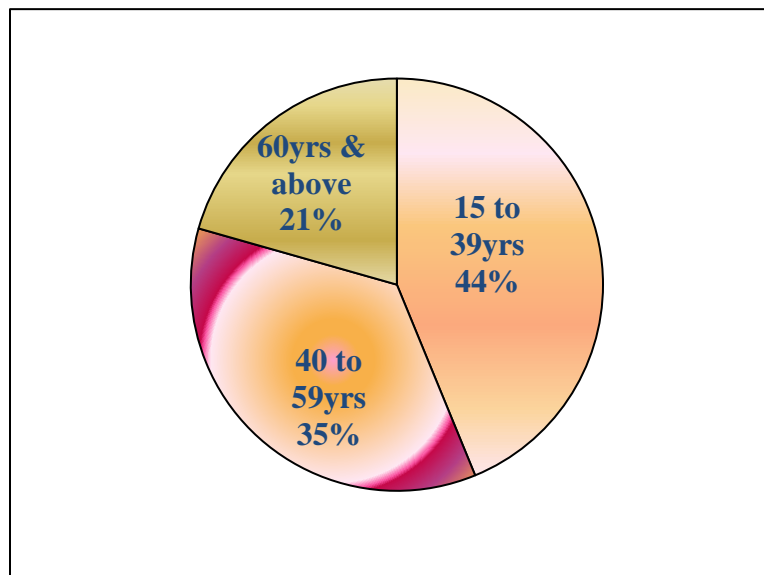
value < 0.001 was considered highly significant.

3. Results

Age wise Distribution

Among the 1000 study population majority of them were belong to the 15- 39 years age group 438 (43.8%) followed by 356 (35.6%) and 206 (20.6%) of 40 -59 years and 60 and above respectively. (Figure.1)

Figure. 1 Age wise distribution of the respondents (n=1000)



Religion Wise Distribution

The table 1 shows that vast majority 722 (72.2%) of the

respondents belong to Hindu religion, 21.6 per cent of the respondents belong to Muslims, 5.6 per cent of the respondents are Christian religion and remaining 0.6 per cent of the respondents are of other religion.

Table 1: Religion wise distribution of the study subjects (n=1000)

Particulars	No.of respondents (n=1000)	Percentage (100%)
Hindu	722	72.2
Muslim	216	21.6
Christian	56	5.6
Others	6	0.6

Socio-economic status wise distribution

The table 2 shows that One third (32 per cent) of the respondents are upper middle in socio economic status, 27.6 per cent of the respondents are in lower middle status, 18.4 per cent of the respondents are in high status, and each 10.6 per cent of the respondents are upper high and poor status.

Table 2: Socio-economic status wise distribution of the study subjects (n=1000)

Particulars	No.of respondents (n=1000)	Percentage (100%)
Upper high	106	10.6

Table 3: Age wise distribution of tobacco users (n=554)

Particulars	No of subjects never used tobacco	% of Tobacco Never Used	No. of Tobacco users (n=554)	% of Tobacco Users	Age wise study population No	% of age wise distribution
15 to 39yrs	202	46.1%	236	53.9%	438	100.0%
40 to 60yrs	179	50.3%	177	49.7%	356	100.0%
61 and above	65	31.6%	141	68.4%	206	100.0%
Total	446	44.6%	554	55.4%	1000	100.0%

Type of tobacco consumption distribution of the study subjects

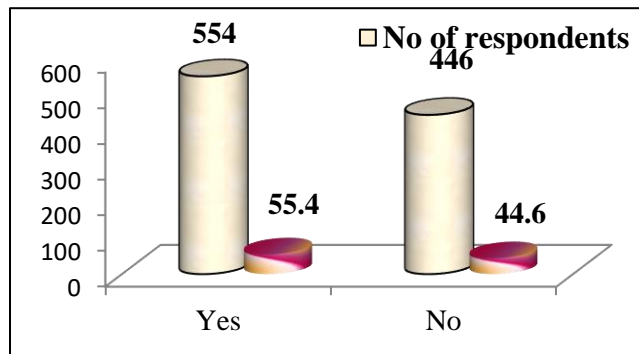
The table 4 indicates that out of the currently tobacco consuming total respondents 340; 204 respondents representing 60 percent use Cigarette type of tobacco followed by Beedi (18.2 per cent), Ghutka/pan (15.3 per cent), Chutta (5.3 per cent) and finally Cigarette and Ghutka/Pan (1.2 per cent).

High	184	18.4
Upper middle	320	32.0
Lower middle	284	28.4
Poor	106	10.6

Tobacco users of the study subjects

Figure 2 indicates that 554 (55.4%) of the study population are users of tobacco and remaining 44.6 per cent of the respondents are not tobacco users.

Figure.2: Tobacco users of the study subjects (n=1000)



Age wise distribution of tobacco users

Table 3 indicates that out of total general tobacco users of 554, majority of the smokers were in the age group 15 to 39yrs. Among the 60 years above age groups the smokers were 68% followed by 15-39 years age group 54%.

Table 4: Type of tobacco consumption distribution of the study subjects (n=340)

Particulars	No.of respondents (n=340)	Percentage (100%)
Cigarette	204	60.0
Beedi	62	18.2
Gutkha & Pan	52	15.3
Chutta	18	5.3

Cigarette & Gutkha & Pan	4	1.2
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Form of Tobacco consumption among current users

The table 5 indicates that vast majority of 284 respondents (83.5 per cent) from among currently tobacco consuming make use of smoking form, 15.3 per cent of the respondents arenon smoking form of tobacco consumption and remaining 1.2 per cent of the respondents are making use of both forms of tobacco consumption.

Table 5: Form of Tobacco consumption among current users (n=340)

Particulars	No.of respondents (n=340)	Percentage (100%)
Smoking	284	83.5
Non Smoking	52	15.3
Both Forms	4	1.2

Quantity of smoking form in current smokers

The table 6 indicates that nearly half 136 (47.9 per cent) of the currently tobacco consuming in the form of smoking make use of 1 to 5nos quantity of Cigarette / Beedi / Chutta per day. Quantity per day 6 to 10nos and above 11 nos represents each 26.1 per cent.

Table 6: Quantity of smoking form in current smokers Quantity per day (Cigarette / Beedi / Chutta) (n=284)

Particulars (nos)	No.of respondents (n=284)	Percentage (100%)
1 to 5	136	47.9
6 to 10	74	26.1
11 & above	74	26.1

Quantity/Day (Ghutka/Pan) packs

The table 7 indicates that vast majority 42 (80.8 per cent) of the current users were consuming tobacco in non smoking form consuming 1 to 5 nos quantity of Ghutka/Pan per day, 11.5 per cent of the respondents are consuming 6 to 10 nos quantity per day and remaining 7.7 per cent of the respondents are above 11nos quantity per day.

Table 7: Quantity/Day (Ghutka/Pan) packs (n=52)

Particulars (nos)	No.of respondents (n=52)	Percentage (100%)
1 to 5	42	80.8
6 to 10	6	11.5
11 & above	4	7.7

Awareness on Study Population

The table 8 reveals that majority 612 (61.2 per cent) of the respondents were aware of problems of usages of tobacco

and remaining 38.8 per cent of the respondents were not aware.

Table 8: Awareness on Study Population (n=1000)

Particulars	No.of respondents (n=1000)	Percentage (100%)
Yes	612	61.2
No	388	38.8

4. Discussion

In India, as in most low income countries, death in middle age is increasing in relative importance due to an increase in smoking related deaths.⁶ The disease burden, health care costs as well as other fiscal losses resulting from premature deaths attributable to tobacco consumption will rapidly increase.

Out of 1000 subjects studied, majority 43.8% respondents were in the age group of 15 to 39 years, 35.6 per cent of the respondents were between 40 to 59 years age group and remaining 20.6 per cent of the respondents were above 60yrs of age group. Similar study conducted by Gavarasana S et. alin Andhra Pradesh find out similar results of age distribution that 64.6% boys and 35.4% girls between 15 and 22 years.⁷ Majority of the smokers 42.6% among the 554 smokers were in the age group 15 to 39yrs. When it came to the different age group among the 60 years above age groups the smokers were 68% followed by 15-39 years age group 54%. But in a study conducted by Rani, Bonu, Jha, et al find out that majority of the tobacco consumers 45.1% were in the age group of 40-59 years least prevalence 8.6% reported in the age group of 15-24 years. This difference might be due to the study conducted in different areas and both sexes they included.⁸ Out of the 554 ever tobacco users 61.4% were current tobacco users.

Out of 1000 study population nearly half of them were belongs to middle class and one quarter were belong to higher socio economic class he socioeconomic but in a study conducted by Rani, Bonu, Jha, et al find out that majority of the tobacco consumers were in the poorest socio economic status followed by poor. This difference might be due to rural urban difference.⁸

Prevalence of tobacco consumption

Out of 1000 subjects studied, 554 (55.4%) are everusers of tobacco. Among 554 everusers 340 (61.4%) are observed to be current consumers of tobacco. Thus out of 1000 study population, 340 (34%) are current consumers. The prevalence of ever users of tobacco in this study is 55.4% and that of current users is 34%.

National Family Health Survey (NFHS-III, 2005–06)⁹ India reported that the tobacco consumption prevalence in men aged 15-49 years in India was 57% and 40% in Tamil Nadu state which is found to be lower than our study.

India Global School Personnel Survey 200610, India found that nearly 29% of school personnels were consuming tobacco products. Current use of any tobacco ranged from 20.9% in the South to 50.3% in the North-Eastern Region. At the national level, males (35%) were significantly more than females (13.7%) to be current users of any tobacco products. This is similar to the findings of our study where the prevalence in males aged 15 years and above was found to be 34%. Nearly one-fourth (25.1%) school personnel in India reported ever use of tobacco. It ranged from 15% in the Central region to 42% in the North-Eastern Region. However our study differs in the prevalence of ever-users of tobacco compared to this study.

A study (2009) by Sharma R, et al,¹¹ among 550 adolescents aged 14-19 years in South Delhi reported that the prevalence of male ever users of tobacco use was found to be 31.4% and current users of tobacco was 19.5% which is different from the findings of our study.

Form and Type of Tobacco consumption among current users

In the present study 83.5% of the current users are consuming tobacco in smoking form and most (60%) commonly used tobacco product is found to be cigarette.

A study (2009) by Sharma R, et al,¹¹ among 550 adolescents aged 14-19 years in South Delhi reported that most (10.3%) of the current users among the males were consuming non smoking form of tobacco which is different from the observations found in our study.

Kumar C, et al,¹² in their study (2004) among 600 male youth aged 15 years-24 years in urban area of Tirupathi reported that the mode of consumption was mostly in the form of smoking (85.5%) which is similar to the findings observed in our study.

In a study (2006) conducted by Bala DV, et al,¹³ among 80,157 adults aged 18 years and above in four districts (Panchmahals, Banaskantha, Bharuch and Kheda) of Gujarat state observed that smoking was the commonest form accounting for 81.1% of all male tobacco users. This is found to be similar to the observations made in our study.

In a study (2003-2004) conducted by Gupta V, et al,¹⁴ among 7891 participants aged 15-64 years in Ballabgarh block, Faridabad district, Haryana found that maximum of the male current users in urban area were consuming tobacco in smoking form which is similar to the observations made in our study. Most (17.8%) commonly used tobacco product was beedi among the current users in urban area which however is different from our study where cigarette is found to be the commonly used tobacco product.

Quantity of tobacco consumption in current consumers

In this study out of 284 smokers, majority 48% of the current smokers smoke about 1-5 cigarettes/beedis/chuttas per day and in a total of 42 current tobacco chewers majority 80.8% of current tobacco chewers consume 1-5 packs of

ghutka/pan per day.

Kumar C, et al,¹² in their study(2004) among 600 male youth aged 15 years-24 years in urban area of Tirupathi reported that the most (61.5%) of the current smokers were smoking 6-10 cigarettes per day which is different from our study. While among tobacco chewers most (88.9%) of them were taking 1-5 packets per day which is similar to our study.

Duration of tobacco consumption among current users

In the present study majority (88.2%) of the current users are found to consume tobacco for the duration of 5 years and above. Kumar C, et al,¹² in their study(2004) among 600 male youth aged 15 years-24 years in urban area of Tirupathi reported that the the duration of tobacco use ranged mostly around 2-5 years which is similar to the observation made in our study. In a study (September 1999-August 2000) conducted by Mukherjee K, et al,¹⁵ among 400 male secondary school students in Mumbai it was seen that average duration of consumption of ghutka by the students was 9 months which differs from our study.

5. Conclusion

The high prevalence of use of tobacco among males age 15- and above is a major and public health problems. This affects the coming generation also. Hence steps need to be taken right now to tackle this problem. More detailed studies on the impact of individual risk factors are needed for better planning and implementation of control measures. Although the Government of India has come out with various programs for control of tobacco use over the years, the community itself is still unaware of this major problem. Unless the community wakes up to the problem posed the dangerous effect of the use of tobacco consumption, it is not possible to cope up the measures successfully. Creating awareness among the community is the responsibility of not only the government but also the educational institutes and more importantly that of health care professionals.

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