# Tobacco Consumption Pattern among Undergraduate Students in Rajkot and Morbi Districts, Gujarat, India

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**Abstract:**

**Introduction:** Of the various drugs abused, the most widely distributed and commonly used drug in the world is 'Tobacco'. In India, the deaths attributed to tobacco, are expected to rise from 1.4% of all deaths in 1990 to 13.3% by 2020. It is suggested that three factors are associated with young people smoking: peer pressure, following the example of sibling and parents, and employment outside home. **Method:** A cross sectional study was carried out among 2000 students in 20 colleges of different streams of Rajkot and Morbi districts during February-March 2016 using self-administered questionnaire. Proportion of male:female was kept 3:1. **Results:** Prevalence of tobacco consumption among study participants was 8%. Most common tobacco product consumed was Mava/Faki. Mean age of initiation of tobacco consumption was 15.7 years. Influence from friends was commonest factor for initiation of tobacco consumption. Average expenditure on tobacco products was 33 rupees per day. **Conclusion:** Chewing products of tobacco products is consumed more than smoking products. Influence from friends was common reason to initiate consumption of tobacco.

**Key Words :** Addiction, Smoking, Tobacco

## Introduction:

Of the various drugs abused, the most widely distributed and commonly used drug in the world is 'Tobacco'.[1] In India and world, commonest cause of preventable death is tobacco consumption.[2] Tobacco is the hazardous substance which is legally available and heavily promoted.[3] Most of new users of tobacco consumption in India are school children and those who begin to use in their mid-teens.Further, tobacco use may also give these students hypertension, heart disease, recurrent lung infections, asthma, cough and poor grading.[4] The prevalence of tobacco use among adults (15 years and above) is 35%.[5] The National Survey on Drug Use and Health estimates that each day, over 4,000 people under the age of 18 years try their first cigarette.[6]

In India, the deaths attributed to tobacco, are expected to rise from 1.4% of all deaths in 1990 to 13.3% by 2020.[5] It is suggested that three factors are associated with young people smoking: peer pressure, following the example of sibling and parents, and employment outside home. If a child's older sibling and both parents smoke, the child is four times as likely to smoke as one with no smoking model in family.[7]

In Gujarat state, usually students pass their higher secondary school and choose to study in colleges but for that they have to opt different locations from their hometown. So, they are more likely to develop bad habits during this period and intervention is necessary at this age only. So the study was conducted with objective to observe tobacco consumption pattern among undergraduate students. Permission to conduct study was taken from ethical committee.

## Method:

A cross-sectional study was carried out by Community Medicine Department, P. D. U. Government Medical College, Rajkot during February-March 2016 in Rajkot and Morbi Districts, Gujarat. From website of Saurashtra University, list of all colleges of Rajkot and Morbi districts was obtained. For ensuring equal coverage; 10 Government and 10 private colleges have been

**Table 1: Sex wise distribution of students consuming tobacco products (n= 1941)**

| Tobacco Consumption | Male N (%) | Female N (%) | Total N (%) |
|---|---|---|---|
| **Yes** | 160 (11.2) | 0 (0.0) | 160 (8.2) |
| **No** | 1260 (88.8) | 521 (100.0) | 1781 (91.8) |
| **Total** | **1420 (100.0)** | **521 (100.0)** | **1941 (100.0)** |

selected randomly from the list of colleges. An attempt was made to select average 100 students from each college and overall sample size was kept 2000 students from all the 20 colleges. On the basis of more prevalence of tobacco consumption among males, it was attempted to keep proportion of male: female participants to 3:1. Principals of all the colleges were informed well in advance regarding the study and verbal consent was obtained.

The investigation team consisted of faculty, resident doctors and Medical Social Workers (MSWs). All investigators of the survey team were trained about proper technique of carrying out the survey beforehand. Before starting the survey, students were well explained regarding the objective of the survey and how to fill the details in the proforma. Verbal consent from the students was taken for participating in the survey. Few students had not responded to some of the questions, so denominator differs in some of the variables.

**Survey tool:** It was a self-administered questionnaire prepared in English translated to vernacular language (Gujarati) for the easy understanding of the students.

**Data entry and analysis:** Data entry and analysis was done using Microsoft Office Excel 2013 and Epi-Info 7. Proportions and chi-square test were used for analysis. P value <0.05 was considered significant.

**Results:**

A total of 2000 undergraduate students from 20 different colleges were included in the study. Out of all 1407 (70.4%) students were in 15-19 years age group and 28.9% students were in age group of 20-24 years. Male participants were 73.8% and almost equal proportion of students from both rural and urban area also equal students from both government and private colleges.

Out of 2000 students who were included in study, 1941students has responded for the question of tobacco consumption habit. Out of 1941 students only 160 students were consuming tobacco. So Prevalence among students who consumes tobacco was 8.2%. Prevalence in female was 0.0% for tobacco consumption but in male the prevalence was 11.2%. (Table-1)

**Table 2: Type of product and its average daily consumption among students**

| Type of Product (n=160) | No. of students | % |
|---|---|---|
| Mava/Faki | 100 | 62.5 |
| Cigarette | 52 | 32.5 |
| Gutkha | 17 | 10.6 |
| Khaini | 16 | 10.0 |
| Bidi | 14 | 8.8 |

| Age at first time consumption of tobacco (n=52) Mean Age : 15.7 years | No. of students | % |
|---|---|---|
| <10 years | 9 | 5.9 |
| 11-13 years | 22 | 14.5 |
| 14-16 years | 55 | 36.2 |
| 17-19 years | 54 | 35.5 |
| >19 years | 12 | 7.9 |
| **Duration of tobacco consumption (n=52) Average duration =3.6 years** | **No. of students** | **%** |
| <1 years | 42 | 27.6 |
| 1-2 years | 32 | 21.1 |
| 2-3 years | 29 | 19.1 |
| 3-5 years | 20 | 13.2 |
| 5 -7 years | 12 | 7.9 |
| >7 years | 17 | 11.2 |
| **Amount spent on tobacco products (Rupees per day) (n=143) Average expenditure=33 Rupees/day** | **No. of students** | **%** |
| ≤10 | 52 | 36.4 |
| 11-25 | 34 | 23.8 |
| 26-50 | 42 | 29.4 |
| 51-100 | 10 | 7.0 |
| >100 | 5 | 3.5 |
| **Influential factors to initiate consumption (n=151)** | **No. of students** | **%** |
| Friends | 113 | 74.8 |
| Mental stress | 21 | 13.9 |
| Advertisement | 15 | 9.9 |
| Relatives | 6 | 4.0 |
| Father/Brother | 2 | 1.3 |

Table-2 shows that, out of 160 students who were consuming tobacco, most common tobacco product used by the students was Mava/Faki (62.5%), followed by Cigarette (32.5%), Gutkha (10.6%), Khaini (10%) and Bidi (8.8%). Though Bidi consumers were lowest, average consumption per

**Table 3: Distribution of students according to attitude towards habit of quitting tobacco**

| Attitude of students | No. of students | % |
|---|---|---|
| **Want to quit tobacco product (n=146)** | | |
| Yes | 135 | 92.5 |
| No | 11 | 7.5 |
| **Tried to quit tobacco products (n=150)** | | |
| Yes | 124 | 82.7 |
| No | 26 | 17.3 |
| **Reasons to restart using tobacco products (n=56)** | | |
| Addictive Habit | 22 | 39.3 |
| Stress reduction | 16 | 28.6 |
| Friend | 12 | 21.4 |
| Self liking | 4 | 7.1 |
| **Distribution of frequency of quitting tobacco products (n=73)** | | |
| Once | 24 | 32.9 |
| Twice | 28 | 38.4 |
| Thrice | 7 | 9.6 |
| Four time | 2 | 2.7 |
| Five or more times | 12 | 16.4 |

day for Bidi was highest (4.8/day). Other products like Mava/Faki, Cigarette, Gutkha, Khaini were consumed in average 2-3/day quantity. Many students were consuming more than 1 product.Out of 152 students who had responded for question, 71.7% students had used tobacco product first time between 14-19 years of age. 5.9% students had used tobacco products first time before 11 years of age and 14.5% students between 11-13years of age.

Out of 152 participants who were consuming tobacco, majority (27.6%) were consuming since <1 year, followed by 1-<2 year (21.1%), 2-<3 years (19.1%). 17 (11.2%) students were consuming tobacco since >7 years. Mean expenditure on tobacco products was 33 rupees per day. 36.4% students had expenditure ≤10 rupees per day. 10.5% students had >50 rupees per day expenditure on tobacco.

Most common factor to encourage for starting tobacco consumption was friend (74.8%). Second most common reason for tobacco consumption was mental stress (13.9%), because of the belief that tobacco consumption decreases the stress. Some students had given more than 1 response. (Table-2)

As shown in the table-3, out of 146 students, 135 (92.5%) students wanted to quit tobacco products. Out of 150 students, 82.7% students had ever tried to quit tobacco products, but still 17.3% students had never tried to quit tobacco products. As large majority of tobacco consuming students want to quit tobacco, so the de-addiction activity should be strengthened in educational institutes.

Most common reason for restarting was addictive habit (39.3%) which can't be controlled, followed by stress reduction due to tobacco (28.6%)