



**PREVALENCE OF TOBACCO AND ALCOHOL CONSUMPTION AMONG MALE
POPULATION IN PUNJAB: A CROSS-SECTIONAL STUDY**

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ABSTRACT

Background: In India, people frequently abuse legal substances like alcohol and tobacco, which pose serious risks for various illnesses. According to the NFHS-5 report, the prevalence of tobacco use among Punjab men has fallen over the last decade, from 33.8% (NFHS-3) to 19.2% (NFHS-4). Over the last decade, the prevalence of alcohol use among men in Punjab has declined from 43.4% (NFHS-3) to 34.0% (NFHS-4). When coupled, tobacco and alcohol abuse can lead to severe morbidity and mortality. Tobacco use raises the risk of a variety of chronic diseases, including cancer, heart disease, and respiratory issues. Similarly, drinking too much alcohol can lead to liver damage, cancer, and other health problems. **Study Designs:** Cross-sectional study. **Methods:** The NFHS-5 was a cross-sectional nationwide survey performed using a representative sample of Punjab's adult population aged 15 and up. Punjab is a state in northwest India that covers 50,362 square kilometres and has a population of 2,77,04,236. The research covered all men aged 15 and up, with a total of 3,296 participants. **Results:** The age groups with the highest prevalence were those aged 15 to 19 years (16.1%) and 25 to 29 years (14.7%). In terms of education, a significant proportion had never attended any formal schooling (10.1%), even though the vast majority had finished secondary school (66.7%). Bathinda has the highest alcohol consumption rate (43.10%), followed by Muktsar (39.90%) and Faridkot (38.70%). Males aged 20-44 years were more likely to consume tobacco products, whereas those aged 25-54 years were more likely to consume alcohol. Muslims were 85% less likely to use alcohol than Hindus, and individuals from the wealthiest socioeconomic level were less than half as likely to utilize tobacco products. **Conclusion:** In conclusion, the study on the prevalence of alcohol and tobacco use among males in Punjab has limitations, although providing useful information about the current situation. The study's key strengths are its cross-sectional methodology and targeted demographics, which provide insight into drug usage. Nonetheless, there are several limitations, such as the use of self-reported data, potential sample bias, and a superficial analysis of contextual aspects.

KEYWORDS: Tobacco Consumption, Alcohol Consumption, Punjab, Male Population, NFHS.

INTRODUCTION

Legal drugs like alcohol and tobacco are often misused in India and are significant risk factors for a number of diseases. They also increase the burden of non-communicable diseases, particularly when taken by the general people.^[1] Over 7 million fatalities globally are attributed to tobacco use, and by 2030, that number is predicted to reach over 8 million. The estimated toll in the 20th century was over 100 million, and by the 21st century, it is expected to have reached nearly one billion.^[2,3] According to GATS 2, 28.6 percent (266.8 million) of adults in India aged 15 and above now use tobacco in a certain way. 24.9 percent (232.4 million) of individuals use tobacco on a daily basis, whereas 3.7 percent (34.4 million) use it sometimes.^[4]

According to the NFHS-5 study, the prevalence of tobacco usage among males in Punjab has decreased over the previous 10 years, from 33.8% (NFHS-3) to 19.2% (NFHS-4).^[6] According to the WHO, three million people die each year as a result of alcohol drinking, accounting for approximately 5.3% of all deaths worldwide and 5.1% of the global burden of disability-adjusted life years (DALYs).^[5] The prevalence of alcohol usage among men in Punjab has decreased from 43.4% (NFHS-3) to 34.0% (NFHS-4) during the previous 10 years, according to the NFHS study.^[6]

Tobacco and alcohol misuse, when combined, can result in significant morbidity and death. Tobacco smoking increases the risk of several chronic illnesses, including

cancer, heart disease, and respiratory ailments. Likewise, excessive alcohol intake can result in liver damage, cancer, and other health issues.^[7]

The main aim of this sectional study is to investigate how common men in Punjab, India use tobacco and alcohol. The study aims to find out the rate of tobacco and alcohol usage, among the population of Punjab. By doing the study hopes to provide information that can be used to create specific public health initiatives and policies aimed at reducing tobacco and alcohol consumption thereby improving the health and wellbeing of men in Punjab.

MATERIALS AND METHOD

Study design, location and duration

NFHS-5 was a cross-sectional national survey conducted in a representative sample amongst the adult population aged 15 years and above of Punjab. The state of Punjab is situated in northwest India with a total area of 50,362 square kilometres and population of 2,77,04,236. The state has twenty-two districts each under the administrative control of a District Collector.

Selection criteria of the sample

The study included all men between the ages of 15 and above, totalling 3,296 individuals.

Explanatory elements

The study's explanatory variables included the age range of the respondents (15–19 years, 20–34 years, 35–49 years, and 50–54 years), their marital status (married,

single, or other, including divorced or separated), where they lived (urban or rural), their level of education (none, primary, secondary, or higher), their caste (scheduled castes or SCs, scheduled tribes or STs, other backward classes or OBCs, and Others), their religion (Hindu, Muslim, Christian, Others), their wealth quintile (richest, richer, middle, poorer, and poorest), and their occupation (working or not working).

Outcome variables

Substance use: Two variables were selected for studying sub-stance use –tobacco and alcohol. Tobacco use was classified into smokeless and smoking categories. Smoking tobacco includes cigarettes and bidis, and the smokeless variety comprised gutka or pan masala with tobacco, khaini, pan with tobacco, other forms of chewing tobacco, etc. With respect to alcohol, the consumers studied were adult males aged 15-54 years.

Ethical approval

No ethical approval was required for this research because it only used secondary data and the NFHS-5 is a freely accessible source of data.

Statistical analysis

To conduct the analysis, SPSS version 26 was employed. We used both analytical and descriptive statistics. For categorical variables, percentages and proportions were presented. For risk analysis, binomial logistic regression and odds ratios with accompanying 95% confidence intervals were used.

RESULTS

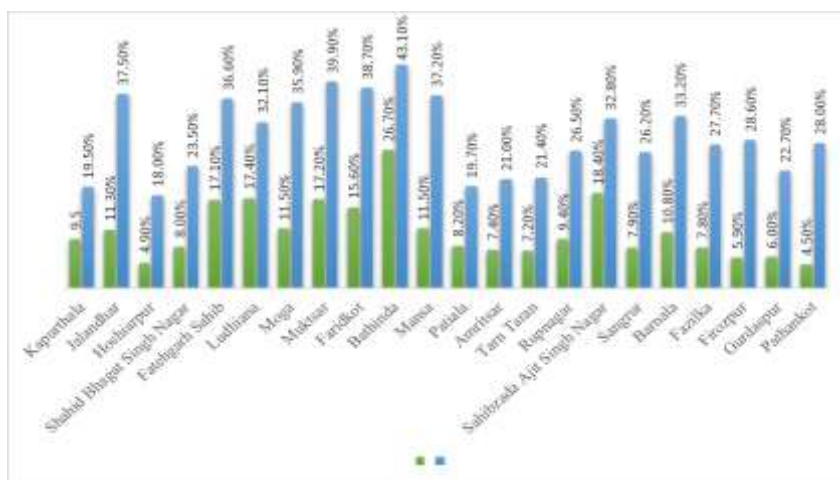
Table 1: Socio-economic profile of men in Punjab, India, 2019-21.

Socio-economic Variables	Number	Percentage
Age (years)		
15-19	531	16.1
20-24	480	14.6
25-29	485	14.7
30-34	480	14.6
35-39	399	12.1
40-44	350	10.6
45-49	285	8.6
50-54	286	8.7
Education		
No education	333	10.1
Primary	301	09.1
Secondary	2200	66.7
Higher	462	14.0
Marital Status		
Unmarried	1340	40.7
Married	1899	57.6
Others	57	01.7
Occupation		
Not working	594	18.0
Working	2702	82.0
Caste		
SC/ST	1599	48.5

OBC	453	13.7
Others	1244	37.7
Religion		
Hindu	1247	37.8
Muslim	40	01.2
Others	2009	61.0
Wealth Index		
Poorest	43	01.3
Poorer	151	04.6
Middle	411	12.5
Richer	773	23.5
Richest	1918	58.2
Place of Residence		
Urban	1101	33.4
Rural	2195	66.6

Table 1 showed that the age groups that were most prevalent were those between the ages of 15 to 19 (16.1%) and 25 to 29 (14.7%). In terms of education, a notable percentage had never attended any formal schooling (10.1%), although a considerable majority had completed secondary school (66.7%). The distribution of married individuals (57.6%) and single individuals (40.7%) in terms of marital status was balanced, with a negligible portion falling into the category “Others.” 82% of people were employed, according to the

occupational landscape, while a sizeable portion were unemployed. The population was primarily composed of SC/ST (48.5%), others (37.7%) and OBC (13.7%). The religious landscape was uneven, with the majority (37.8%) identifying as Hindu. Geographically, more individuals resided in rural areas (66.6%) than in urban ones, and the wealth distribution showed some fluctuation, with a large share falling into the richer (23.5%) and richest (58.2%) groups.



Green- Tobacco Prevalence
Blue- Alcohol Prevalence
Figure 1: Prevalence of Tobacco and alcohol consumption among men by district, Punjab, 2019-21.

Figure 1 displayed the rates of alcohol and tobacco consumption in the various districts of Punjab. It was clear that Bathinda (43.10%) was the city with the largest alcohol consumption, followed by Muktsar (39.90%) and Faridkot (38.70%). Hoshiarpur has the lowest rate of alcohol consumption, with only 18% of the male

population drinking. Turning our focus to tobacco use, Pathankot had the lowest consumption rate, with a mere 4.50%. The highest tobacco usage was found in Bathinda (26.70%), followed by SAS Nagar (18.40%) and Ludhiana (17.40%). It’s obvious that Bathinda consumed the most liquor and tobacco.

Table 2: Prevalence of Tobacco and alcohol consumption among men according to Background Characteristics, Punjab, 2019-21.

Background Characteristics	Consumption	
	Tobacco	Alcohol
Age (years)		
15-19	04.6	04.4
20-24	09.3	15.6
25-29	12.8	29.2
30-34	11.6	39.7
35-39	14.0	38.3
40-44	10.9	37.1
45-49	17.9	43.0
50-54	17.7	44.5
Education		
No education	32.5	53.2
Primary	25.9	48.4
Secondary	08.3	25.0
Higher	03.5	18.7
Marital Status		
Unmarried	07.5	14.5
Married	13.7	39.0
Others	39.4	51.8
Occupation		
Not working	02.4	05.4
Working	13.6	34.2
Caste		
SC/ST	14.4	30.5
OBC	10.2	29.8
Others	08.5	26.7
Religion		
Hindu	14.5	28.6
Muslim	26.5	20.8
Others	09.5	29.3
Wealth Index		
Poorest	33.0	40.3
Poorer	16.8	40.6
Middle	21.2	36.4
Richer	16.9	31.5
Richest	07.1	25.7
Place of Residence		
Urban	14.0	26.7
Rural	09.9	30.6
Total	11.6	29.0

Different demographic groups exhibited unique trends according to an examination of consumption patterns and background variables. People between the ages of 45 and 54 consumed more tobacco and alcohol, with respective peak percentages of 17.9% and 44.5%. Education was important since the groups with the highest rates of alcohol (53.2%) and tobacco (32.5%) usage were those without any formal education. One other significant factor was marital status; the "Others" category reported the highest rates of alcohol (51.8%) and tobacco (39.4%). In terms of occupation, those without a job consumed less alcohol (5.4%) and tobacco (2.4%) than those who were employed. The SC/ST Caste exhibited the greatest rates of alcohol and tobacco consumption, at

30.5% and 14.4%, respectively. Within the religious community, Muslims consumed the most tobacco (26.5%), while men in the "others" category consumed the most alcohol (29.3%). The poorest and poorer groups consumed the most tobacco (33%) and alcohol (40.6%), respectively. Urban residents tended to consume less alcohol (26.7%) than their rural counterparts (30.6%), and more tobacco (14%) than those living in rural areas (9.9%). The total data showed that the average rates of tobacco and alcohol consumption were 11.6% and 29.0%, respectively. These findings provide a thorough understanding of the interactions between the studied population's background characteristics and its consumption patterns.

Table 3: Determinants of Tobacco and Alcohol Consumption among Men by Independent Variables, Punjab, 2019-21.

Independent Variables	Tobacco Consumption				Alcohol Consumption			
	Exp(β)	95% C.I. for Exp (β)		p-value	Exp(β)	95% C.I. for Exp(β)		p-value
		Lower	Upper			Lower	Upper	
Age (years)								
15-19	1.000				1.000			
20-24	2.228	2.092	2.372	0.000	2.894	2.672	3.135	0.000
25-29	2.495	2.330	2.672	0.000	4.238	3.898	4.607	0.000
30-34	2.426	2.254	2.612	0.000	4.770	4.367	5.211	0.000
35-39	2.261	2.096	2.440	0.000	5.059	4.622	5.537	0.000
40-44	2.069	1.912	2.238	0.000	4.637	4.227	5.087	0.000
45-49	1.920	1.774	2.078	0.000	4.709	4.292	5.167	0.000
50-54	1.707	1.571	1.854	0.000	4.162	3.782	4.581	0.000
Education								
No education	1.00				1.000			
Primary	1.173	1.112	1.238	0.000	1.042	0.985	1.102	0.156
Secondary	1.028	0.983	1.075	0.000	0.804	0.767	0.842	0.000
Higher	0.648	0.611	0.688	0.230	0.565	0.531	0.602	0.000
Marital Status								
Unmarried	1.00				1.000			
Married	1.075	1.027	1.126	0.002	1.112	1.058	1.169	0.000
Others	1.485	1.329	1.660	0.000	1.339	1.192	1.503	0.000
Occupation								
Not working	1.00				1.000			
Working	2.157	2.045	2.276	0.000	1.897	1.784	2.018	0.000
Caste								
SC/ST	1.000				1.000			
OBC	0.804	0.776	0.832	0.000	0.684	0.660	0.709	0.000
Others	0.778	0.746	0.811	0.000	0.632	0.605	0.661	0.000
Religion								
Hindu	1.000				1.000			
Muslim	1.072	1.023	1.122	0.003	0.158	0.145	0.172	0.000
Others	1.367	1.309	1.428	0.000	1.528	1.462	1.596	0.000
Wealth Index								
Poorest	1.00				1.000			
Poorer	0.961	0.922	1.002	0.064	0.828	0.791	0.866	0.000
Middle	0.805	0.770	0.841	0.000	0.789	0.753	0.828	0.000
Richer	0.677	0.645	0.711	0.000	0.671	0.637	0.708	0.000
Richest	0.496	0.468	0.526	0.000	0.628	0.591	0.667	0.000
Place of Residence								
Urban	1.00				1.000			
Rural	0.812	0.782	0.842	0.000	0.792	0.761	0.824	0.000
Constant	0.175			0.000	0.128			0.000

Table 3 revealed that the likelihood of consuming tobacco products was approximately 2-2.5 times higher for males aged 20-44, while the likelihood of alcohol consumption was approximately 4-5 times higher for individuals aged 25-54. Education had little bearing on these lifestyle choices, and each participant was nearly equally likely to consume tobacco and alcohol; those who were employed had a chance of consuming tobacco and alcohol of 2 and 1.9 times, respectively; people from all castes were equally likely to consume tobacco and alcohol, with very slight variations; Muslims were 85%

less likely to consume alcohol than Hindus; and those from the richest socioeconomic group were less than half as likely to consume tobacco products as compared to other segments of society.

DISCUSSION

In comparison to other states in the nation, the statewide representative poll revealed a generally low frequency of alcohol and tobacco use among the populace. The influence of different measures implemented by the Punjab government in successfully implementing the

regulations is likely one of the factors behind the low incidence of alcohol and tobacco usage among the adult population.

This study gives a comprehensive picture of the prevalence of tobacco and alcohol use among men aged 15–54 years using a recent national survey. Men in the older group, those with lower incomes and educational levels, those who were employed, those who were separated, divorced, or widowed, and those who lived in cities were more likely to smoke. Age, living in a rural region, having little education, and having a poor income were all linked to higher tobacco smoking, according to Indian studies.^[8,9] 39.4 percent of men who were divorced, or separated consume tobacco and 51.8 percent consume alcohol, the prevalence of which was significantly higher than the men who were married. Previous studies from Punjab have reported current use of alcohol in the range of 19-58 per cent. However, these studies lacked generalizability because they had variable methodology, sample size, study instruments and case definitions and most were single-site studies.^[10,11,12,13,14]

The current study reported 11.6% and 29.0% prevalence of tobacco and alcohol consumption respectively. Among the 12 States, Punjab had the lowest prevalence of tobacco usage (5.5% vs. 20.89%).^[15] One of the most prevalent motivations for drug abusers to achieve sobriety was religious involvement.^[16] In our study, the prevalence of alcohol and tobacco use was relatively high in the productive population (50-54 years).

According to the GATS study from 2009–2010, 11.7% of Punjabi people currently use tobacco in any form, with men making up 21.6% of the population and women making up 0.5%. Approximately 6.9% of people smoked (12.7% of men and 0.4% of women), while 6.5% used smokeless tobacco products (12.2% of men and 0.2% of women).^[2]

There are several significant advantages to the research study on alcohol and tobacco use among Punjab's male population. First off, the study's cross-sectional design enables data to be collected at a certain moment in time, providing a picture of the present situation. This methodology facilitates the effective evaluation of prevalence rates by researchers and offers significant insights into the tobacco and alcohol use patterns of Punjabi men.

Second, the study is more precise since it focuses on a particular group of people—males in Punjab—which enables focused actions and suggestions for policy. By focusing on a specific community, the research can identify characteristics unique to that area that influence alcohol and tobacco use, enabling more efficient public health initiatives.

Notwithstanding its merits, it is important to take into account several limitations related to the research study

on the incidence of alcohol and tobacco use among Punjabi men. A plausible constraint may be the dependence on self-reported data, a prevalent practice in survey-based research. A less accurate picture of real drug use may result from participants underreporting or overreporting their usage of alcohol and tobacco products due to memory problems or social desirability bias, which can cause measurement errors.

CONCLUSIONS

In conclusion, the study on the prevalence of alcohol and tobacco use among men in Punjab has limitations even if it provides insightful information on the state of affairs right now. The cross-sectional design and targeted demography of the study, which offers a glimpse of drug use, are its main assets. Nonetheless, there are drawbacks, such as the use of self-reported data, possible sample bias, and a shallow examination of contextual elements. It is advisable to exercise caution when extrapolating results outside of Punjab. To improve the study's validity and depth, future investigations should take into account qualitative techniques and longitudinal approaches. This will help to provide a more complex understanding of alcohol and tobacco use in this particular population.

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