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Perception of Tobacco Use among School-Going Early Adolescent Children in Udupi District: A Cross-sectional Study

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Abstract

Background: Tobacco use among school-going children is a significant public health concern worldwide. Studies on perception and knowledge about harmful effects of tobacco use among early adolescent children are limited.

Aim: To assess the knowledge, attitude, and perception of tobacco use among rural and urban school-going early adolescent children.

Methods: A cross-sectional study design was used. Using mixed method multi-stage sampling, a sample of 218 eighth grade students were selected randomly using the simple random technique from two government schools (rural and urban schools were chosen purposively), Udupi district, Karnataka. Data were collected using the questionnaire method. The Global Youth Tobacco Survey was used for the data collection. Descriptive statistics were used to express the data and Chi-square test and Fisher's exact test were used to compare the categorical variables.

Results: More than one-third (39%) of middle school children have used tobacco in the past. About 44% of boys felt guilty about their tobacco use. About two percent tried using other forms of tobacco products. Less than 1% of them had used tobacco more than once in the past 30 days. Urban children had significantly more knowledge about the harmful effects of tobacco use ($p = .001$), quitting tobacco ($\chi^2 = 11.6, p = .008$), and reasons for quitting tobacco use was, noticing anti-tobacco messages. More urban children think using tobacco makes boys more attractive ($\chi^2 = 9.07, p = .01$) and girls more attractive ($\chi^2 = 10.80, p = .004$).

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Conflicts of interest

There are no conflicts of interest.

Conclusion: The prevalence of tobacco use was 1.5% among middle-school children in the last month. Urban school children have significantly more knowledge and awareness about the harmful effects of tobacco use than rural students.

Keywords

Adolescent mental health; nicotine use; school social work

Introduction

Tobacco use among adolescents is a significant public health concern worldwide. Most tobacco-related deaths occur in developing countries. More than one-third of adults (35%) use tobacco in India. Among those, about 163.7 million use smokeless tobacco; 68.9 million are smokers, and 42.3 million use both smoking and smokeless tobacco. As a result, nearly 8–9 lakh people die every year in India due to heart and lung diseases related to tobacco use.^[1]

India ranks second in tobacco consumption, third in tobacco production and fourth-largest exporter to 114 countries (217,393 metric tons valued at 843.09 million USD) in 2019–20. About 45.7 million people in India directly or indirectly employed in the tobacco industry in 2021.^[2] Gujarat was the largest tobacco-producing state in India in 2016–2017, accounting for 47%, followed by Andhra Pradesh (22%), Uttar Pradesh (15%), and Karnataka (8%).^[3] Most tobacco products consumed in India are beedis, chewable, and illegal cigarettes. Illegal cigarettes are contraband and counterfeit cigarettes. Contraband cigarettes (genuine products) that are smuggled from abroad without domestic duty paid and sold illegally to evade tax and counterfeit cigarettes are products bearing the trademark of a legal manufacturer without their consent that are produced and sold illegally for lesser price resulting in tax evasion.^[4] Legal cigarette consumption accounted for 9% and other tobacco products constituted 91%. India's tax revenue from tobacco products is Rs. 356 billion, out of which 80% is from legal cigarettes.^[5]

Tobacco use among school children

One in every five boys and one in every ten girls aged between 13 and 15 years use tobacco worldwide. Tobacco use among children varies in the different parts of the world.^[6] Tobacco use among 13–15 year-old children differs from the region to region in India, ranging from 1% to 60%. More school-going children chew different forms of tobacco and chewing tobacco is more prevalent than smoking among children aged 13–15 years.^[7,8] Awareness about risks of tobacco use was more among school-going students.^[9,10] However, about three-fourth of the school-going students were unaware of health hazards and thought tobacco use was harmless.^[11]

In India, there has been 42% decline in tobacco use among 13–15 years old school-going children in the last decade. Tobacco use among school-going children (13–15 years) is 8.5% and lowest in Himachal Pradesh (1.1%) and Karnataka (1.2%). More than one-third of students get exposed to second-hand smoke. Most children using tobacco bought tobacco from a store, pan shop, street vendor, and vending machine. Half of the youth noticed

anti-tobacco messages, few noticed advertisements related to tobacco promotion at the point of sale, and most thought tobacco use is harmful.^[12]

More than 75% of school students who use tobacco preferred mostly chewable forms.^[13] Tobacco use was more among boys when compared to girls.^[6,14,15] Knowledge regarding the harmful use of tobacco was higher among girls and having literate parents. Tobacco use was higher among those students with a history of parental tobacco use.^[16]

Rationale for the study

Studies on perception of tobacco use among early adolescent children are limited. Hence, the present study examined the knowledge, attitude, and perception of tobacco use among early adolescent school-going children in the Udupi district of Karnataka.

Methods

The study used a cross-sectional research design. The study was conducted in Udupi, a coastal district of Karnataka, with unique culture and language. Udupi district has 724 government schools from five educational blocks, namely Brahmavara, Byndoor, Karkala, Kundapura, and Udupi. Two government schools; one school from rural setting in Karkala block and another school from the urban setting in Udupi block were selected using the convenient sampling technique. Eighth grade students were considered as the study population as they were in the early adolescent stage. The study used mixed method multi-stage sampling procedure as shown in flow chart [Figure 1]. Both the schools provide co-education in Kannada medium and are affiliated to State Board Education, Karnataka. The rural school had day-boarding and hostel facilities. Boys and girls studying in the eighth grade were considered for the study. There were 169 eighth grade students studying in three different sections (A, B, and C) from Government Junior School, Bailur, Karkala Taluk, Udupi (Rural), 20 kms away from Manipal, an out-reach area of Department of Psychiatry, Manipal University for school mental health programme. There were 253 eighth grade students studying in five different sections (A, B, C, D, and E) from Government Composite High School, Volakadu, Udupi (Urban Setting) six kms away from Manipal. Out of five sections in urban school; three sections (B, C, D) were selected randomly using the simple random method (lottery method). There were 153 students in the three sections of urban schools. Out of 153 students, 66 children's parents refused consent for the study. Therefore, 87 students were considered for the study in the urban setting. Hence, the total sample size arrived for the study was 218. Students (N = 218) who gave their assent and obtained parental written informed consent were included in the study. Data were collected using the questionnaire method.

Tools used

Global youth tobacco survey (GYTS),^[17] a standard instrument to assess smoking and smokeless tobacco prevalence and information about tobacco use, cessation, second-hand smoke, accessibility and availability, exposure to anti-tobacco information, awareness, knowledge, and attitudes toward tobacco use and its health effects, exposure to media and advertising on tobacco products among the youth aged 13–15 years, globally. It is developed by the World Health Organization, Tobacco Free Initiative, the United Nations

Children's Fund and the Office on Smoking and Health at the Centers for Disease Control and Prevention. It is a school-based survey designed to enhance monitoring of tobacco use among students aged 13–15 years, to implement and evaluate tobacco prevention and control programmes. GYTS is a self-administered questionnaire consists of 56 “core” questions and optional questions designed to gather the data on the following seven domains. (1) knowledge and attitudes of young people toward tobacco use, (2) prevalence of cigarette smoking and other tobacco use among young people, (3) role of the media and advertising in tobacco use, (4) access to tobacco, (5) tobacco-related school curriculum, (6) environmental tobacco smoke, and (7) cessation of tobacco use. These seven domains were the outcome variables of the study. Out of 56 core questions, 30 were culturally suitable for this region. Therefore, 30 questions were considered in the abbreviated GYTS questionnaire. In addition, four item C-cut down, A-annoyed, G-guilt, E- eye-opener (CAGE) questionnaire was modified to elicit tobacco use among school-going children and added to the 30-item GYTS questionnaire. Face validation was done for the modified CAGE questionnaire.

Study procedure

Participation in this survey was entirely voluntary. Students had the right to withdraw from the survey at any time without informing. The information provided by the students was kept confidential and anonymous. The students cannot be identified by their responses. There was no risk involved to the school or students by participating in the survey. Nature and purpose of the study were explained to the school Principal to obtain permission and school children (in a language they can understand). A copy of a translated (Kannada version) questionnaire was given to the school principal and respective class teachers to know what information about tobacco use was collected from the children. Translated tool was back translated and validated by two Kannada speaking psychiatry consultants.

Written informed consent form in the Kannada version was given to children to obtain their parents' consent. Students were given one week time to get consent from parents for the study. Children and their parents who refused assent and consent were excluded from the study. These students were allowed to sit in the classroom as usual during data collection without altering their seating arrangement. Other students were asked to fill the questionnaire without discussing.

Students were debriefed about the questionnaire before filling it, and their doubts were clarified. After the assessment, one hour awareness activity was conducted on harmful effects of tobacco use and dispelled the myths and misconceptions about tobacco use in their respective classroom. The questionnaire requires 30–40 min for completing. Teachers were not present at their respective classrooms during the data collection. The rural school gave permission to collect the data during the last hour of the morning session and the urban school gave permission to collect the data during the last hour of the afternoon session. Students were assured that the information in the filled questionnaire would not be revealed to their teachers or their parents. Students were instructed not to write their names on the questionnaire. There were no incentives provided to the students to participate in the study. The study was conducted from September 2013 to February 2014. The first author collected the data. Descriptive statistics were used to express the continuous and

categorical variables. The Chi-square test was used to compare the outcome variables. Fisher's exact test, Freeman–Halton extension of Fisher's exact test were used when the cells have values less than five or zero, respectively. Kasturba Hospital Institute Ethics Committee (for student research), Manipal Academy of Higher Education approved the study (Ref No: IEC 546/2013).

Results

The mean age of the early adolescents in both rural and urban schools was 13 (± 0.6) years. More than half of the students' (51%) mother tongue was Tulu, Kannada (27%), Konkani and Tamil (7%), Telugu (2%), Urdu (2%), Beary, Lambani, Marathi, and Malayalam (1%) reflecting diverse culture. Boys outnumbered in rural (56%) and urban schools (53%). Most children (80%) were Hindu and 90% belonged to middle socioeconomic status in both the rural and urban schools. There was no significant difference between both the groups regarding age, religion, and socio-economic status.

Table 1 describes the patterns of tobacco use among early adolescents. About 1.5% early adolescent middle school children used tobacco in the last one month. More than one-third (39%) had used tobacco in the past. About three percent of students ever tried using tobacco and two percent usually take less than one cigarette/packet of chewing tobacco. Few (6%) tried other tobacco products such as gutkha and pan parag. Few (15%) students reported a family history of tobacco use. One-third (26%) of them, felt to cut down their tobacco use. More than one-third (37%) of them felt guilty about their tobacco use. Around 14 percent used to get pocket money ranging from Rs.5 to Rs.150/month. Few reported (1%) shopkeepers sold tobacco to them. Very few (3%) had a t-shirt, pen, back pack with a tobacco brand or logo. Few students reported that source of obtaining tobacco was from shop and asking someone to buy for them. More urban school-going students received pocket money than than rural students (33 vs 11). This was statistically significant ($p < .001$).

Table 2 shows the knowledge and attitude toward tobacco use among early adolescents. More urban participants (51%) perceived that it would be difficult to quit once they started using tobacco than their counter parts (36%). This difference was statistically significant ($\chi^2 = 11.6, p = .008$). Most participants (94%) from urban school reported that tobacco use is harmful to health (77% in rural) and smoke from others is harmful (91% vs. 79% in rural school). These differences were statistically significant ($\chi^2 = 11.41, p = .0007$), ($\chi^2 = 5.62, p < .02$). Majority of students in urban schools (96%) and in rural school (92%) reported they will not use tobacco in the next 12 months. Nearly half of the urban participants (49%) perceive that those who use tobacco have more friends compared to rural boys (29%). This difference was statistically significant ($\chi^2 = 9.2, p = .01$). More than one-third (39%) of the urban participants perceive using tobacco makes boys more attractive than rural participants (20%). This difference was statistically significant ($\chi^2 = 9.1, p = .01$). Nearly one-third (29%) of the urban participants perceive that using tobacco makes girls attractive than their counter parts (12%). This difference was statistically significant ($\chi^2 = 10.80, p = .004$). More rural participants (53%) perceive that using tobacco causes weight loss than urban participants (33%). This difference was statistically significant ($\chi^2 = 8.43, p = .02$). More

than 10% of students' reported that their close friends use tobacco. Nearly half of the rural and urban students perceive that people who smoke, lack confidence, and less intelligent.

Table 3 shows that early adolescents' knowledge of tobacco cessation and mass media awareness on tobacco use. Few rural students' (5%) reported that the reason for quitting smoking was to save money and health reason, whereas urban students' (8%) reported that the reason for quitting tobacco was to improve their health ($\chi^2 = 9.64, p = .02$). More urban children (52%) than rural children (33%) see anti-tobacco messages when they go to social gatherings or any sports events ($\chi^2 = 8.23, p = .04$). More urban children (93%) see actors using tobacco in movies and television than rural children (63%) ($\chi^2 = 27.6, p = .001$). More than half of the urban students (57%) reported that the harmful effects of tobacco use were discussed in their family. Nearly half of the students (47%) revealed that someone in class talked about the dangers of tobacco use. More than half of the students reported that there was no discussion in class about why students of their age use tobacco, the effects of tobacco, and no lesson on tobacco and health.

Discussion

We examined knowledge and attitude toward tobacco use among early adolescents in rural and urban schools in Udupi district using a cross-sectional study design with 218 samples. In total, 119 boys and 99 girls participated in the study. The rationale for considering early adolescents for the study was that the mean age of onset of tobacco use ranged from 10 to 13 years.^[6,18–20] The mean age of the participants in our study was 13 years (± 0.6). This finding was consistent with the GYTS-2019. GYTS-4 found that students who participated were between 13–15 years old.^[12] Another study finding was similar to our study, where participants' mean age was 14.8 ($\pm 1.1.3$) years^[11] Early adolescent period is considered to be risk period of tobacco use as the onset of initiation of tobacco use was 10–11.5 years.^[12] Several studies reported that the onset of tobacco use is 13–15 years.^[20–23] At the age of 13 years, nearly half of the students had started smoking, and by 15 years of age, the percentage increased to 75%.^[24] In Kolkata, it was reported that over 65% of adolescents reported tobacco initiation at age of 10 years or earlier.^[22]

Our study showed that boys outnumbered girls in tobacco use. This finding was similar to the previous epidemiological study^[10] and GYTS-4 which reported that a higher number of boys (9.6%) reported current tobacco use than girls (7.4%).^[12] We found that two percent of the children had tried using other forms of tobacco. Earlier studies reported that two to six percent of the children tried other forms of tobacco.^[22,25,27]

In our study, 39% of the students had used tobacco in the past. Previous study reported that 44% of the students had used tobacco in the past,^[25] and another study reported that one-third of the students had used both smoking and smokeless tobacco in the past.^[26]

We found that 1.5% of students used tobacco in the past 30 days. The findings are consistent with the GYTS-2019;^[12] however, the prevalence rate was higher in the national survey (8.5%) compared to our finding. Previous studies reported that few (7%) students currently smoked tobacco, and other few (4%) students used smokeless tobacco; however,

the percentages were significantly lower in GYTS-2019 compared to 2009 (14.6% vs. 8.5%).^[12]

In India, the current use of tobacco among school-going students varies in different regions. The southern states have the lowest rates at less than five percent less than five percent, and the north-eastern states reported more than 20% and in Arunachal Pradesh and Mizoram it is more than 58%.^[12] Several studies found that tobacco use among school-going students ranged from 6% to 58%.^[8–28] We found that more urban children (5%) tried using other forms of tobacco products than rural children (1%). This finding is consistent with previous studies.^[22,25,27]

We found that one percent of the students purchased tobacco from a shop, whereas earlier studies reported more than 30% purchased from a store, a vending a vending machine, asking someone else to buy, borrowing from someone else, taking away from someone, getting it from older persons, and other sources.^[12,31]

In our study, one percent of students who never used tobacco in the past is likely to start using it in the next 12 months. Previous study reported that 14% of them were likely to initiate tobacco use in the next 12 months.^[29] Our study found that more than half of the students perceive that difficulties in quitting tobacco once they started using it. Previous study reported similar finding that one-fourth thought it is difficult to quit once they start smoking.^[12]

A study conducted in Karnataka reported that tobacco use was predominantly more in male and urban children (6.8%) than rural children (3.4%).^[21] Urban school-going students were more likely to smoke than rural students.^[22,29] Our study shows that 13% of urban students and 11% of rural students have few friends who use tobacco; these findings are similar to a previous study,^[23] suggesting that peer pressure might be an important factor for the initiation of tobacco use among school-going students.^[28,33] Parental tobacco use,^[23,26,33,34] followed by movie actors, advertisements, and media are important factors the initiation of tobacco use among early adolescents.^[18,19,24–27] In our study, 39% of urban and 20% of rural boys and 29% of urban and 12% of rural girls thought that the use of tobacco looked more appealing; this finding was consistent with previous studies.^[12,21,22,29] Our study revealed that 15% of the students have a family history of tobacco use. This finding is similar to earlier studies.^[19]

In our study, more than half of the students reported that the dangers of tobacco use were discussed in class. The previous studies' findings support this finding.^[18,22] Previous studies found that one-third of children reported that there was discussion about tobacco use in schools.^[6,21] In Punjab, 76% of the students in the 8th–10th grades learned about the dangers of smoking, whereas in Bihar, Only three percent of students were aware of the harmful effects of tobacco.^[30] Teachers discussed the dangers of tobacco use, risk factors, and why children smoke.^[22] There was a contrast in finding that most rural students reported no discussion about the health hazards of tobacco use in class during the past year.^[16,32]

Studies reported that most students knew the harmful effects of tobacco.^[10,11,16] Sources of information for tobacco products were television, newspapers, and movies.^[18,19,21,24] We

found that more urban students perceived that tobacco use is harmful to health, difficult to quit once they started using tobacco, and tobacco smoke from other people is harmful. They also had better knowledge about the harmful effects of tobacco use and more negative attitudes toward tobacco use than rural students. This finding was consistent with previous research.^[21,35]

School teachers play a vital role in creating the awareness among children about the harmful effects of tobacco use. Parents play a crucial role in educating their children about the harmful consequences of tobacco use and shaping their negative attitudes towards tobacco use. The harmful effects of tobacco use should be incorporated into school curricula, starting right from primary school onwards. The minimum age at initiation of tobacco use among early adolescents ranged from 9–10 years. The present study revealed knowledge about tobacco use, cessation, second-hand smoke, access and availability, exposure to anti-tobacco information, and awareness about the harmful effects of tobacco use among middle-school children.

In movies, the portrayal of tobacco use is more often shown than the anti-tobacco message, which comes twice before and after intermission. On television, smoking scenes come along with a display of anti-tobacco messages. The Censor Board must have zero tolerance for depicting tobacco use in movies.

The continued monitoring and surveillance of all forms of tobacco use is an essential aspect of school health policy. The comprehensive and sustained implementation of evidence-based tobacco control strategies is essential for reducing all the forms of tobacco use among school children.

Limitations

The study was limited to eighth grade school-going students and early adolescents. The study selected only two government schools that might have had selection bias, as private schools were not considered for the study. The study findings cannot be generalized to other districts of Karnataka due to convenient sampling technique used for selecting schools and for choosing single district. The study could have had information bias, as students may be reluctant to reveal their tobacco use status. Therefore, students could have reported socially desirable responses in the questionnaire.

Conclusion

The prevalence of tobacco use among early adolescents was 1.5% in the last month. Urban school students have significantly more knowledge, and awareness about the harmful effects of tobacco use than rural school students. Rural school students need more awareness programs about the harmful effects of tobacco use.

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Data availability

The data underlying this article will be shared on reasonable request to the corresponding author.

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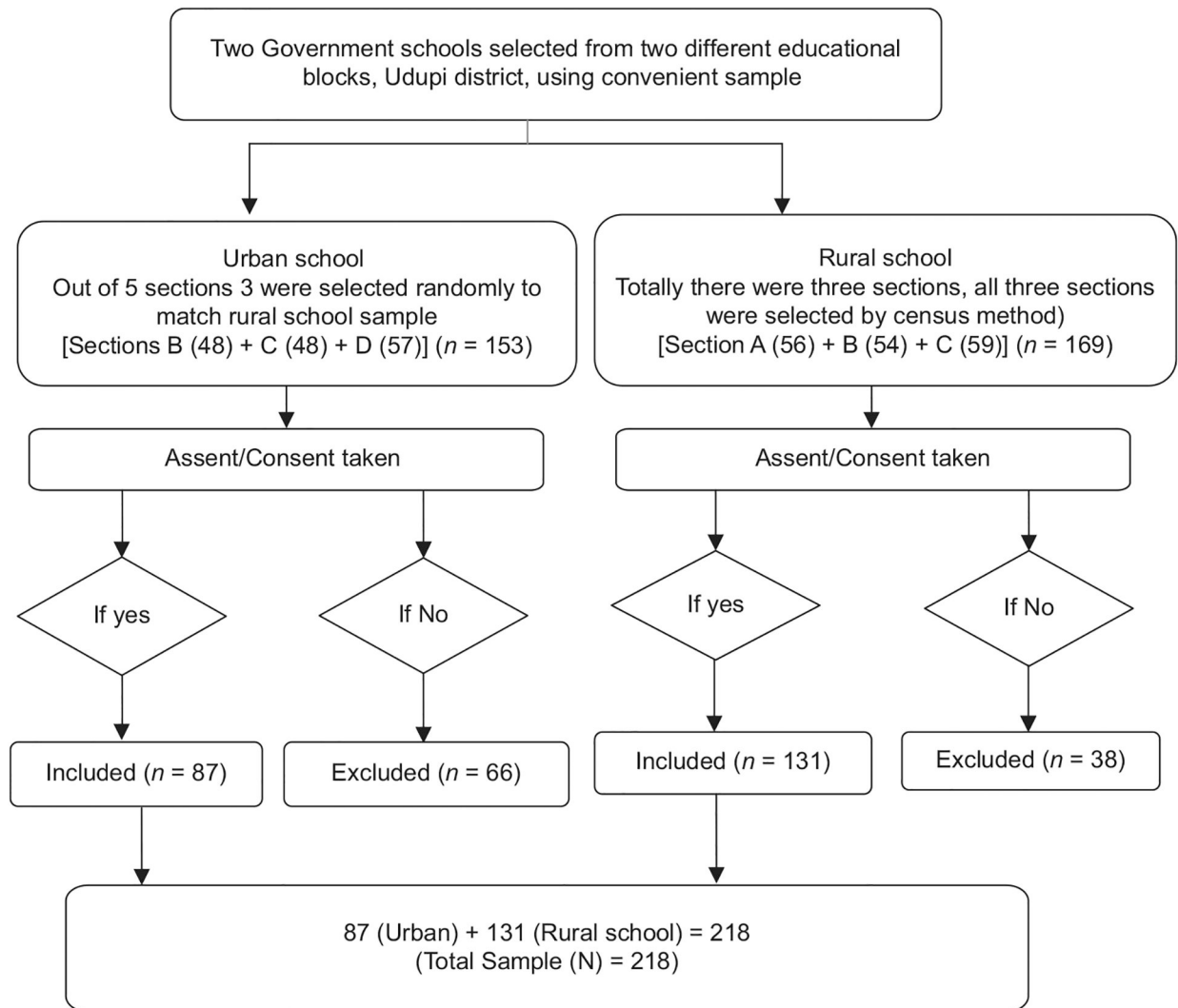


Figure 1:
Flowchart showing sample recruitment

Table 1:

Perception of tobacco use among early adolescent school-going children (N=218)

Serial number	Prevalence of tobacco use	Response	Frequency (%)		χ^2 / Fisher's exact test	p
			Urban (n=87)	Rural (n=131)		
1 [‡]	Family history of tobacco use	Yes	13 (15)	19 (15)	7.21	.072
		No	74 (85)	112 (86)		
2 [‡]	Have you ever felt to cut down your tobacco use?	Yes	23 (26)	43 (33)	1.011	.367
		No	64 (74)	88 (67)		
3 [‡]	Have you ever felt guilty about your tobacco use?	Yes	38 (44)	43 (33)	2.64	.117
		No	49 (56)	88 (67)		
4 [‡]	Have you ever used tobacco in the early morning?	Yes	1 (1)	0		.399 [‡]
		No	86 (99)	131 (100)		
5	Have you ever tried using tobacco even one or two?	Yes	1 (1)	3 (2)		.539 [§]
		No	86 (99)	128 (98)		
6	How many days did you use tobacco?	<1	87 (100)	129 (99)		.518 [‡]
		>1	0	2 (1)		
7	On the days you used tobacco how many did you usually take?	NA	86 (99)	126 (96)		.406 [§]
		<1	1 (1)	5 (4)		
8	Have you ever tried other forms of tobacco products?	Yes	4 (5)	1 (1)		.084 [§]
		No	83 (95)	130 (99)		
9	Do have t-shirt/bag with a tobacco brand logo on it?	Yes	1 (1)	3 (2)		1.0 [§]
10	How did you get tobacco for your own use most often?	Did not use	85 (98)	129 (98)		.698 [§]
		From shop	1 (1)	1 (1)		
		Asked someone to buy	0	1 (1)		
		Some other way	1 (1)	0		
11	Did you buy tobacco by yourself for your own use?	didn't buy	86 (99)	130 (99)		.640 [‡]
		1 at a time	1 (1)	0		
		2-3 at a time	0	1 (1)		
12	How much pocket money you get in a month?	Didn't get	54 (62)	120 (92)		.001 ^{*,‡}
		Rs. <5	12 (14)	3 (2)		
		Rs. 5-25	8 (9)	4 (3)		
		Rs. 25-50	5 (6)	0		
		Rs. 50-100	2 (2)	2 (1.5)		
		Rs. >100	6 (6)	2 (1.5)		
13	Did any shopkeeper ever refuse to sell tobacco because of your age?	Did not buy	86 (99)	131 (100)		.399 [‡]

* $p < .01$,[‡] Questions were not part of Global Youth Tobacco Survey and 2, 3, 4 were modified from CAGE,[‡] Freeman-Halton extension of Fisher's exact test;[§] Fisher's exact test;

NA: Not available

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Table 2:

Early adolescent's knowledge and attitude toward tobacco use (N = 218)

Serial number	Global youth tobacco survey	Response	Urban (n=87), n (%)	Rural (n=131), n (%)	χ^2 /Fisher's exact test	p
14	It is difficult to quit once started using tobacco	No	43 (50)	83 (64)	11.6	.008*
		Yes	44 (51)	47 (36)		
15	Using tobacco is harmful to health	No	5 (5)	30 (23)	11.41	.0007*
		Yes	82 (94)	101 (77)		
16	Tobacco smoke from other people is harmful	No	8 (9)	28 (21)	5.62	.02**
		Yes	79 (91)	103 (79)		
17	Will use tobacco at any time during next 12 months	No	83 (96)	121 (92)		.29 [§]
		Yes	4 (5)	10 (7)		
18	Boys who use tobacco have	More friends	43 (49)	38 (29)	9.2	.01**
		Less friends	19 (22)	39 (30)		
		No difference	25 (29)	54 (41)		
19	Girls who use tobacco have	More friends	18 (21)	26 (20)	1.9	.37
		Less friends	39 (45)	48 (37)		
		No difference	30 (35)	57 (43)		
20	Using tobacco help people feel comfortable at parties	More comfort	10 (12)	25 (19)	3.3	.19
		Less comfort	26 (30)	28 (21)		
		No difference	51 (57)	78 (60)		
21	Using tobacco makes boys	More attractive	34 (39)	27 (20)	9.1	.01**
		Less attractive	17 (20)	39 (30)		
		No difference	36 (41)	65 (50)		
22	Using tobacco makes girls	More attractive	25 (29)	15 (12)	10.8	.004*
		Less attractive	23 (26)	36 (27)		
		No difference	39 (45)	80 (61)		
23	Using tobacco makes you	Gain weight	10 (12)	9 (7)	8.4	.02**
		Lose weight	29 (33)	69 (53)		
		No difference	48 (55)	53 (40)		
24	Close friends use tobacco	None of them	76 (87)	112 (86)	3.1	.37
		Some of them	11 (13)	14 (11)		

* $p < .01$,** $p < .05$,[§]Fisher's exact test

Table 3:

Early adolescent children's attitude toward tobacco cessation (N = 218)

Serial number	Global youth tobacco survey	Category	Frequency (%)		χ^2 /Fisher's exact test	p
			Urban (n=87)	Rural (n=131)		
25	Want to stop using tobacco now	Yes	1 (1)	0		.33 [‡]
		Definitely not	0	2 (2)		
26	Main reason to stop using tobacco	Never used	78 (90)	120 (92)		.02 ^{*,‡}
		Didn't stop	2 (2)	0		
		Health reason	7 (8)	4 (3)		
		Save money	0	6 (5)		
27	Parents aware about their tobacco use	Do not use	85 (98)	122 (93)		.26 [§]
		No	1 (1)	7 (4)		
		Yes	1 (1)	2 (2)		
28	Seeing anti-tobacco messages in to sports events, social gatherings	Never attend	21 (24)	37 (28)	8.23	.04 [*]
		A lot	5 (6)	12 (9)		
		Sometimes	45 (52)	43 (33)		
		Never	16 (18)	39 (30)		
29	Seeing actors using tobacco in TV, movies (media exposure)	Never watch	4 (5)	21 (16)		.001 ^{*,§}
		A lot	36 (41)	28 (21)		
		Sometimes	45 (52)	57 (44)		
		Never	2 (2)	25 (19)		
30	Discussion about harmful effects of tobacco use in family	Yes	50 (57)	62 (47)	2.15	.167
		No	37 (43)	69 (53)		
31	Discussion about dangers of tobacco use in class	Yes	42 (48)	61 (47)	5.14	.130
		No	30 (35)	59 (45)		
		Not sure	15 (17)	11 (8)		
32	Discussion in class about reasons why children use tobacco	No	51 (58)	93 (71)	5.11	.149
		Yes	17 (20)	22 (17)		
		No response	19 (22)	16 (12)		
33	Discussion in class about the effects of tobacco use	Yes	30 (35)	37 (28)	1.10	.822
		No	45 (52)	75 (57)		
		Not sure	12 (14)	19 (14)		
34	Discussion on tobacco and health as part of a lesson	Never	45 (52)	74 (57)	2.24	.52
		<1 month	24 (27)	38 (30)		
		>2-3 months	8 (9)	10 (7)		
		>1 year	10 (12)	8 (6)		

* $p < .01$,** $p < .05$,[‡]Freeman-Halton extension of Fisher's exact test;[§]Fisher's exact test;