A COMPARATIVE STUDY OF PREVALENCE OF TOBACCO USE AMONG URBAN POPULATION OF HARZPENTA AND RURAL POPULATION OF PATANCHERU, HYDERABADSyam Sundar Junapudi¹, Lalith Meesala²**HOW TO CITE THIS ARTICLE:**

Syam Sundar Junapudi, Lalith Meesala. "A Comparative Study of Prevalence of Tobacco use among Urban Population of Harzpenta, and Rural Population of Patancheru, Hyderabad". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 28, July 14; Page: 7737-7744, DOI: 10.14260/jemds/2014/2964

ABSTRACT: BACKGROUND: Tobacco use is a major public health problem globally. According to the World Health Organization (WHO), tobacco is the second most important cause of death in the world. It is currently estimated to be responsible for about 5 million deaths each year worldwide. In India, it is responsible for over 8 lakh deaths every year. **OBJECTIVE:** To estimate the prevalence of tobacco use among urban population of Harzpenta and rural population of Patancheru, Hyderabad. **STUDY SETTING:** Urban Health Centre, Harazpenta and Rural Health Centre, Patancheruvu. **STUDY DESIGN:** Community Based Cross-Sectional Study. **MATERIALS AND METHODS:** A Proforma was designed and pretested with pilot study at the Harazpenta and the actual study was started after making necessary corrections. A total of 1400 persons in the age group of above 15 years were interviewed at their residence. **DATA ANALYSIS:** By Using MS office 2003. epiinfo2007. **STATISTICAL TEST:** Rates, Ratios, Proportions and Chi-square tests. **CONCLUSION:** Smoking habit was more (19.2%) among urban population when compare to the rural (13.4%) population. Urban area out of 426 males, 31% were smokers and out of 282 females, Smokeless tobacco use was 8.5% in rural area and 11.8% in urban area. Passive smokers were 42.9% in urban area and 38.8% rural area. Smoking habit was more prevalent in Muslims 22.2% in urban area and in Christians 29.3% in rural area. Smoking habit was more among unskilled workers (50.0%) in urban population and is more among skilled workers (38.6%) in rural population.

KEYWORDS: Tobacco chewing, Tobacco smoking.

INTRODUCTION: Various forms of tobacco usage either as smoked or smokeless are used mostly in developing countries, especially those in south East Asia. In India, tobacco is smoked as a cigarette, beedi, cheroot, or in a pipe. The smokeless forms of tobacco are chewed as raw tobacco leaves or pan masala or inhaled as snuff. Globally, smoking causes about 71% of lung cancer, 42% of chronic respiratory diseases and about 10% of cardiovascular disease. It is responsible for 12% and 6% of male and female deaths respectively.¹

The World Health Organization predicts that tobacco deaths in India may exceed 1.5 million annually by 2020.² Tobacco use alone is currently ranked fourth in the world in its contribution to years of life lost.³ Tobacco continues to kill 6 million people each year globally, including more than 600000 non-smokers who die from exposure to tobacco smoke.⁴

Basic data on tobacco use at the national level is available from the National Family Health Surveys⁵ (a large scale, multi-round survey conducted in a representative sample of households in India). To estimate tobacco use among school children in the 8th grade to 10th grade (ages 13 to 15 years) and adults (of age >15 years), nationwide Global Youth Tobacco Survey (GYTS)⁶ and Global Adult Tobacco Survey (GATS) have been conducted.⁷

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Tobacco use is considered to be one of the chief preventable causes of death in the world and posing a public health problem.

Accordingly a study was planned and conducted in urban and rural population of Hyderabad among those greater than 15 yrs with an objective to estimate the prevalence of use of various forms of tobacco and their socio-demographic factors.

METHODOLOGY: A Proforma was designed and pretested with pilot study at the Harazpenta and the actual study was started after making necessary corrections.

A total of 1400 persons in the age group of above 15 years were interviewed at their residence and anthropometric measurements were taken.

Study Design: Community Based Cross-Sectional Study.

Study Setting: Urban Health Centre, Harazpenta and Rural Health Centre, Patancheruvu.

Study Population: Adults above 15 years of age in Harazpenta and Patancheruvu.

Sample Size: 700 urban, 700 rural population.

Study Period: April 2008 to May 2009 (1year).

Study Variables: Age, Sex, religion, occupation, area, type of family, marital status, socio economic status.

Data Collection: By using pre-designed, pretested questionnaire.

Data Analysis: By Using MS office 2003. epiinfo2007.

Statistical Test: Rates, Ratios, Proportions and Chi-square tests.

Inclusion Criteria: above 15 years age group of study population.

Exclusion Criteria: pregnant women, who are already having cardiovascular disease, seriously ill persons and persons who are not willing to give consent.

SELECTION OF THE SLUMS AND HOUSEHOLDS:

A. IN URBAN AREA: Three Out of 41 slums (three slums i.e. Krishna Nagar, Sunder Nagar and Nehru Nagar) were selected for study by simple random sampling method and they cover a population of 3235, 3229, and 1947 respectively.

In Harazpenta all the houses were numbered starting from North east corner covering the entire slum and ended at the place where we started. The households were selected by a systematic random sampling method. Every third house hold was selected. A total of 700 respondents of above 15 years age group were interviewed at their residence.

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The interview was conducted by the investigator after taking informed consent from all the study subjects after explaining the purpose and general objectives of the study, keeping in mind their level of understanding.

The study subjects were interviewed with pre-tested Proforma and anthropometric measurements, blood pressure were recorded and also health education was given to them at the end of the interview.

B. IN RURAL AREA: Rural health centre, Patancheruvu is a mandal under Medak district and caters to a population of one lakh twenty thousand which consists of 13 villages. Out of 13 villages, 3 villages were selected for study by random method.

The three villages selected were Ismail Khanpet, Chitkul and Ghanpur, which were 10-15 kms away from R.H.C Patancheruvu. The Ismail Khanpet sub centre caters to a population of 3082 and similarly Chitkul-3260 population and Ghanpur-1930 population respectively.

Selection of Households: In a village after reaching the center of the village, numbering was given to each house hold from centre to periphery. Then reached the north of the village and started the house hold survey. Starting from 3rd house onwards and the subjects above 15 years were interviewed with pretested Proforma and their anthropometric measurements were taken and moved on to next house i.e., 3+3= 6th house and so, till the required sample size was attained.

The same procedure was adopted in the other two villages.

CALCULATION OF SAMPLE SIZE: In a study conducted by Meenakshi Bakshi mehan et al⁸ have noted that prevalence of smoking was 13.6%. Using this prevalence of smoking was calculated the sample size with the following formula:

$$4 PQ / L^2 \quad (L = 20\%, P = 13.6\% \text{ \& } Q = 1 - P)$$

Where L = allowable error,

P = prevalence,

$$\text{Calculated sample size} = 4 \times 13.6 \times 86.4 / 2.64 \times 2.64 = 695.$$

Estimated Sample size is 695 which was rounded to 700. the total study subjects in the urban area was 708 and in the rural area 701.

INTERVIEW AND COUNSELING: The study subjects (i.e. >15yrs) were interviewed and examined over a period of 45 to 60 minutes per individual.

After interview health education was given regarding their risk factor, methods to reduce the same and the available treatment was explained.

RESULTS:

Current smoker	Urban(708)		Rural(701)		Total(1409)	
	N	%	N	%	N	%
Yes	136	19.2	94	13.4	230	16.3
No	572	80.8	607	86.6	1179	83.7
Total	708	100	701	100	1409	100

Table 1: distribution according to prevalence of current smokers in the study population

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In the study population smoking habit was more (19.2%) among urban population when compare to the rural (13.4%) population was found to be statistically significant ($X^2=8.67$, $p<0.00032$, $CI=95\%$).

The present study results were comparable to studies conducted by Mohmad D⁹ where the overall prevalence of smoking was 18.1%. In a study conducted by Meenakshi Bakshi mehan et al⁸ have noted that prevalence of smoking was 13.6%.

When compared to present study results the prevalence of tobacco smoking was more in the following studies- A study conducted by Suganthan T.N. et al¹⁰, among adults in Kerala over all current smokers were 40%. A study by Bela shah et al¹¹ have noted that daily smokers were highest in Ballabgarh (rural 50% and slums 44%)

In the present study the prevalence of smoking habits was in urban area than in rural area. This may be due to the social acceptance of these habits in their community where they dwell and these habits are a part and parcel of their life style.

Sex	Urban			Rural		
	Smoker	Non Smoker	Total	Smoker	Non Smoker	Total
Male	132 (31.0)	294 (69)	426 (100)	94 (29.5)	217 (70.5)	311 (100)
Female	4 (1.4)	278 (98.6)	282 (100)	0 (0)	390 (100)	390 (100)
Total	136 (19.2)	572 (80.8)	708 (100)	94 (13.4)	607 (86.6)	701 (100)

Table 2: Sex wise tobacco smokers in urban and rural areas

In the urban area out of 426 males, 31% were smokers and out of 282 females only 1.4% was known smokers in urban area this difference was highly significant ($X^2=95.58$, $p<0.0001$, $CI=95\%$)

In rural area out of 311 males, 29.5% are smokers and out of 390 females no one (0%) is a known smoker.

This results was similar to a study done by Sen U¹² tobacco use in Kolkata has noted that prevalence of smoking in men was 28% and women were 0.5%.

When compared to our study results the prevalence of tobacco smoking was more in following studies- in a study conducted by Clara Kayei Chow et al¹³ in rural Andhra Pradesh the prevalence of current smoking was 45.2% in men and 4.8% in women. In a study conducted by Chandra V, Ganguli M¹⁴ Smoking among the elderly in rural Haryana, noted that prevalence of smoking in males was 88% and in females 53%. In a rural study conducted by Nawi Ng, Hans Stenlund, Ruth Bonita et al¹⁵, in rural Indonesia, prevalence of smoking was high among men at all ages and there was almost no tobacco use in women (53.9% of men uses tobacco verses 1.7% of women). According to WHO, Tobacco or Health: A global report, WHO, Geneva, 1997, has noted that prevalence of smoking in South East Asia region was 44% for men 4% for women.

It was seen that the prevalence of tobacco smoking is very high among the urban males (31%), this may be due to the social acceptance of these habits in their community where they dwell and these habits are part and parcel of their life style and moreover being males they feel that they have privilege to smoke and chew tobacco and this is deep rooted in the socio-culture system of urban people. Apart from increasing the knowledge levels, it is more important in stopping this habit and this has to be included right from the childhood period.

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Smokeless tobacco use	Urban (n=708)		Rural (n=701)		Total (n=1409)	
	N	%	N	%	N	%
Yes	60	8.5	83	11.8	143	10.1
No	648	91.5	618	88.2	1266	89.9
Total	708	100	701	100	1409	100

Table 3: Smokeless tobacco use in the study population

Smokeless tobacco use was 8.5% in rural area and 11.8% in urban area. This difference was found to be statistically significant ($X^2 = 4.38$, $P < 0.036$, $CI = 95\%$).

Meenakshi Bakshi Mehan et al⁸ "profile of non-communicable disease risk factors in an industrial setting" have noted that prevalence of smokeless tobacco was 15.9%, but in the present study overall prevalence was 10%.

Exposed to smoke	Urban(n=708)		Rural(n=701)		Total(n=1409)	
	N	%	N	%	N	%
Yes	304	42.9	272	38.8	576	40.9
No	404	57.1	429	61.2	833	59.1
Total	708	100	701	100	1409	100

Table 4: Prevalence of passive smokers in study population

Passive smokers were 42.9% in urban area and 38.8% rural area

A high proportion of the urban study group was exposed to passive smoking (42.9%) compared to the rural study group (38.8), but this difference was statistically not significant ($X^2 = 2.49$, $p > 0.05$, $CI = 95\%$).

People in urban areas usually smoke in public areas like tea shops, bus stops, working places in spite of government prohibition on public smoking, where as in rural area usually people used to smoke in open places and there is no overcrowding in rural area when compared to the urban area.

Socio economic status	Urban			Rural		
	Smokers	Non Smokers	Total	Smokers	Non Smokers	Total
1. Upper class	52 (21.4)	190 (78.6)	242(100)	6 (10)	54(90)	60(100)
2. Upper middle class	28 (17.2)	134(82.8)	162(100)	29 (15.4)	59(84.6)	188(100)
3. Middle class	24 (15.5)	130(84.5)	154(100)	36 (12.5)	250(87.5)	286(100)
4. Upper lower class	26 (20.3)	102(79.7)	128(100)	16 (10)	144(90)	160(100)
5. Lower class	6 (27.2)	16(72.8)	22(100)	7 (100)	0(0)	7(100)
Total	136 (19.2)	572(80.8)	708(100)	94(13.4)	607(86.6)	701(100)

Table 5: Distribution of smoking habit according to socio economic status classification (B.G Prasads) I n the study population

In the study population, both in the urban and rural area, the prevalence of smoking was highest among the lower lass (urban27.2% and rural 100%).

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A study by T.N. Sugathan et al¹⁰ in their study, have reported that low socio economic group was found to be higher prediction for habit of smoking.

Sen U.¹² Tobacco use in Kolkata has noted that prevalence of smoking in lower groups was 50%, middle groups was 36% and 14% among high socio economic group.

It was seen that prevalence of smoking was more in low socio economic group in both urban and rural areas. It may be due to low socio economic group usually used to smoke bedies and cigars than cigarettes which are cheaper and easily available and also this may be due to the social acceptance of this habit in the low socio economic group where they dwell and these habits are part and parcel of their lifestyle.

Religion	Urban			Rural		
	Smoking	Non Smoking	Total	Smoking	Non Smoking	Total
Hindu	110(19.2)	462(80.8)	572(100)	42(8.2)	466(91.8)	508(100)
Muslim	16(22.2)	56(77.8)	72(100)	10(20)	40(80)	50(100)
Christian	10(16.6)	50(83.4)	60(100)	42(29.3)	101(70.7)	143(100)
Other	0(0)	4(100)	4(100)	0(0)	0(0)	0(100)
Total	136(19.2)	572(80.8)	708(100)	94(13.4)	607(86.6)	701(100)

Table 6: Distribution of smoking habit according to religion in the study population

In the study population smoking habit was more prevalent in Muslims 22.2% in urban area and in Christians 29.3% in rural area.

A study by Abdulmumini Usman, Jacob Mufunda, Goitom Hagos, et al¹⁶ "Prevalence of Non-communicable disease risk factors in Eritrea". Have noted that the prevalence of smoking was high among Muslims (9.7%). Similar findings were noted in the present study, smoking was high among Muslims (22.2%) in urban population.

Marital status	Urban			Rural		
	Smoking	Non smoking	Total	Smoking	Non smoking	Total
Married	102 (20.7)	390 (79.3)	492 (100)	82 (16.8)	406 (83.2)	488 (100)
Unmarried	30 (17.4)	140 (82.6)	170 (100)	6 (5.0)	112 (95)	118 (100)
Widow/widower	4(8.6)	42 (91.)	46 (100)	6 (6.3)	89 (93.7)	95 (100)
Total	136 (19.2)	157 (80.8)	708 (100)	94 (13.4)	607 (86.6)	701 (100)

Table 7: Distribution of smoking habit according to marital status wise in the study population

In the study population smoking habit was more among married people in both in urban (20.7%) and rural (16.8%).

The observed difference in prevalence of smoking between married and other population of both the areas was found to be statistically significant ($\chi^2=5.20$ $p>0.02$, CI=95%).

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Type of family	Urban			Rural		
	Smoking	Non smoking	Total	Smoking	Non smoking	Total
Nuclear	106(20.3)	414(19.7)	520(100)	73(14.7)	422(85.3)	495(100)
Joint	30(15.9)	158(84.1)	188(100)	21(10.0)	185(90)	206(100)
Total	136(19.2)	572(80.8)	708(100)	94(13.4)	607(86.6)	701(100)

Table 8: Distribution of smoking habit according to type of family wise in the study population

In this study smokers are predominantly present in nuclear families in both urban and rural areas 20.3% and 14.7% respectively, but this difference was statistically not significant ($X^2 = 0.0$, $P > 0.05$, $CI = 95\%$).

CONCLUSIONS: Smoking habit was more among urban population when compare to the rural population. Both in urban and rural area smoking habits were higher in males. Passive smokers were 42.9% in rural area and 38.8% urban area in the study population. Smoking habit was more among unskilled workers in urban population and is more among skilled workers in rural population. Both in the urban and rural area, the prevalence of smoking were highest among the lower class.

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