



# Perception towards tobacco consumption and its usage among auto rickshaw drivers of Udupi District, Karnataka, India: A cross-sectional study<sup>☆</sup>

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## ARTICLE INFO

### Keywords:

Adult  
Auto drivers  
Perception  
Tobacco use  
Tobacco smoking  
Tobacco smokeless  
Tobacco products

## ABSTRACT

**Background:** Tobacco usage has become a major public health problem. It is a leading cause of preventable disease and death. The hazard related to tobacco consumption is also increasing. Therefore, the present study aimed to assess the perception towards tobacco consumption and the pattern of usage of tobacco products among auto-rickshaw drivers.

**Methods:** A cross-sectional study was conducted from November 2019 to August 2020 among 161 auto-rickshaw drivers of Udupi Taluk, Karnataka using the purposive sampling technique. A pretested, valid and reliable self-administered questionnaire was used to collect data on usage of tobacco and perception towards tobacco consumption. Data were analysed using SPSS version 16.

**Results:** A total of 99 (62%) auto-rickshaw drivers were users of smoking tobacco products and 38 (24%) were smokeless tobacco products users. The majority 118 (73%) were daily tobacco users and 83 (52%) auto-rickshaw drivers did not use any tobacco products in the work area. Nearly 52 (32%) participants consumed tobacco products due to work pressure. Around 91 (57%) auto-rickshaw drivers were not interested to quit tobacco products. Mean perception score of  $139.81 \pm 11.45$  shows that the majority of them perceive tobacco consumption as hazardous for health.

**Conclusion:** Different forms of tobacco products were used despite knowing the hazardous effect on health. Intervention programs to control tobacco consumption should be planned by the health care professionals and strict enforcement of tobacco control policy is critical to address tobacco-related morbidity and mortality.

## 1. Introduction

Tobacco consumption is a major public health concern across the globe and in India.<sup>1-3</sup> As per a systematic analysis done, around 1.14 billion people were current smokers worldwide, of which 116 million male smokers were from India.<sup>4</sup> It is a leading cause of preventable disease and death globally. The excessive usage of tobacco products is of high concern due to its ill effects around the world. The major emerging health problems in the developing countries are the non-communicable disease viz cancer, diabetes, stroke, respiratory diseases which are related to the tobacco consumption.<sup>5</sup>

Globally, an estimated 7 million people are affected or dying due to tobacco usage. Nearly 1.2 million people are non-smokers being exposed to second-hand smoke. An estimated 1.1 billion smokers live in low middle-income nations, where tobacco-related health problems are heaviest. As tobacco is so addictive, tobacco users find it difficult to quit. This leads to diversion of house hold spending and as a result family starve for basic needs such as food and shelter.<sup>1</sup>

Every third adult in rural areas of India and every fifth adult in urban areas, uses some form of tobacco. In India, 266.8 million adults currently use tobacco products both in smoking or smokeless form, 232.4 million are daily tobacco users and 34.4 million are casual users.<sup>6</sup> In Karnataka,

<sup>☆</sup> "The manuscript has been read and approved by all the authors, that the requirements for authorship as stated earlier in this document have been met, and that each author believes that the manuscript represents honest work, if that information is not provided in another form. The authors declare that the article has not been published previously and is not under consideration of publication elsewhere".

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<https://doi.org/10.1016/j.cegh.2022.101005>

Received 4 December 2021; Received in revised form 25 January 2022; Accepted 3 March 2022

Available online 11 March 2022

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one in three men and one in ten women, are currently using tobacco in some form. The overall prevalence of tobacco use in Karnataka is 22.6%.<sup>7</sup>

Evidences show that the nature of occupation is associated with higher usage of tobacco products.<sup>8</sup> Drivers, daily wage workers are more vulnerable to increased use of tobacco products.<sup>9</sup> Auto-rickshaw's are integral part of transport in India.<sup>10</sup> Auto-rickshaw drivers are likely to have stress in their workplace due to hectic work schedules, late night working hours, financial concerns, long working hours in traffic and highly polluted environment and the freetime they get during working hours makes them vulnerable to increased tobacco consumption.<sup>11-14</sup> A cross-sectional study undertaken among 414 male commercial long-distance drivers, to estimate the cigarette smoking prevalence in Nigeria revealed that current smoking among drivers was 18.9%. Close friends those who smoked, cargo driving, and lower education levels were associated with current smoking.<sup>15</sup>

A descriptive study done to determine the prevalence among 210 auto rickshaw drivers in south Delhi showed that 69% of auto rickshaw drivers were tobacco users; amongst them 48% were both smoking and smokeless tobacco users. Bidi was the most common product 51%. The study finding revealed that both form of tobacco were high in prevalence among adult male auto rickshaw drivers.<sup>14</sup> Higher prevalence of tobacco consumption is seen among auto rickshaw drivers (83.3%) than non-auto rickshaw drivers (63.3%).<sup>13</sup>

The prevalence of usage of tobacco products is still at the higher end globally and nationally. The hazard related to tobacco consumption is also increasing. Hence, it is important to understand the pattern of usage of tobacco products and the perception towards tobacco consumption among the vulnerable population. Thus, the investigators, felt that need to conduct a study among the auto rickshaw drivers to assess the perception towards tobacco consumption and the pattern of usage of tobacco products. This study will provide an insight to the health care decision makers to understand the availability, pattern of usage of different tobacco products and their perception towards tobacco consumption, which would further enable the health care professionals to plan intervention programmes on tobacco cessation among the population.

Keeping this in mind, the present study was undertaken to determine the pattern of usage of tobacco products and the perception towards tobacco consumption among adults using tobacco products.

## 2. Methods

A cross-sectional study was conducted from November 2019 to August 2020 among 161 auto-rickshaw drivers of Udupi District, Karnataka to determine the pattern of usage of tobacco products and assess their perception towards tobacco consumption. Udupi District is divided into seven talukas namely Udupi, Kundapura, Kapu, Byndoor, Bramhavar, Karkala and Hebri. Udupi taluk and auto-rickshaw stands were selected using convenient sampling technique and auto-rickshaw drivers were selected using purposive sampling technique.

The sample size for the study was calculated using the estimation of proportion from a previous study<sup>16</sup> with an absolute error or precision (d) at 5% and 95% level of confidence. Hence, the sample size of 161 autorickshaw drivers were included in the study. Auto-rickshaw drivers between the age of 20 and 60 years who were consuming any of the smoking or smokeless tobacco products, who were available during data collection and willing to participate were included in the study.

Data were collected using structured valid, reliable and pretested questionnaires. A screening tool for tobacco usage was used to screen the participants for the study. Background proforma was used to collect the sample characteristics. Tobacco usage questionnaire was used to determine the usage of tobacco under four areas namely: tobacco use, tobacco forms, peer influence or pressure and smoking cessation. Test and retest method was done to establish the reliability ( $r = 0.99$ ) and the tool was found to be reliable. Perception towards tobacco consumption

was assessed using a five-point Likert scale on perception towards tobacco consumption. Under four categories: opinion on usage, personal factor, peer pressure and effect on cessation. The highest score was 160 and the lowest score was 32. The scale has a five-point rating from 1 to 5, where 1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, 5 = strongly agree. Cronbach's alpha was used to check the internal consistency and the tool was found to be reliable ( $r = 0.87$ ). Language validity was established after the translation of the tool to the local language i.e, Kannada.

Formal administrative permissions were taken from the concerned authorities. Approval from the Institutional Ethical Committee and CTIRI registration (CTIRI/2020/03/024218) was obtained before the commencement of the study. After screening for eligibility, the data were collected from the eligible autorickshaw drivers who met the inclusion criteria. The purpose of the study was explained and informed consent was taken from the study participants. Data were collected using the self-administered questionnaires. The data was analysed using SPSS version 16 using descriptive statistics.

## 3. Results

A total of 247 auto-rickshaw drivers were screened for eligibility, of which 168 (68.01%) were the eligible participants who were consuming tobacco products and 79 did not meet the inclusion criteria. Among the eligible 168 participants, 7 declined to participate. Hence, a total of 161 samples were included in the study.

### 3.1. Sample characteristics

Of the 161 samples, all were males and 64 (40%) participants had a higher primary level of education. Most of the 92 (57%) auto-rickshaw drivers belonged to the age of 20–40 years and 69 (43%) were in the age group of  $\geq 40$ –60 years. The majority of the auto-rickshaw drivers 104 (65%) belonged to the hindu religion and 88 (55%) were non-vegetarians. Most of the auto drivers 76 (47%) were from nuclear and joint family respectively and 67 (46%) had income between Rs.10, 000 to 15,000 per month. The majority 136 (85%) family members of the auto-rickshaw drivers were not using any type of tobacco products and 97 (60%) had 15 years of experience in driving auto-rickshaw (Table 1).

### 3.2. Usage of tobacco products

The results of the study revealed that 99 (62%) of the auto-rickshaw drivers were using smoking tobacco products like bidi, cigarette, hookah; 38 (24%) were consuming smokeless tobacco products like tobacco leaf, khaini, kharra and 24 (15%) were using both smoking and smokeless tobacco products. Among 62 smokeless tobacco users, 34 auto-rickshaw drivers used chewing tobacco products, 20 used snuffing and 8 used both smokeless forms. Among the 123 smoking tobacco users, 35% of them preferred using manufactured cigarettes. The majority of the auto-rickshaw drivers 73% were daily tobacco users.

Most of the auto-rickshaw drivers 47% started using tobacco products since adolescence. Around 83 (52%) auto-rickshaw drivers did not use any type of tobacco products in the work area. The majority of them 124 (77%) did not use any type of tobacco products before going to sleep and 148 (92%) did not wake up during the night for consuming tobacco products. One-third 32% of the auto-rickshaw drivers accepted that were addicted to the use of tobacco products and only 43% of the auto-rickshaw drivers were interested to quit the tobacco products (Table 2).

### 3.3. Perception towards tobacco consumption

The majority of auto-rickshaw drivers had a higher score with an overall mean value of  $139.81 \pm 11.45$  which shows that the majority of them perceive tobacco consumption as hazardous for health. The higher the score for the perception of tobacco usage, the auto-rickshaw drivers

**Table 1**  
Frequency and percentage distribution of sample characteristics (n = 161).

Sample Characteristics	f (%)
<b>Education</b>	
Primary	47 (29.2)
Higher primary	64 (39.8)
High school	34 (21.1)
PUC	14 (8.7)
Graduate/Diploma	2 (1.2)
<b>Religion</b>	
Hindu	104 (64.6)
Christian	41 (25.5)
Muslim	14 (8.7)
Others	2 (1.2)
<b>Place of residence</b>	
Rural	71 (44.1)
Urban	90 (55.9)
<b>Marital status</b>	
Married	136 (84.5)
Unmarried	23 (14.3)
Divorced	2 (1.2)
<b>Type of family</b>	
Nuclear	76 (47.2)
Joint	76 (47.2)
Extended	9 (5.6)
<b>Monthly family income (in Rupees)</b>	
≤5000	6 (3.7)
5001–10,000	36 (22.4)
10001–15000	67 (46.1)
15001–20000	41 (25.5)
More than 20,000	11 (6.8)
<b>Previous experience of participating in any workshop or survey related to tobacco</b>	
Yes	30 (18.6)
No	131 (81.4)
<b>Part-time work along with auto driving</b>	
Yes	10 (6.2)
No	151 (93.8)
<b>Experience do you have in driving auto-rickshaw</b>	
<15	97 (60.2)
≥15–35	61 (37.9)
>35	3 (1.9)

perceive that tobacco consumption is hazardous to health; whereas the lower score suggests they don't perceive tobacco consumption as hazardous to health. Almost all the auto-rickshaw drivers 160 (99%) strongly perceive tobacco consumption as hazardous to health. Auto-rickshaw drivers perceive their own opinion on personal usage of tobacco as the most important factor with a maximum score of 69 and minimum 23 and perceive peer pressure as least important with a maximum score of 30 and minimum 12 with a mean value of  $22.1 \pm 2.56$  (Table 3).

Further, item-wise description of perception towards tobacco consumption among auto-rickshaw drivers was analysed. Majority 124 (77%) of the auto-rickshaw drivers perceive tobacco consumption is not good for health and they admit that by rating strongly disagree. The majority 115 (71%) of the auto-rickshaw drivers strongly disagree that they are unable to work without smoking/using tobacco products for few hours, whereas 87 (54%) strongly agree that even if their friends suggest them to continue the consumption of tobacco products, they will avoid their words. More than two-third 130 (81%) of the auto-rickshaw drivers strongly disagree that friends are the temptation for them to consume tobacco products. Most of the auto-rickshaw drivers 127 (79%) thought of quitting tobacco products and 69 (43%) strongly agree that even though they are addicted, they are ready to withdraw from tobacco consumption (Table 4).

#### 4. Discussion

Globally, an estimated 8 million people are affected each year due to the usage of tobacco products. More than 80% of users of tobacco

**Table 2**  
Frequency and Percentage Distribution of Usage of tobacco products by auto-rickshaw drivers (n = 161).

Variables – Usage of tobacco products	n (%)
<b>Frequency of usage of tobacco products</b>	
Daily	118 (73.3)
Often	31 (19.3)
Occasionally	12 (7.5)
<b>Type of tobacco products used</b>	
Smoking	99 (61.5)
Smokeless	38 (23.6)
Both	24 (14.9)
<b>Years of smoking (n = 123)</b>	
1 - 4	17 (13.82)
5 - 9	42 (34.14)
10 -15	33 (26.82)
>15	31 (25.20)
<b>Average time of smoking cigarettes per day (n = 123)</b>	
<5 times	30 (24.4)
6 - 15	82 (66.7)
>20	11 (8.9)
<b>Most preferred smoking tobacco products (n = 123)</b>	
Manufactured cigarettes	56 (34.8)
Pipe full of tobacco	31 (19.3)
Cigars	13 (8.1)
Hookah	2 (1.2)
Hand-rolled cigarettes (beedi)	21 (13)
<b>Time of usage of tobacco products after waking up</b>	
<5 min	8 (5)
6–10 min	32 (19.9)
11–30 min	43 (26.7)
31–60 min	32 (19.9)
>1 h	46 (28.6)
<b>Time of the day the tobacco products (smoke/chew/snuff) are used more frequently</b>	
Morning	22 (13.7)
Afternoon	76 (47.2)
Evening	55 (34.5)
Night	8 (5)
<b>Age of start of taking tobacco products for the first time</b>	
During childhood	15 (9.3)
Adolescence	76 (47.2)
Adulthood	69 (42.9)
Elderly	1 (6)
<b>Use tobacco products</b>	
- as part of the routine	51 (31.7)
- to give the energy to work	47 (29.2)
- to reduce work pressure	52 (32.34)
- to reduce peer pressure	23 (14.3)
- as it is readily available in the market	102 (63.4)
- because it is cheap	68 (42.2)
- because of addiction to it	52 (32.3)
- for a pleasant taste	30 (18.6)
- due to familial distress	51 (31.7)
- to impress others	40 (24.8)
- due to temptation from family members	33 (20.5)
Any situation made you feel nervous for not getting tobacco	61 (37.9)
Use of tobacco products due to the influence of advertisement and media	29 (18)
Use tobacco products due to belief in custom or ritual purpose	43 (26.7)
Use tobacco products by mixing with some other form of substances	
Yes	35 (21.7)
No	126 (78.3)
If 'Yes', specify the name of the product	
Weed	14 (8.6)
Pan masala	1 (0.6)
Raw bhang	2 (1.2)
Not mentioned	18 (0)
Ever used any over-the-counter medication to help quit smoking	
Tried	30 (18.6)
Never tried	116 (72)
<b>Reason for use of tobacco products</b>	
Mental depression	28 (17.4)
Unhealthy family relation	33 (20.5)
Academic problem	19 (11.8)
Peer pressure	15 (9.3)
Curiosity	23 (14.3)

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**Table 2 (continued)**

Variables – Usage of tobacco products	n (%)
Work stress	42 (26.1)
No reason	1 (0.6)
Interested to quit tobacco products	
Yes	70 (43)
No	91 (57)

**Table 3**

Perception towards tobacco consumption (n = 161).

Areas	Mean (±SD)	Minimum	Maximum
Usage on tobacco	48.26 (4.72)	23	69
Personnel factor	34.17 (3.64)	16	44
Peer pressure	22.1 (2.56)	12	30
Effect on cessation	35.43 (3.71)	20	49
Total	139.81 (11.45)	78	157

\*SD = standard deviation.

products live in low-middle income countries. Usage of tobacco products has become so addictive and the continuous behavior makes it difficult to curb.<sup>1</sup>

The present study finding shows that 73% of auto-rickshaw drivers were daily tobacco users. Similar findings were observed in a study conducted by Kaul, Gupta, Sarkar, Ahsan, & Singh,<sup>13</sup> in New Delhi among auto-rickshaw drivers which revealed that 80% were routine tobacco users. Another prevalence survey conducted in Nepal showed that 81.7% of them were current tobacco users.<sup>17</sup> This shows that an increased number of auto-rickshaw drivers consume tobacco products irrespective of the region to which they belong.

Smoking tobacco products were used by 99 (61.5%) whereas, smokeless tobacco products were consumed by 38 (23.6%) of auto-rickshaw drivers in the present study. Nearly 24 (14.9%) auto drivers were using both smoking and smokeless tobacco products. A cross-sectional study conducted by Arora, Kaur, Khokar, & Jindal<sup>14</sup> in South Delhi supported the present study which showed that 22% were smokers and 24% were chewers. Another study conducted by Mutti, Reid, Gupta, Pednekar, Dhumal, Nargis, Hammond<sup>18</sup> showed that 20.4% of the overall population were mixed users. This depicts that the percentage of autorickshaw drivers using smoking and smokeless tobacco products are almost similar in different geographical locations.

Peer pressure was one of the reasons for the usage of tobacco products as mentioned by 23 (14%) of participants in the present study. These findings were comparable with a study conducted in Nepal which showed that 31% of participants gave the reason that initiation of tobacco products was due to peer pressure.<sup>17</sup> This shows the influence of peers in the usage of tobacco products.

Manufactured cigarettes were preferred by most of the participants 56 (34.8%) in the present study. These findings were contradicted by a study conducted in South Delhi which showed that bidi was the most common form of tobacco use.<sup>14</sup>

The present study findings show that majority of auto-rickshaws 99% perceived that smoking is hazardous for health. Similar findings are reported in a study conducted by Aryal, Petzold, and Krettek<sup>19</sup> in Nepal to determine the perceived risk and benefit of cigarette smoking. The study found that 70% perceived smoking causes physical risk, which shows that majority of the participants are aware about the illeffects of tobacco consumption. .

A study conducted in India by Mullapudi, Britton, Kulkarni & Kamath<sup>20</sup> reported that 70% participants won't start any type of tobacco products because of pictorial or health warning which was comparable to the present study findings that 132 (82%) auto rickshaw drivers did not start or use tobacco products due to the mass media or advisement.

The present study findings showed that most 52 (32%) of the auto-rickshaw drivers perceived that they used tobacco products due to

**Table 4**

Item wise Description of Perception towards Tobacco Consumption in Frequency and Percentage (n = 161).

Variables	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Opinion on usage	n (%)	n (%)	n(%)	n (%)	n (%)
Tobacco consumption is good for my health.	–	–	5 (3.1)	32 (19.9)	124 (77)
Tobacco consumption/ smoking helps me to forget problems.	–	2 (1.2)	10 (6.2)	54 (33.5)	95 (59)
I am ready to do anything to get tobacco products.	–	1 (0.6)	10 (6.2)	53 (32.9)	97 (60.2)
Tobacco consumption reduce my nervousness.	–	2 (1.2)	25 (15.5)	53 (32.9)	81 (50.3)
Use of tobacco products helps me to make more friends.	–	1 (0.6)	7 (4.3)	57 (35.4)	96 (59.6)
Bad mood encourages me for tobacco consumption.	–	1 (0.6)	15 (9.3)	78 (48.4)	67 (41.6)
Easy access to tobacco products encourages the consumption.	–	1 (0.6)	17 (10.6)	80 (49.7)	63 (39.1)
Tobacco consumption makes me energetic	2 (1.2)	–	17 (10.6)	67 (41.6)	75 (46.6)
It is difficult to quit tobacco products as I started consuming it.	1 (0.6)	2 (1.2)	10 (6.2)	49 (30.4)	99 (61.5)
Lack of awareness on hazards of tobacco products promotes its usage.	44 (27.3)	90 (55.9)	18 (11.2)	5 (3.1)	4 (2.5)
Even though health personnel advise me to stop tobacco products, I may not be able to stop.	–	6 (3.7)	19 (11.8)	68 (42.2)	68 (42.2)
Variables	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Personal factors	n (%)	n (%)	n(%)	n (%)	n (%)
I am not able to work without smoking/using tobacco products for a few hours.	–	2 (1.2)	8 (5)	36 (22.4)	115 (71.4)
The idea of not consuming any tobacco products makes me stressed.	–	2 (1.2)	14 (8.7)	65 (40.4)	80 (49.7)
Before going out, I always make sure that I have tobacco products with me.	2 (1.2)	2 (1.2)	25 (15.5)	49 (30.4)	83 (51.6)
I am not that dependent on tobacco products.	67 (41.6)	71 (44.1)	16 (9.9)	3 (1.9)	4 (2.5)
	1 (0.6)	2 (1.2)	21 (13)	77 (47.8)	67 (37.3)

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Table 4 (continued)

Variables	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Opinion on usage	n (%)	n (%)	n(%)	n (%)	n (%)
I feel happy if someone offers me tobacco products.	–	2 (1.2)	29 (18)	76 (42.2)	54 (33.5)
Temptation to buy tobacco products, prevents me from quitting it.	1 (0.6)	2 (1.2)	19 (11.8)	77 (47.8)	62 (38.5)
I smoke/consume tobacco products despite of knowing the fact that it is risky for my health.	50 (31.1)	87 (54)	15 (9.3)	2 (1.2)	7 (4.3)
Smoking/Tobacco consumption does not boost person's reputation in society					
Variables	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Peer Pressure	n (%)	n (%)	n(%)	n (%)	n (%)
Friends are a temptation for me to consume tobacco products.	1 (0.6)	2 (1.2)	8 (5)	20 (12.4)	130 (80.7)
As my friends share tobacco products with me, I am made to smoke or consume tobacco products.	–	1 (0.6)	17 (10.6)	57 (35.4)	86 (53.4)
As friends always arrange tobacco products at party's and other occasion, I am tempted to consume tobacco products.	–	2 (1.2)	29 (18)	52 (32.3)	78 (48.4)
If friends or colleagues suggest me to quit the tobacco products, I will quit.	58 (36)	75 (46.6)	22 (13.7)	4 (2.5)	2 (1.2)
Even if my friends suggest me to continue the consumption of tobacco products, I will avoid their words.	87 (54)	63 (39.1)	9 (5.6)	–	2 (1.2)
Variables	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Effect of cessation	n (%)	n (%)	n(%)	n (%)	n (%)
Many times I think about quitting tobacco products.	127 (78.9)	25 (15.5)	9 (5.6)	–	–
It is better to ban tobacco products or increase the tax, to improve public health.	91 (56.5)	59 (36.6)	8 (5)	3 (1.9)	–
Quitting tobacco helps to promote health.	85 (54.7)	45 (28)	26 (16.1)	1 (0.6)	1 (0.6)
I would like to suggest my friends to stop the habit of tobacco consumption.	82 (50.9)	54 (33.5)	25 (15.5)	–	–
	98 (60.9)		13 (8.1)	–	–

Table 4 (continued)

Variables	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Opinion on usage	n (%)	n (%)	n(%)	n (%)	n (%)
I would like to support the activities of banning of tobacco products.		50 (31.1)			
It is possible to quit tobacco product if there is a will.	75 (46.6)	67 (41.6)	15 (9.3)	3 (1.9)	1 (0.6)
I am an addict, but I am ready to withdraw from this habit.	69 (42.9)	69 (42.9)	19 (11.8)	3 (1.9)	1 (0.6)
Smoking/Tobacco consumption is not at all necessary for me, but still I often use it.	3 (1.9)	6 (3.7)	12 (7.5)	71 (44.1)	69 (42.9)

addiction. A similar study conducted in Spain found that 45% of the participants perceived that they were using tobacco due to habit-addiction which supports the present study.<sup>21</sup>

In spite of stepdown in prevalence in recent years, tobacco related problems are still one of the preventable causes of early death worldwide. Therefore, proper implementation of comprehensive tobacco prevention and control programmes are very necessary to prevent tobacco related problems, both at individual and community level, to reduce smoking initiation and use among adults and youths. The study recommended that population based coordinated interventions need to be implemented in order to halt the initiation of tobacco use.<sup>22</sup>

The data for the present study was collected by self-administered questionnaires using self-report of the participants and not directly observed. This limits the generalization of the study.

The present study provides a baseline data and insight to the health care decision makers to understand the availability, usage pattern and the perception towards tobacco consumption, which would further enable the health care professionals to plan intervention programmes on tobacco cessation among the population.

### 5. Conclusion

The study findings conclude stating that the usage of tobacco products is increasing in people especially in younger population. Tobacco consumption is the biggest public health problem. Auto rickshaw drivers in spite of knowing the hazardous effect of tobacco, use different forms of tobacco products (smoking and smokeless). Only a smaller number of drivers are willing to quit the tobacco products. Thus, intervention programs to control tobacco consumption should be planned by the health care professionals and strict enforcement of tobacco control policy is critical to address the tobacco-related morbidity and mortality.

### Financial support and sponsorship

Nil.

### Declaration of competing interest

There are no conflicts of interest.

### References

1 World Health Organization (WHO). In: *Tobacco*. Geneva: World Health Organization; 26 July 2021. Available from: <https://www.who.int/news-room/fact-sheets/detail/tobacco>. Accessed November 26, 2021.

- 2 World Health Organization (WHO). In: *WHO Global Report on Trends in Prevalence of Tobacco Use 2000–2025*. third ed. Geneva: World Health Organization; 18 December 2019. Available from: <https://www.who.int/publications/i/item/who-global-report-on-trends-in-prevalence-of-tobacco-use-2000-2025-third-edition>. Accessed January 23, 2022.
- 3 Kaur J, Jain DC. Tobacco control policies in India: implementation and challenges. *Indian J Publ Health*. 2011;55(3):220–227. <https://doi.org/10.4103/0019-557X.89941>.
- 4 GBD 2019 Tobacco Collaborators. Spatial, temporal, and demographic patterns in prevalence of smoking tobacco use and attributable disease burden in 204 countries and territories, 1990–2019: a systematic analysis from the Global Burden of Disease Study 2019. *Lancet*. 2021;397(10292):2337–2360. [https://doi.org/10.1016/S0140-6736\(21\)01169-7](https://doi.org/10.1016/S0140-6736(21)01169-7).
- 5 Ministry of Health and Family Welfare, Government of India. Effect of tobacco on health. Available from <https://www.nhp.gov.in/effects-of-tobacco-on-health.pg>. Accessed November 26, 2021.
- 6 Tata Institute of Social Sciences (TISS), Mumbai and Ministry of Health and Family Welfare, Government of India. Global adult tobacco survey GATS 2 India 2016–17 report. Available at: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.pdf>. Accessed November 26, 2021.
- 7 Institute of Public Health, I.P.H. Global adult tobacco survey – Karnataka. Available from: <https://iphindia.org/global-adult-tobacco-survey-karnataka/>; 2018. Accessed November 26, 2021.
- 8 Ayyappa G, Kunte R, Yadav AK, Basannar DR. Is occupation the "driving force" for tobacco consumption? A cross-sectional study to assess prevalence, patterns, and attitude towards tobacco use among long-distance bus drivers and conductors in Western Maharashtra. *Ind Psychiatr J*. Jul-Dec 2019;28(2):237–241. <https://doi.org/10.4103/ipj.ipj.72.20>.
- 9 Singhal A, Agrawal P, Agrawal VK. Prevalence and determinants of tobacco use and oral sub mucous fibrosis in auto-rickshaw drivers at Bareilly, Uttar Pradesh, India. *Int Surg J*. Apr 2018;5(4):1449–1453. <https://doi.org/10.18203/2349-2902.isj20181128>.
- 10 Tigari H, Santhosh HB. Socio-economic background of AutoRickshaw drivers. *Shanlax Int J Manag*. 2020;8(1):48–53. <https://doi.org/10.34293/management.v8i1.3245>.
- 11 Subendiran S. Socio economic and lifestyle problems of Auto- drivers in Palani. *Int J Adv Res Computer Sci Manag Stud*. 2014;2(12):165–172.
- 12 Ray NK, Awate R, Narasannavar A, et al. A cross-sectional study on pattern of tobacco consumption and effects on health among auto rickshaw drivers in Nehru nagar, Belagavi city. *Int J Healthc Biomed Res*. July 2017;5(4):102–108. <http://ijhbr.com/pdf/July%202017%20102-108.pdf>.
- 13 Kaul S, Gupta AK, Sarkar T, Ahsan SK, Singh NP. Substance abuse and depression among auto-rickshaw drivers: a study from the national capital region of Delhi, India. *Indian J Med Specialities*. 2019;10(3):143–148. <https://doi.org/10.4103/IJMS.IJMS.64.19>.
- 14 Arora P, Kaur G, Khokar A, Jindal AV. Prevalence and pattern of tobacco use among auto rickshaw drivers of South Delhi: a cross-sectional study. *Int J Community Med Publ Health (IJCMPH)*. 2018;5(8):3464–3468. <https://doi.org/10.18203/2394-6040.ijcmph20183082>.
- 15 Ozoh OB, Akanbi MO, Amadi CE, Vollmer W, Bruce N. The prevalence of and factors associated with tobacco smoking behavior among long-distance drivers in Lagos, Nigeria. *Afr Health Sci*. 2017;17(3):886–895. <https://doi.org/10.4314/ahs.v17i3.32>.
- 16 Rewar S, Poonia N, Singh NK. A cross-sectional study on tobacco consumption pattern among auto rickshaw drivers in Jaipur city, Rajasthan. *IOSR J Humanit Soc Sci*. 2013;14(3):88–91. Available at: <https://www.iosrjournals.org/iosr-jhss/papers/Vol14-issue3/O01438891.pdf>.
- 17 Saroj G, Sonai C, Kumar YA, Kumar YA, Ram SS, Dhar BD. Tobacco use among long route bus drivers and staffs of Dharan Eastern Nepal a KAP study. *Sci J Publ Health*. 2017;5(4):301–306. <https://doi.org/10.11648/j.sjph.20170504.14>.
- 18 Mutti S, Reid JL, Gupta PC, et al. Patterns of use and perceptions of harm of smokeless tobacco in Navi Mumbai, India and Dhaka, Bangladesh. *Indian J Community Med*. 2016;41(4):280–287. <https://doi.org/10.4103/0970-0218.193337>.
- 19 Aryal UR, Petzold M, Krettek A. Perceived risks and benefits of cigarette smoking among Nepalese adolescents: a population-based cross-sectional study. *BMC Publ Health*. 2013;13:187. <https://doi.org/10.1186/1471-2458-13-187>.
- 20 Mullapudi S, Britton J, Kulkarni MM, Moodie C, Kamath VG, Kamath A. A pilot study to assess compliance and impact of health warnings on tobacco products in the Udipi District of Karnataka State, India. *Tob Induc Dis*. 2019;17(May):45. <https://doi.org/10.18332/tid/105894>.
- 21 Alonso F, Esteban C, Useche SA, Faus M. Smoking while driving: frequency, motives, perceived risk and punishment. *World J Prev Med*. 2017;5(1):1–9. <https://doi.org/10.12691/jpm-5-1-1>.
- 22 West R. Tobacco smoking: health impact prevalence correlates and interventions. *Psychol Health*. 2017;32(8):1018–1036. <https://doi.org/10.1080/08870446.2017.1325890>.