International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2013): 6.14 | Impact Factor (2015): 6.391

Trends in Tobacco and Alcohol Consumption in Nalgonda District

Avinash .B[1], Dr. K. Uma Devi[2]

[1]Ph.D Scholar, Dept. of FDNT, College of Home Science,
Professor Jayashankar Telangana State Agricultural University, Hyderabad, Telangana State

[2]Professor, Department of FDNT, College of Home Science,
Professor Jayashankar Telangana State Agricultural University, Hyderabad, Telangana State

Abstract: ***Men used to be more likely to smoke and drink heavily than women. However, as social roles changed, so have gender differences in health-related behaviors. Parallels and contrasts between tobacco smoking and alcohol drinking are considered, in terms of harms, cultural positioning and dependence, which is social as well as physical and psychological. The study was conducted in Nalgonda district, Telangana State to assess demographic, nutrition and Health status of the population who were residing around the Proposed uranium processing plant at sherpalle. The findings of the study showed that 52% of respondents were illiterates and 30% belonged to Schedule Tribes. The results revealed that the frequency of smoking was found to be daily by 50% of the sample and the type of tobacco used was beedi by 45% of the smokers. Thirty nine percent of the smokers smoked 1-5 pieces by the age seen in between 16-20yrs which constituted 30%of smokers. The frequency of daily alcohol consumption was seen 44% of the alcoholics. The type of liquor consumed by 60% was locally made age group of 15-20yrs constituted 55% of the alcoholics. Forty eight percent of the alcoholics consumed 100-200ml liquor. Female population was found to be the majority in the exclusive alcohol consumption (42%) and males were the majority in the exclusive smoking category (37%). And also Females were found to have highest percentage (36%) in Both smoking and alcohol consumption followed by 25% of male population. Though 53% of males 47% of females formed the total population. Of 83% male and 17% female no of people with these habits, with in the gender groups in the practice of smoking , drinking higher percent of females (42%)were exclusive alcoholics, compared to 37% of exclusive alcoholics among men.***

Keywords: Health status studies, Smoking and Drinking habits, Adults health Status, Nalgonda health Status

1. Introduction

Nicotine and alcohol are the most widely used psychoactive substances. Nicotine and alcohol are also the substances ingested by humans which cause the greatest harm to health. According to the WHO (2000), tobacco smoking is responsible for 4.1% and alcohol drinking for 4.0% of avoidable disability or loss of life, in terms of net disability adjusted life-years. The most widely used substance for smoking is tobacco, Beedi, cigarette and chutta which are the commonly consumed forms of tobacco smoking. Beedi is manufacturing with less tobacco, cigarette is madeup of refined tobacco leaves powder and the chutta is pure form of tobacco leave and easily made at home level, among all these chutta is very strong due to direct consumption of tobacco leaf. Smoking is the habit which is not just adopted by men but also women, In the most severe cases maternal drinking leads to the fetal alcohol syndrome (FAS). Smoking leads to various health issues like Throat cancer, lung cancer. Drinking and smoking during pregnancy can result in negative short-and long-term effects in exposed children.Alcohol is the substance which is available in different forms based on the quality and the type of ingredients used. Mainly in India there are three verities of alcohol are available viz., Gudumba, Taadi and Branded liquors. Gudumba is madeup of low quality materials like spoilt fruits, jaggery and different low grade materials, and which can be easily prepared at house hold level in villages and hamlets. Taadi is the liquor which is collected naturally from Toddy palm trees (Borassus flabellifer), taadi is also known as Toddy, is mainly available in rural areas. Branded Liquor is made of Wheat, grapes and different types of materials using fermentation process at different levels, and it's cost is higher compared to other liquors.

Among the social vices tobacco smoking and alcohol consumption are considered not only to immoralise one's personality but also cause irreversible health problems leading to early mortality. The habits of tobacco and alcohol consumption were also considered the root cause for several types of cancers especially oral, esophageal, lung, liver and intestinal cancers. Alcohol consumption has been steadily increasing in developing countries like India and decreasing in developed countries since the 1980s. The pattern of drinking to intoxication is more prevalent in developing countries indicating higher levels of risk due to drinking.

62.5 million alcohol users estimated in India Per capita consumption of alcohol increased by 106.7% over the 15-year period from 1970 to 1996. About 80% of alcohol consumption is in the form of hard liquor or distilled spirits showing that the majority drink beverages with a high concentration of alcohol. Branded liquor accounts for about 40% of alcohol consumption while the rest is in the form of country liquor. People drink at an earlier age than previously. The mean age of initiation of alcohol use has decreased from 23.36 years in 1950 to 1960 to 19.45 years in 1980 to 1990. India has a large proportion of lifetime abstainers (89.6%). The female population is largely abstinent with 98.4% as lifetime abstainers. This makes India an attractive business proposition for the liquor industry.

This study aims to find the Smoking and Drinking Practices in the selected areas of Nalgonda District. However, since

the public health concern is central to any technological and industrial human activity in modern times, a baseline health status survey around processing plant becomes essential to evaluate existing data pattern. This would help to understand background scenario and might form a reference for future assessments of impacts due to processing activity in the region of processing plant namely Sherpalle. The population under study was surveyed to obtain information on addiction to tobacco and alcohol.

2. Methodology

Exploratory research design has been adopted to collect the data about the smoking and alcohol practices among the selected sample to assess the health and nutritional status of the population living in selected area of the Nalgonda district i.e 60 Hamlets, and 40 villages. The total numbers of households covered were 11,769 and total population 45,415 respectively. The indigenous people living in these villages are mostly from agriculture background and daily agricultural wagers and very few of them from private job. The questionnaire sought information on age, gender, frequency and quantity consumed by the respondents.

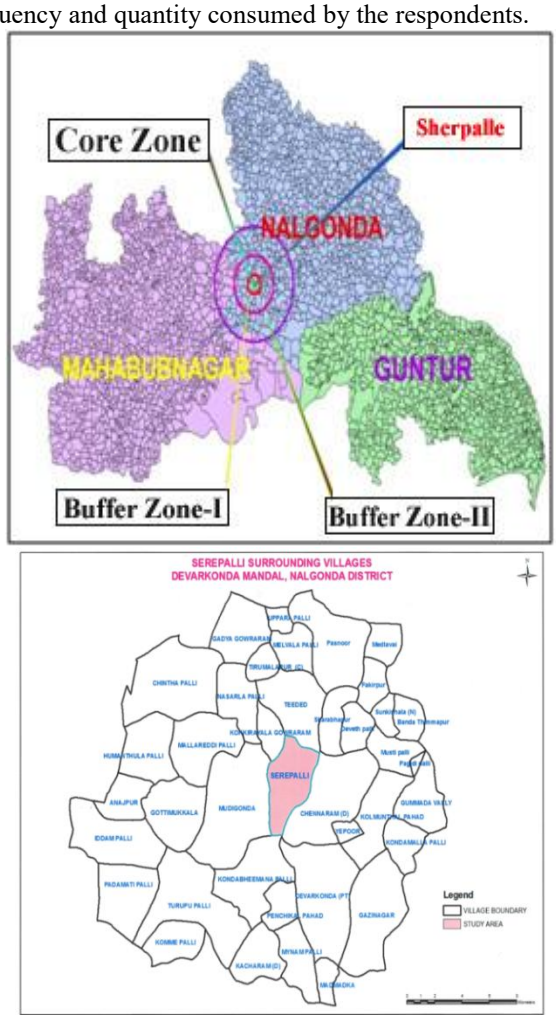

Figure 1: Map showing Study Area with 5,15,30 km zones

3. Results and Discussion

Table 1: Distribution of Population based on caste

Caste	0-5km N=2735	5-15km N=4523	15-30km N=4511	Total N= 11769
OC	71 (2)	240 (5)	351 (8)	662 (6)
BC	813 (30)	2004 (44)	2507 (56)	5324 (45)
SC	108 (4)	1151 (26)	954 (21)	2213 (19)
ST	1743 (64)	1128 (25)	699 (15)	3570 (30)
Total	2735 (100)	4523 (100)	4511 (100)	11769 (100)

The core zone (0-5km) consisting of highest number of hamlets was highly concentrated by the schedule tribe (ST) families and the percent ST households gradually reduced to 25 and 15 % in two buffer zones (5-15 and 15-30) respectively. The Increasing trend of percent BC households followed the order of 0-5, 5-15 and 15-30km indicating that most of the BC population lived in villages far away from hamlets.(Table.1) [4] conducted a study between 15 years to 64 years of age from population of Ahmedabad city results revealed that Heavy frequencies of consumption of any type of tobacco products was found among respondents falling under the categories of male gender, illiterates and socially and economically backward classes . [8] Found that the Scheduled tribes (odds ratio 1.23, 95% confidence interval 1.18 to 1.29) and scheduled castes (1.19, 1.16 to 1.23) were more likely to consume tobacco than other caste groups.

Literacy Level

The percent literates were 39, 50 and 53 and illiterates were 61, 50 and 47 in 0-5, 5-15 and 15-30km zones respectively. The number of illiterates has covered children below 5yrs who were not yet ready for formal school education. Illiteracy was highest among population in 0-5km while literacy was highest in 15-30km area. Equal percent of literates and illiterates is 50:50 existed in 5-15km buffer zone. Compared to literacy levels of 57% and 65% during 2001(Census 2001) and 2011(Census 2011) in Nalgonda district. The literacy levels of 0-30km study area was very low with 48% literates and 52% illiterates (Table.2). Though the overall literacy level within the district has increased by 8% between 2001 and 2011 and reached 65% literacy, the area of 0-30km around Sherpalle, encompassing 10–12 mandals had a low literacy rate of 48% only during the study period between 2010 -2012. [7] found that Lack of awareness about the selected hazards of tobacco significantly affects tobacco use.

Table 2: Literacy Level

Particulars	0-5km	5-15km	15-30km	Total
Literacy level				
Illiterates	6793 (61)	8846 (50)	7914 (47)	23553 (52)
Literates	4257 (39)	8743 (50)	8862 (53)	21862 (48)
Total	11050 (100)	17589 (100)	16776(100)	45415 (100)

I. Tobacco Smoking

Table 4 gives the percent of population smoking or chewing tobacco, frequency of smoking, type of brands, quantity of consumption and percent smokers in different age groups. On an average, 25% of population in each of the 3 zones had the habit of smoking (Table.3 & fig.2). Tobacco chewing was observed in 1% of population in each of 5-15km and 15-30km, but not found in 0-5km. [9] conducted study in

different states of india and found that the Concentration index of inequality was significant for smoking tobacco -0.7 (-0.62 to-0.78) and not significant for smokeless tobacco consumption -0.15 (0.01to-0.33). Out of the total smokers 36.5% smoked occasionally, 50% daily and 13.5% smoked weekly 2-3 times. Daily smoking was highest in 0-5km (59%) followed by 15-30km (50%) and 5-15km (44%). Almost 21% of the population of 0-5 and 5-15km smoked 2-3 times in a week (fig 2).

Table 3: Population consuming tobacco

Particulars	*0-5km*	*5-15km*	*15-30km*
Smokers (%)	26	25	25
Non Smokers (%)	74	75	75

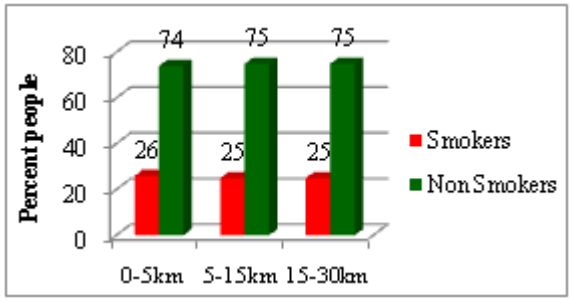

Figure 2: Distribution of population based on smoking

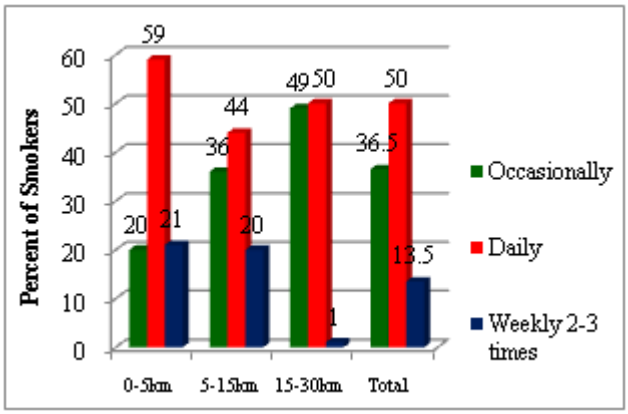

Figure 3: Frequency of tobacco consumption

Table 4 : Habits of tobacco consumption among smokers

Particulars	*0-5km n=2918*	*5-15km n= 4454*	*15-30km n=4202*	*Total n= 11574*
Smokers in the population (%)	26	25	25	25
Chewers in the Population (%)	0	1	1	0.68
Frequency of consumption				
Occasionally	586 (20)	1584 (36)	2072 (49)	4242 (36.5)
Daily	1713 (59)	1979 (44)	2102 (50)	5794 (50)
Weekly 2-3 times	619 (21)	891 (20)	28 (1)	1538 (13.5)
Type of tobacco consumed				
Beedi	1066 (36)	2864 (64)	1347 (32)	5277 (45)
Cigarette	961 (33)	763 (17)	1245 (30)	2969 (26)
Chutta	891 (31)	827 (19)	1610 (38)	3328 (29)
No. of pieces consumed				
1-5 pieces	1109 (38)	1664 (37)	1721 (41)	4494 (39)
5-10 pieces	975 (33)	1203 (27)	1009 (24)	3187 (26)
1-2 packets	834 (29)	1587 (36)	1472 (35)	3893 (35)
Age-wise distribution of smokers				
1-10yrs	65 (2)	Nil	52 (1)	117 (1)
10-15yrs	456 (16)	167 (4)	162 (4)	785 (7)
16-20yrs	985 (34)	853 (19)	1604 (38)	3442 (30)
20-25yrs	266 (9)	716 (16)	2278 (54)	3260 (28)
26-30yrs	629 (22)	556 (12)	92 (2)	1277 (11)
30 & above	517 (17)	2162 (49)	14 (1)	2693 (23)

Beedi, cigarette and chutta were the commonly consumed forms of tobacco smoking. Beedi is manufacturing with less tobacco, cigarette is madeup of refined tobacco leaves powder and the chutta is pure form of tobacco leave and easily made at home level, among all these chutta is very strong due to direct consumption of tobacco leaf. On an overall basis, majority of the smokers used beedi (45%) followed by chutta (29%) and cigarette (26%). In the respective zones all forms of tobacco were consumed equally by the smokers in 0-5 and 15-30kms area (30-35%). Sixty four percent of smokers In 5-15km used Beedi and 17% used cigarette and 19% chutta (Table no.4 & fig.4).

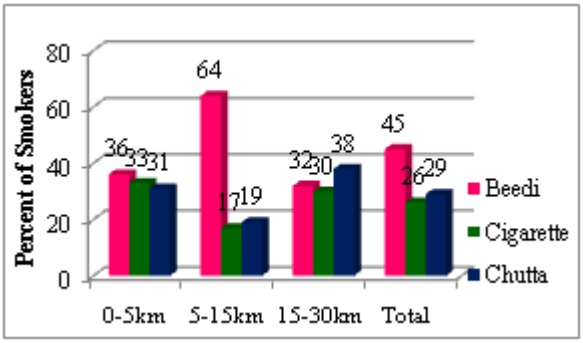

Figure 4: Type of tobacco consumed

The average smoking of tobacco ranged between 1-5 pieces among 39%, and 5-10pcs among 26%, while 35% of smokers consumed almost 1-2 packets of any type of tobacco (fig 5).

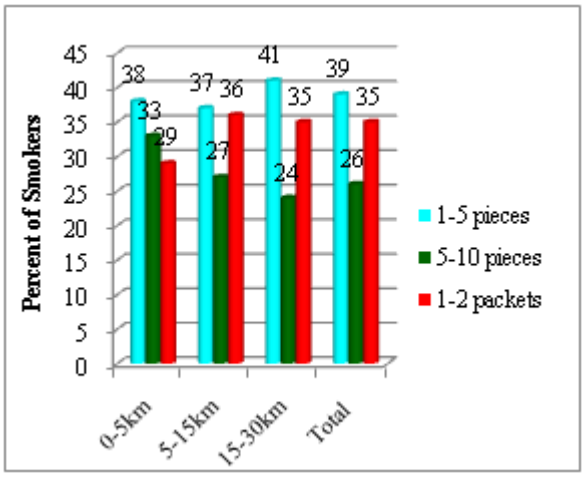

Figure 5: Number of pieces consumed

Though majority of the smokers fell in the age group of 16 and above, there were nearly 8% of children below 15yrs who got into the habit of smoking Higher percentage of children below 15yrs were smokers in 0-5km (18%) compared to 4-5% in 5-15 and 15-30km area. The number of smokers between the age of 16-20 was also high in 0-5km (34%) and 15–30km area (38%), while it was 19% from 5-15km. among the smokers 9% from 0-5, 16% from 5-15 and 54% from 15-30km were of 20-25yrs, highest being in 15-30km. with increasing age the number of smokers between 26-30yrs and above 30 was very low in 15-30km (2%) but it

was high in 0-5 and 5-15km with 22% and 12% among 26-30yrs and 17% and 49% among above 30yrs respectively (Fig.6). [5] found in their study That the age-standardized prevalence of smoking declined modestly among men aged 15–69 years and Female smoking at ages 15–69 years has not likely risen.

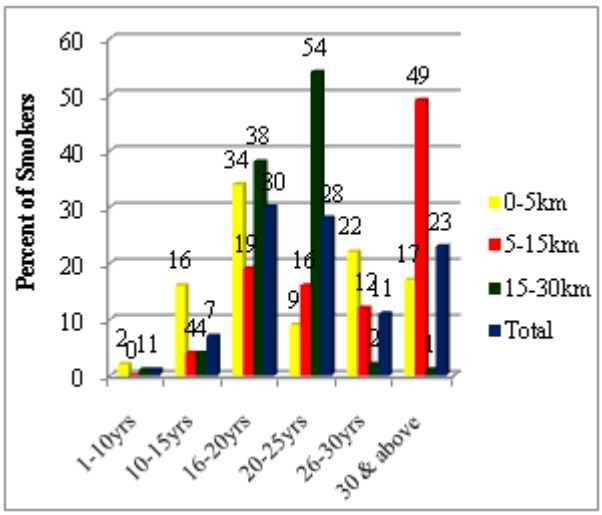

Figure 6: Age-wise distribution of smokers

II. Alcoholism

The North – west region of nalgonda dist which was the study area is known for collection of liquor (Taadi) from palm trees and also making of local liquor (Gudumba/Saarai). Nearly 27% (12,416 out of total population 45,415) of the population was found to be habituated to consume alcohol. Zone wise, 29–30% population in 0-5 and 5-15 km area followed by 23% in 15-30km were found to take alcohol (fig.7). Concentration of alcoholics was relatively high in the core zone (0-5km) and buffer zone-I (5-15km).

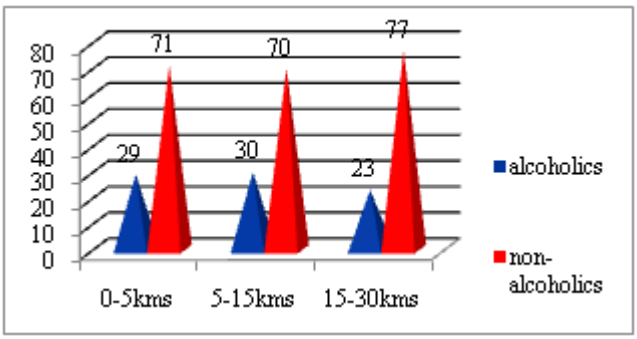

Figure 7: Percent alcoholics in the population

The type, frequency and quantity of liquor consumed and age wise distribution of alcoholics is given in table (no 5).

Table 5: Habits of Alcohol consumption

Particulars	0-5km n=3222	5-15km n=5259	15-30km n=3935	Total 12,416
Type of alcohol consumed				
Local liquor	1848 (57)	3612 (69)	2019 (51)	7479 (60)
Taadi	266 (9)	567 (11)	681 (17)	1514 (13)
Brand	330 (10)	647 (12)	1173 (30)	2150 (17)
Two varieties	778 (24)	433 (8)	62 (2)	1273 (10)
Frequency of consumption				
Daily	1637 (51)	1985 (38)	1889 (48)	5511(44)
Weekly 4-5 times	853 (27)	1477 (28)	18 (0.4)	2348(19)
Weekly 2-3 times	365 (11)	1237 (24)	473 (12)	2075 (17)
Rarely/ Occasionally	367 (11)	560 (10)	1555 (40)	2482 (20)
Age-wise distribution of alcoholics				
15-20yrs	2159 (67)	1920 (37)	2748 (70)	6827 (55)
21-25yrs	515 (16)	856 (16)	922 (23)	2293 (18.5)
26-30yrs	386 (12)	1576 (30)	222 (6)	2184 (17.5)
30 & above	162 (5)	907 (17)	43 (1)	1112 (9)
Quantity consumed				
100-200ml	1256 (39)	2864 (54)	1891 (48)	6011 (48)
200-500ml	1386 (43)	1959 (37)	1251 (32)	4596 (37)
>500ml	580 (18)	436 (9)	793 (20)	1809 (15)

Sixty percent of the alcoholics were in the habit of consuming liquor which was made locally called gudumba, while 13% consumed taadi, 17% branded varieties and 10% consumed both either of the all verities. Consumption of local liquor was highest in any of the three zones: 57% in 0-5km, 69% 5-15 and 51% in 15-30km. taadi collected from local palm trees which was found to be good demand was sold mostly to the travelers on the main road side yet 9% from 0-5km, 11% 5-15km and 17% from 15-30km with overall 13% alcoholics consumed taadi. Compare to the core and buffer zone – I, in buffer zone-II 30% consumed branded verities while it was only 10-12% in the other two zones. Consumption of two or more verities of alcohol was 1-2% in 0-5 and 15-30km with more while it was 8% in 5-15km (fig.8).

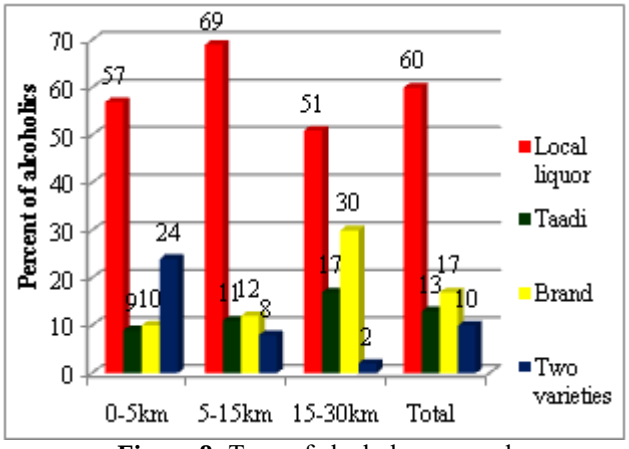

Figure 8: Type of alcohol consumed

The frequency of consumption of alcohol is shown in figure 9. Daily consumption of alcohol was found in 44% of overall population while it was 51% in 0-5km 38% in 5-15km and 48% in 15-30km area and daily consumption was seen among highest number of alcoholics in any region. Consumption of alcohol weekly 4-5 times was seen among 27% to 28% of alcoholics in 0-5 and 5-15km but it was negligible among those in 15-30km. consumption of alcohol 2-3 times in a week was the practice of 11% alcoholics in 0-5km, 24% in 5-15km and 12% in 15-30km area. While 40% of alcoholics in 15-30km area were habituated to occasional consumption of alcohol, 10-11% of 0-5km and 5-15km area consumed occasionally. [3] Among tribal study subjects about 29.3% of the subjects consumed alcohol whereas in non-tribal this was 14.3% & this difference was found to be statistically significant (P<0.0001)

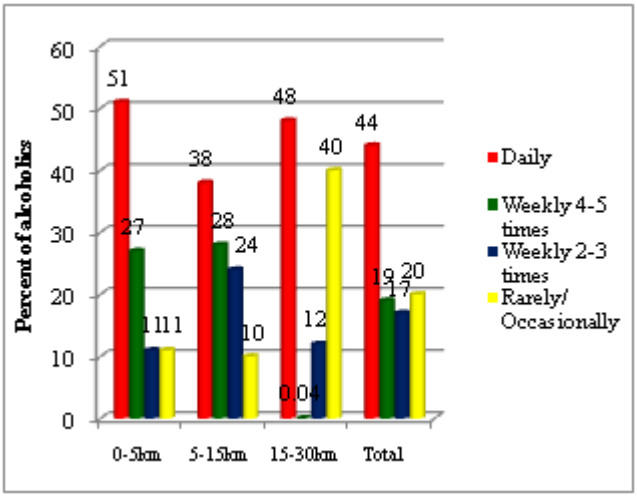

Figure 9: Frequency of consumption of alcohol

Among the alcoholics, 15-25 yrs age group was found the biggest group with 55% an overall average. Both core zone (0-5km) and buffer zone-II(15-30km) had highest percent of alcoholics in the age group of 15-20yrs with 67% and 70% respectively, while 37% from buffer zone-II (5-15km) were in this age group. On average alcoholics of 21-25yrs found 16% in 0-5km and 5-15%km and 23% in 15-30km with an overall percentage of 18.5. Twelve percent alcoholics from 0-5km, 30% from 5-15km and 6% from 15-30km who are in the age group of 26-30yrs. The incidence of alcoholism seems to be very low among 30yrs and above age group with only 5% in 0-5km, 17% in 5-15km and 1% in 15-30Km with overall 9% alcoholics. The data indicates that the vice of alcoholism was mostly among teenagers and young adults in the study area (Fig.10).

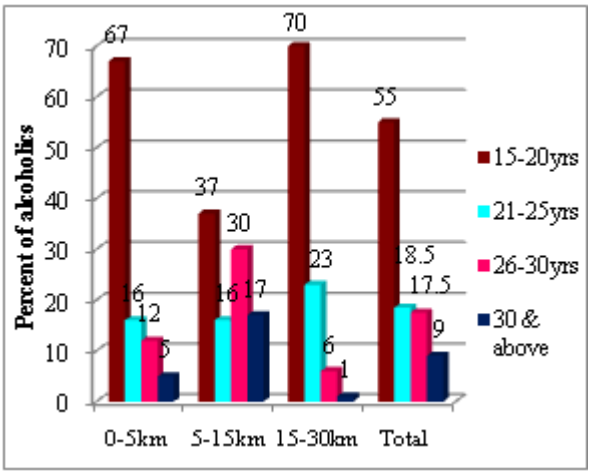

Figure 10: Age wise Distribution of alcoholics

The quantity of alcohol consumed was categorized in to100-200ml, 200-500ml and <500ml and the percent of alcoholics consuming different amounts is given in table 2 and Fig11. An overall 48% alcoholic consumed 100-200ml liquor, which covered 39%, 54% and 48% from 0-5, 5-15 and 15-30km. around 200-500ml alcohol per day was consumed by 43%, 37% and 32% alcoholics from 0-5, 5-15 and 15-30km respectively with an overall 37% alcoholics. The percent of alcoholics consuming <500ml liquor was 18% in 0-5km , 9% in 5-15km and 2% in 15-30kms with an overall 15% alcoholics.

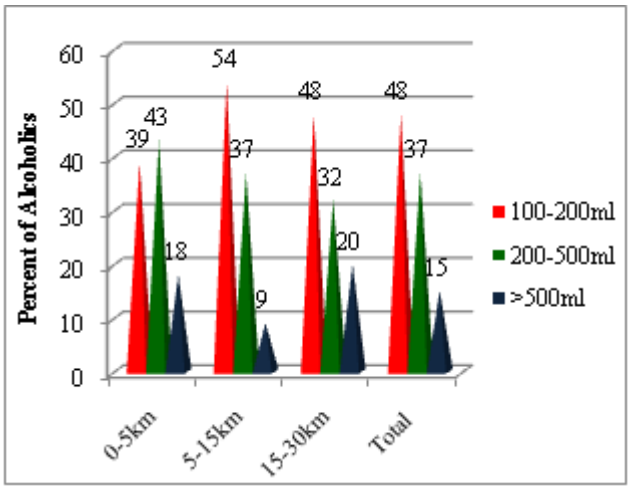

Figure 11: Quantity of liquor consumed by alcoholics

III. Population habituated to Smoking /Alcohol

The population habituated to smoking, alcohol or both vices has been distributed in table 6. in the core zone of 0-5km 83% of population with the smoking and alcohol habits were males and 17% were females. In buffer zone- I (5-15km) 89% were males and 11% females, while it was 74% males and 26% females in buffer zone-II (15-30 km). Greater percent of males compared to females were found to be addicted to these vices in all the 3 zones highest males being in 5-15km followed by 0-5km and 15-30km while, highest percent of females with the vices were in 15-30km followed by 0-5km and 5-15km (fig.12).

Within those with the habits of vices,36% and 25% of males and females respectively were exclusive smokers, 40% and 39 % males and females respectively were exclusive alcoholics and 24% and 36% males and females respectively were both smokers and alcoholics in 0-5km. [1] revealed tobacco use was associated with age, gender, seeing others using tobacco, and seeing restrictions on tobacco use. That Gender and age did not moderate the relationship between cue exposure and tobacco use, although males reported higher tobacco use and cue exposure in general. The percent of population with the above vices in 5-15 and 15-30km in the order of exclusive smoking was 33% and 45% males and 37% and 13% females in the respective zones. The percent of population with exclusive alcoholism in 5-15 and 15-30km was 42% and 29% males and 51% and 39% females in the respective zones. The percent of population with both Smoking and alcoholism in 5-15 and 15-30km was 25% and 26% males and 12% and 48% females in the respective zones. [2] found that Males were 40% where mean age was 46.1 years (±15.1). Hazardous drinking was seen in 5.2% of men and 0.02% of women, Lower level of education, and age >70 years positively correlated with hazardous drinking. [6] revealed that Dependence was seen in 4.1% and problem drinking in 1%. Physical complications possibly due to alcohol were seen in 4.1% and psychiatric co-morbidity in 1%. Pregnancy drinking was recorded in 4.4%. Only 0.2% came for follow-up. On the whole, greater percent of exclusive smokers were males compared to females in any zone, while higher percentage of women were exclusive

alcoholics compared to men and similar trend was seen among those with both smoking and alcoholism.

Table 6: Habits of Smoking and Alcohol consumption

Particulars	0-5km N= 4,852		5-15km N= 7,836		15-30km N= 6,182		Total N= 18,870	
	Male n= 4004 (83)	Female n= 848(17)	Male n= 6989 (89)	Female n= 847(11)	Male n= 4603 (74)	Female n= 1579 (26)	Male n= 15596 (83)	Female n= 3274 (17)
Exclusive Smoking	1427 (36)	203 (25)	2262 (33)	315 (37)	2056 (45)	191 (13)	5745 (37)	709 (22)
Both smoking & alcohol	972 (24)	316 (36)	1779 (25)	98 (12)	1189 (26)	766 (48)	3940 (25)	1180 (36)
Exclusive alcohol	1605 (40)	329 (39)	2948 (42)	434 (51)	1358 (29)	622 (39)	5911 (38)	1385 (42)
Total	4004 (100)	848 (100)	6989 (100)	847 (100)	4603 (100)	1579 (100)	15596 (100)	3274 (100)

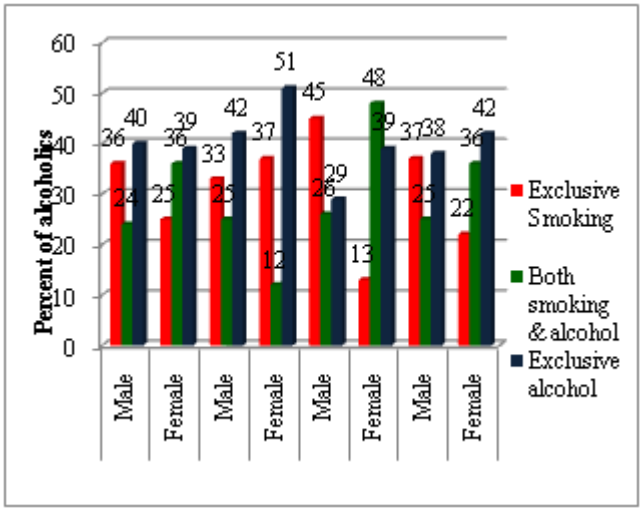

Figure 12: Habits of Smoking and Alcohol consumption

The trend of higher percentage of women among exclusive alcoholism was seen in buffer zones I and II while, habits of both smoking and alcoholism among women was in higher percentage in 0-5km and 15-30km but in any habituation groups men were in large number compared to women.

4. Conclusion

From the present study it can be concluded that female category were found to be the majority (36 %) in both smoking and alcohol consumption and also females were found to be the highest percentage (42%) in exclusive alcohol consumption. The reason could be attributed to the Illiteracy where the majority belongs to the Schedule tribes among the selected population and also lack of awareness about the ill effects of smoking and alcohol consumption.

References

[1] Borzekowski and Chen. Tobacco use in India: An ecological momentary assessment. Tobacco Induced Diseases, 2016.14:16.

[2] Katulanda, P., Ranasinghe, C., Rathnapala,A., Karunaratne, N., Sheriff, R and Matthews. D. Prevalence, patterns and correlates of alcohol consumption and its' association with tobacco smoking among Sri Lankan adults: a cross-sectional study. *Bio medical central Public Health,* 2014. 14:612.

[3] Kumar, R. K and Tiwari, R. A cross sectional study of alcohol consumption among tribal and non-tribal adults of Narayanganj block in Mandla district of Madhya Pradesh, India**.** *International Journal of Community Med Public Health,*2016.3(4):791-795.

[4] Mamta Patel. Frequencies of Consumption of Tobacco Products and Multinomial Logistic Regression: A Study of Metro City Ahmedabad. *Indian Journal of Research,* 2016. 5(2).

[5] Mishra, S., Joseph, R,N., Gupta,P.C., Pezzack, B., Ram,F., Sinha,D.N., Dikshit, R., Patra,J and Prabhat Jha. Trends in bidi and cigarette smoking in India from 1998 to 2015, by age, gender and education. *British Medical Journal Global Health*, 2016.

[6] Padmavathy, S. Potukuchi and Prasada .G.R. Problem alcohol drinking in rural women of Telangana region, Andhra Pradesh Indian J Psychiatry. 2010 Oct-Dec; 52(4): 339–343.

[7] Singh, A and Ladusingh, L. "Prevalence and Determinants of Tobacco Use in India: Evidence from Recent Global Adult Tobacco Survey Data" 2014.

[8] Subramanian. S.V., Nandy, S., Kelly, M., Gordon, D and Smith,G.D. "Patterns and Distribution of Tobacco Consumption in India: Cross Sectional Multilevel Evidence from the 1998-9, National Family Health Survey."*British Medical Journal, 2004*. 328 (7443): 801–806.

[9] J.S. Thakur, Shankar Prinja, Nidhi Bhatnagar, Saroj Kumar Rana, Dhirendra Narain Sinha & Poonam Khetarpal Singh "Widespread inequalities in smoking and smokeless tobacco consumption across wealth quintiles in States of India: Need for targeted interventions". *Indian Journal of Medical Research* 2015. 141: 789-79.

Author Profile

B. Avinash is pursuing his Ph.D. from Department of Bio-Technology, Jawaharlal Nehru Technological University Hyderabad. At present he is working on an ongoing central government project under UNICEF. He has also participated in national and international conferences.