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## RESEARCH ARTICLE

**KNOWLEDGE, ATTITUDE, PRACTICE AMONG PAAN VENDORS IN KARAD REGION REGARDING HARMFUL EFFECTS, LAWS AND REGULATION REGARDING TOBACCO PRODUCT - “A QUESTIONNAIRE STUDY”**Abhishek Jeture\*<sup>1</sup>, Asmita Ramesh Hamand<sup>2</sup><sup>1</sup>Dental surgeon, School of Dental Sciences, Krishna Vishwa Vidhyapeeth, Karad, Maharashtra, India

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## ABSTRACT

**Background:** Tobacco use is a widespread public health issue in India, significantly contributing to preventable deaths, poverty, and a heavy healthcare burden on families and the nation. Despite existing legislation like the Cigarettes and Other Tobacco Products Act (COTPA) 2003, tobacco products remain easily accessible, especially through local paan vendors. This availability, coupled with a lack of awareness and weak enforcement, perpetuates the problem, especially among youth and in rural regions.

Objective:

To assess the Knowledge, Attitude, and Practices (KAP) of paan vendors in the Karad region regarding the harmful effects of tobacco and the laws regulating its sale and distribution.

**Methodology:** A cross-sectional, questionnaire-based study was conducted among 100 paan vendors from both urban and rural areas of Karad using convenience sampling. The questionnaire, comprising 15 pre-tested questions translated into Marathi, assessed demographic data, knowledge, attitudes, and practices related to tobacco and relevant laws. Data were collected via personal interviews and analyzed using SPSS version 23 with descriptive statistics.

**Results:** All participants were aware of the harmful effects of tobacco, yet 75% consumed tobacco themselves. Only 64% knew the legal age for selling tobacco products, and a mere 32% asked minors for age proof. About 31% were unaware that tobacco sales are prohibited within 100 yards of educational institutions. Although 81% knew about legal punishments, most vendors lacked proper licenses and reported no regulatory inspections. Peer pressure and stress were reported as major reasons for tobacco consumption.

**Conclusion:** While awareness of tobacco's health risks is high among paan vendors, adherence to COTPA regulations is lacking due to poor enforcement and negligence by authorities. Most vendors do not follow legal protocols, sell to minors, and continue malpractices such as selling loose tobacco. There is an urgent need for stricter surveillance, enforcement of laws, and community-based awareness programs. Active involvement of all stakeholders, especially government agencies and educational institutions, is essential to mitigate this public health challenge and reduce tobacco-related morbidity and mortality in India.

**Keywords:** Paan Vendors, laws and regulation, TOBACCO

## INTRODUCTION

Tobacco is the common name for species of plant in the genus *Nicotiana* of the family *Solanaceae*, and the general term for any product prepared from the cured leaves of these plants. More than 70 species of tobacco are known, but the chief commercial crop is *N.*

*tabacum*. Tobacco has long been used in the Americas, with some cultivation sites in Mexico dating back to 1400–1000 BC.<sup>1</sup> Tobacco was introduced in India by the Portuguese 400 years ago. Since then tobacco consumption has continued to rise in India. Different types of tobacco products are available in market.

Tobacco contains various chemical compounds for example O-containing compounds (75.70%), followed by the N-containing compounds (12.98%), miscellaneous compounds (10.61%), including the category "Others" at 1.21%), and finally the hydrocarbons (0.71%).<sup>2</sup>

India's Tobacco Board is headquartered in Guntur in the state of Andhra Pradesh.<sup>3</sup> India has 96,865 registered farmers who cultivate tobacco crops<sup>4</sup> and many more who are not registered but illegal cultivate it. In 2010, 3,120 tobacco product manufacturing services were functioning in India. 0.25% of India's cultivated land is used for tobacco production.<sup>5</sup> Since 1947, the Indian government has covertly supported growth in the tobacco industry. India has seven tobacco research centres, situated in TamilNadu, AndhraPradesh, Punjab, Bihar, Mysore, and West Bengal.

The extensiveness of tobacco use is a major public health menace leading to premature deaths, poverty, and healthcare burden to the family and the nation. Tobacco use contributes to poverty by diverting household spending from basic needs such as food and shelter to tobacco. In some countries children from poor households are employed in tobacco farming to boost family income. Various forms of tobacco are used all over the country both in chewable and non-chewable form that is smoking e.g bidi, cigarette, chillum, chutta, dumthi, gudaku, hookah, hookli, kaini, mainpuri tobacco, paan, snuff, zarda. In India, the tobacco industry can be divided into three distinct and profitable sectors: a. bidis, b. smokeless tobacco, c. cigarettes out of which in India the use of smokeless tobacco (ST) is nearly three times as common as smoking. India is known for its diversity of tobacco products. Smokeless tobacco in India remains by far the most prevalent form used (38%) followed by bidis (48%) and cigarettes (14%).<sup>6</sup> Tobacco-related health issues are avertible but still tobacco is the leading cause of mortality for more than 7 million people per year.<sup>7</sup> According to the report of World Health Report, 2002 by WHO, developing countries already account for half of all deaths attributable to tobacco. This proportion will increase to 7 out of 10 by 2025 because prevalence of smoking has been rapidly increasing in many developing and underdeveloped countries even though it is decreasing in high-income countries. If the pattern of smoking all over the globe doesn't change, more than 8 million people a year will die from diseases related to tobacco use by 2030.<sup>8</sup>

Tobacco has deleterious effects on general health as well as on oral health, mostly on the oral mucosa and the periodontal attachment structures of the teeth. The most common oral problems affecting people who consume tobacco are development of white patch on the soft tissue in the mouth (called

smoker's keratosis), poor healing after tooth removal (known as dry socket), tooth loss, poor healing after mouth and gingival surgery, decreased mouth opening, staining of teeth, halitosis, etc. if it continues, leads to precancerous lesions and condition ultimately resulting into various cancers of the oral cavity which today is one of the top three cancers in India, number one among all cancers in men and third highest among female cancers. The single largest cause of preventable death is nothing but the tobacco. These diseases are very common because tobacco and its products are easily available in small roadside shops<sup>9</sup> and for all age groups despite having strict laws and regulation implemented by government of India i.e Cigarettes and other Tobacco Products Act 2003 (COTPA 2003) (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution), to reduce tobacco use.

Hence the present study was carried out to assess the Knowledge, Attitude and Practices (KAP) among Paan Vendors in Karad region regarding the harmful effects and laws & regulations regarding the use and sale tobacco products.

## METHODOLOGY

This study was a cross-sectional questionnaire study. Data was collected in October 2024. The target population for the study comprised 100 paan vendors, who were selected by convenience sampling technique in Karad city.

The questionnaire comprised two sections, where the first included 4 questions related to demographic data. The second section concentrated on 6 questions to assess knowledge, 4 questions to assess attitude, and 5 questions to assess practice regarding the same. Demographic data includes the name and age of the paan vendor, gender, and qualification. Out of 15 questions, 8 questions were binomial i.e. having two options: yes or no type.

In order to attain the highest possible accuracy, participation in this study was voluntary and the questionnaire was anonymous and self-administered because some study subjects refuse to give their demographic detail in the fear of getting arrested or fear of their shop being raided. The participants were informed the importance of answering the questions correctly and were assured of their confidentiality. Data was collected by personal interview.

The questionnaire was written in English and then translated to the local Marathi language and again retranslated into English to test the linguistic validity. Most of the study participants were illiterate or partially literate. For such subjects, one assistant was employed to explain the questionnaire in the regional language.

Approval was obtained from the Institutional

Ethics Committee prior to onset of the study and after designing the protocol and questionnaire (058/2024-2025). The respondents were informed about the purpose of the study using information sheets written in English and Marathi. In each case, signing or thumb print the consent form was a prerequisite that affirmed their participation in the study based on informed consent. The respondents were also informed that their participation was voluntary, and they could stop their participation at any stage in case they felt any question was infringing on their privacy. The responses were anonymized to keep all the information confidential.

The descriptive statistics were applied in characterizing the respondents. The data was entered into the Statistical Package for Social Sciences (SPSS) program version 23 by IBM, Armonk, New York, United States for descriptive analysis. The primary methods included frequencies and percentages. Presentation of the results was in tables, charts, and graphs to ease interpretation and facilitate drawing of conclusions.

**RESULTS**

**Demographic finding**

Table 1 illustrates the demographic characteristics of the participants. The study aimed to determine the age distribution of the respondents based on four

quantifications: 20-30 years, 30-40 years, 40-50 years, 50-60 years, 60-70 years.

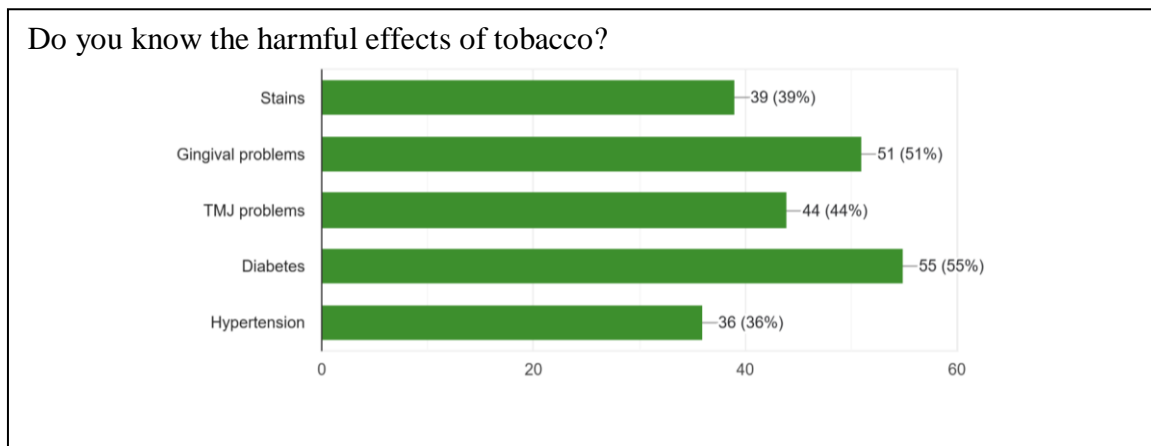
The findings indicate that 40% of participants were aged between 30-40 years and 38% of participants were aged between 40-50 years. Males comprised most of the respondents, 94% while females represented only 6%.

According to Graph no. 1, all the participants were aware about harmful effects of tobacco still 75% were consume tobacco product. Graph no. 2, according to 63% participants habit followed by peer pressure, show-off was the main reason to buy tobacco product. Graph no. 3 showed that 64% of participants were know about legal age to which they can sell tobacco products i.e. 18 years According to participants. Graph no. 4 revealed that 31% participants were not aware about the law about at what distance tobacco shop can be open from educational institutes and hospitals i.e 100 yards. Graph no. 5, the 30% participants don't know the fine being imposed on people smoking in public places. According to 37% of participants, the sale of Tobacco products hampered due to increased taxations by the government. Results also showed that 64% of the paan vendors who were participated in the study were aware about age of selling tobacco still only 32% were asked for age proof to minors. All the participant were aware about ban on tobacco products, but only 81% were known punishments regarding it.

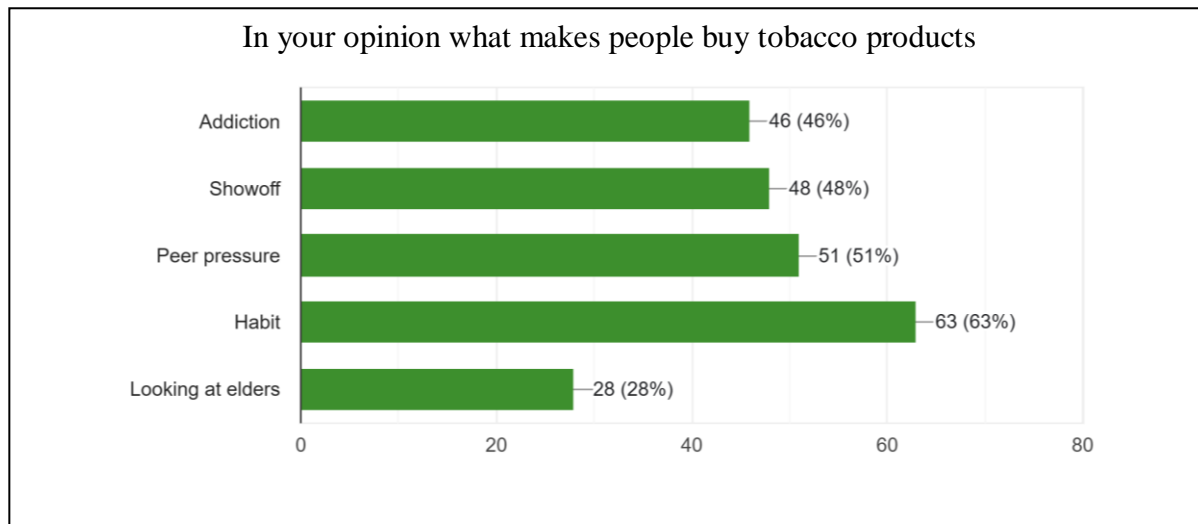
**Table 1. Demographic Data of the Respondents**

Demographic Factors		Frequencies (f) Percentages (%)	
Age	20-30 years	10	10
	30-40 years	40	40
	40-50 years	38	38
	56-60 years	11	11
	60-70 years	1	1
Gender	Female	6	No. 1 6
	Male	94	94

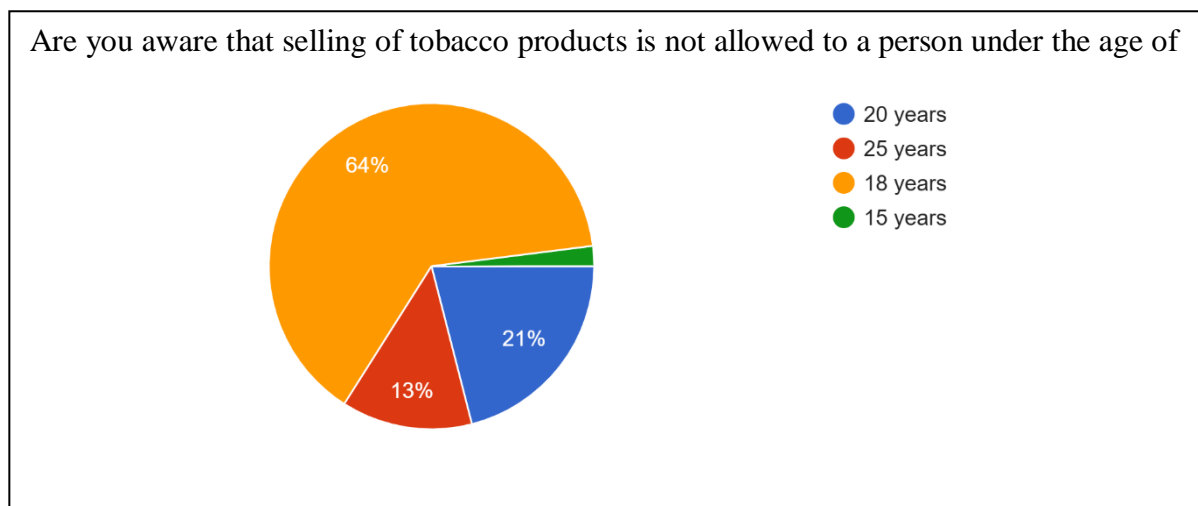
**Graph N1**



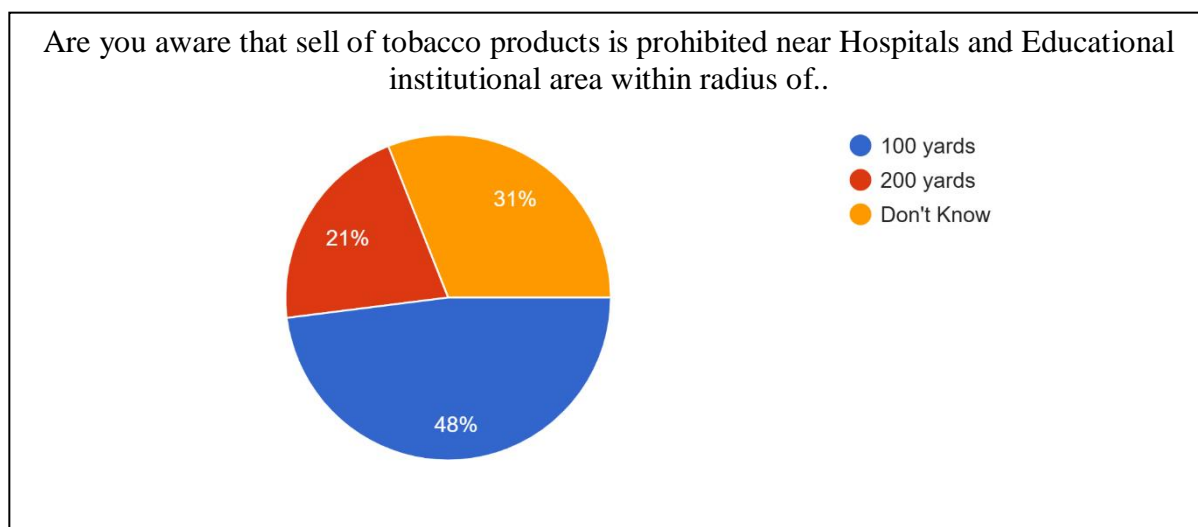
Graph N2



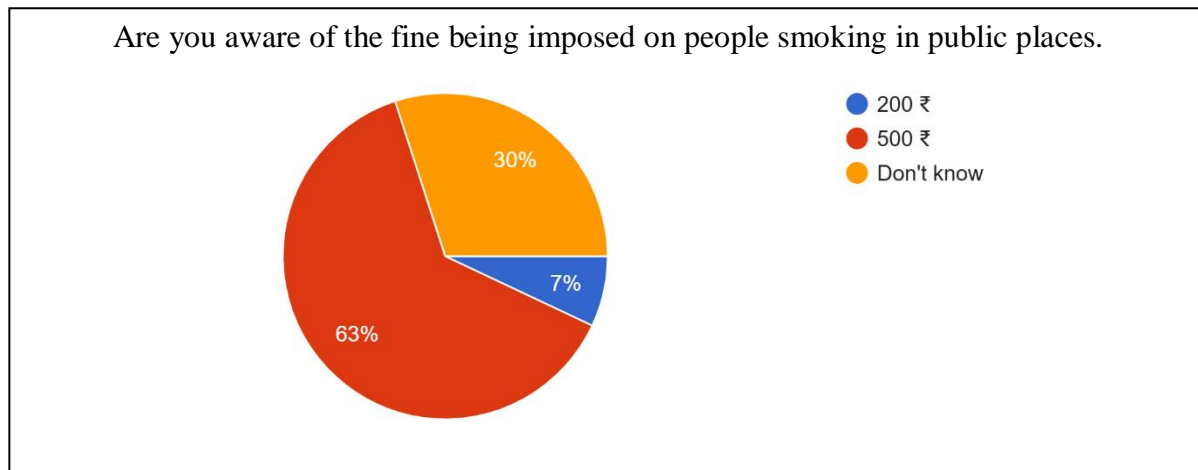
Graph N 3



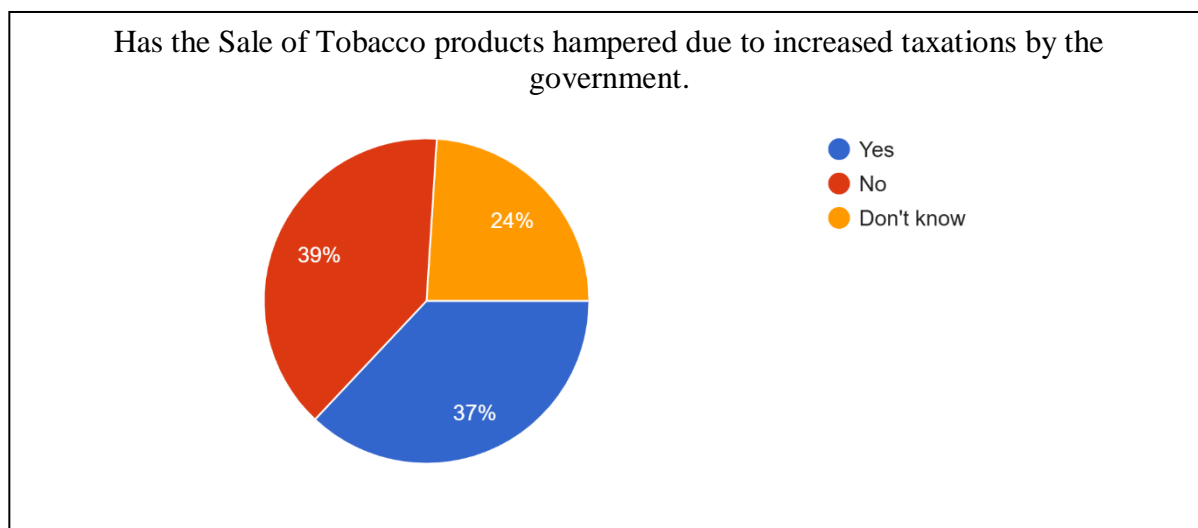
Graph N 4



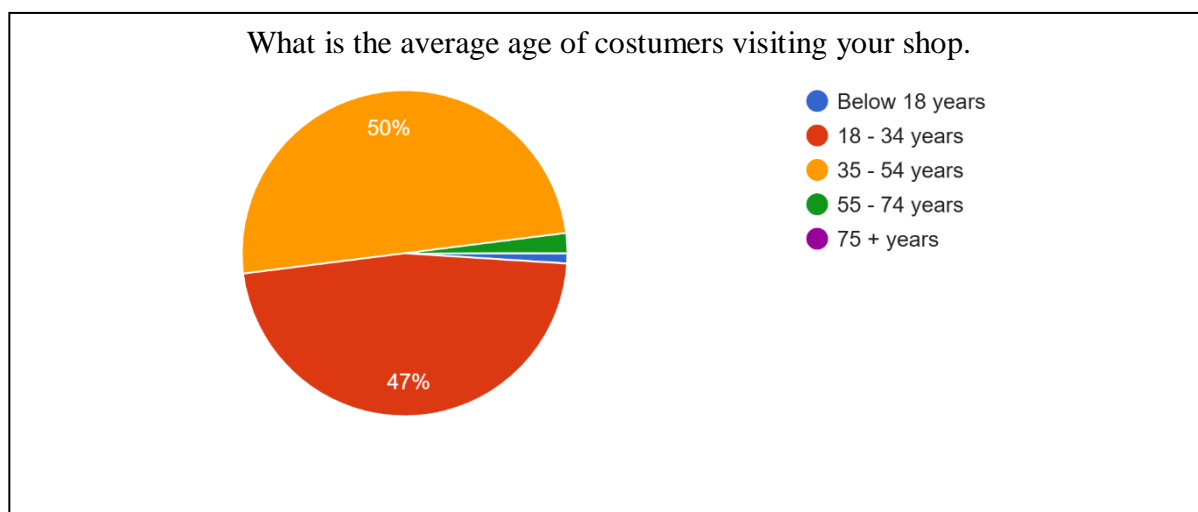
Graph N 5



Graph N 6



Graph N 7



## DISCUSSION

As this was a cross sectional questionnaire study focuses on KAP related to harmful effects, laws and regulation regarding tobacco products in Karad region. 100 paan vendors were included in the study, out of which most of were partially literate. Hence there must be lack of education and awareness regarding the same.

Tobacco leads to several symptoms which cause precancerous lesion and condition which ends up in death of a person. This all happened because of availability of tobacco at minor age, long term use of tobacco, etc. according to this study, none of the participants ask for age proof to minor while selling tobacco, which was given by COTPA 2003. In this study all participant never asked for age proof to minors, which is in line with results of the study conducted by *Arnold H. Levinson, Joseph G.L. Lee, Leonard A. Jason, Joseph R. DiFranza.*<sup>9</sup> According to opinion of 58% participants, stress rendered people to by tobacco products which is similar to study conducted in medical students.<sup>11</sup>

COPTA 2003 prohibits the sale of tobacco products within 100 yards of the outer boundary of educational institutions and bans the advertising of tobacco products at most locations (except point of sale with specific guidelines), the results of this study indicate that 48% participants were aware about this act which is in similarity with the study conducted by *J.L. Elfa, B. Modi, F. Stillman, P. Dave, B. Apelberg* in Ahmedabad.<sup>12</sup>

In current study, there was 37% drop in sale of tobacco products due to increase in taxation as mentioned by respondents. This results are in harmony with some study conducted.<sup>13,14</sup> All participants had knowledge about harmful effects of tobacco.<sup>15</sup> About 47 % people visited to shop were of age between 18-34 years which is similar to the study result showing around 54% people consume tobacco products in age between 15-34 years.<sup>16</sup> The result of this study revealed that 31% participants had no knowledge about the location of shops selling tobacco products within a radius of 100 yards of the educational institutions is not permitted, as per Section 6b of COTPA, 2003.<sup>17</sup> All of the paan vendors reported that there was no visit or inspection of the shop by any regulatory agencies (State FDA or Municipal Corporation Authorities) which indicates an alarming level of negligence on the part of the government.

## CONCLUSION

It can be concluded that, despite all the paan vendors knowing about harmful effects of tobacco products, 75% of paan vendors themselves consumed tobacco in one form or another. Study also point to a grave lacunae in

following of laws and regulation guidelines by the paan vendors in the sale of tobacco, which is evident from the facts that only 63% of the paan vendors poses some sort of licenses to sale and there was no visit by any authorities or government agency for inspection. This resulted in serious malpractices which is evident from the fact that none of the paan vendors ever asked for any age proof to minors and have also sold loose tobacco products in clear violation of guidelines. The attitude of paan vendors was also found to be unfavourable since none of them encouraged anyone to quite their habit. This shows that paan vendors are aware about some laws and regulations of tobacco sale but their attitude and practices point toward a repeated tendency toward these rules and regulation especially in the absences of any government authorities. Thus it can be concluded that there is an urgent need of stricter implementations of the laws by active surveillance & regular inspections by the Government Authorities.

It can also be concluded that despite stringent measures laid down by the existing laws, hardly any of it is being practised or enforced on the ground. There is adequate dissemination of the knowledge of the laws but there is little implementation of the same. There needs to be stricter enforcement by the Government agencies especially in peripheral areas of cities or rural areas. There is also an urgent need to conduct programs in schools & colleges to spread awareness among younger section of the society, regarding the menace of tobacco. However to ensure successful curbing of this menace, there must be active participation from every stakeholder affected by this 'epidemic' of tobacco addiction.

## DECLARATIONS

### Ethical statement

This study was performed in line with the principles of the Declaration of Helsinki.

### Funding

This research did not receive any specific funding.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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