

Original research article

To study the Knowledge, Social Attitudes Among Medical Students, Hospital Workers and Institutional Practice Regarding Tobacco Control

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Abstract

Background: Tobacco use is the most important avoidable cause of early decease and disease global, tobacco in any form kills and sickens millions of people every year. Anti-tobacco law in India namely Cigarettes and Other Tobacco Products Act (COTPA) happens since year 2003 and intentions at shielding all the people in our country for tobacco product, but smoking is still prevalent among publics.

Study

Objective: To assess the knowledge about tobacco control law among various groups of people in medical college and hospitals. To assess the attitude about tobacco control law among various groups of people in medical college and hospitals. To assess the knowledge about institution Policies and practices about tobacco control law.

Materials and Methods: A cross-sectional study was conducted among 381 participants during January 2022 to March 2022. The study population includes institutional personnel.

Results: Total 381 participants with mean age 23.5 years were enrolled. 214 (56.2%) study population have good knowledge of COTPA law whereas 298 (78.2%) have favorable attitude towards COTPA Law and 213 (56%) of study participants have good knowledge on Institutional policy and practice. Among study subjects, 81 (21.2%) were current smoker or ex-smoker and 49 (12.9%) consuming tobacco in one and or the other form. 32 (39.5%) Out of these 81 smokers were also consuming tobacco. Level of attitude; -In the present study, people who do not use tobacco had a significantly higher positive attitude toward COTPA as compared with their counterparts.

Conclusion: Based on the findings of our study that there was lack of knowledge about Anti-smoking legislation among the study participant and there was high knowledge about deleterious multi-dimensional effects of smoking among students, medical and paramedical staff and a high support for implementation of COTPA.

Keywords: Cigarette and Other Tobacco Products Act, Cigarette products, legislation, smokers

Introduction

Tobacco use is the most important avertible cause of early decease and disease global, with nearly 1.4 billion people age 15 years or older by tobacco [1]. Tobacco in any form kills and sickens millions of people every year. (2) The WHO Global Action Plan for the Prevention and Control, reducing the universal prevalence of tobacco use (smoked and smokeless tobacco) by 30% by the year 2025 compared to 2010 (3).

According to the NFHS-5 survey (2019-2021) Men, age 15 years and above who use any kind of tobacco in India-38%, Madhyapradesh-46.5%, Bhopal-32.9% while Women age 15 years and above who use any kind of tobacco in India-8.9%. Madhyapradesh-10.2%, Bhopal-8.5%.(4) GATS-2 (2016- 2017) reports that 28.6% of the adult population consumes tobacco in any form, while 34.2% tobacco users in Madhya Pradesh. 6% decrease in the tobacco consumption recorded in GATS-1 (2009-10) to GATS-2(2016-17).(5)

Anti-tobacco legislation in India

- 1975- Cigarettes Act (6): mainly restricted to a statutory warning ‘Cigarette Smoking is Injurious to Health’ to be displayed on cigarette packs and advertisements (7,8). but it did not include non-cigarettes tobacco products. (9)
- 1981- Prevention and Control of Pollution Act: considered smoking as an air pollutant. (7)
- 1988- Motor Vehicles Act: made smoking illegal in a public vehicle. (7)
- 1990- Amendment of Prevention of the Food Adulteration Act 1955: To prescribe health warnings asserting tobacco chewing of injurious to health. (6,8)
- 1992- Central Government banned the sale of toothpaste and tooth powder containing tobacco under the Drugs and Cosmetics Act of 1940. (8)
- 2000- Cable Television Networks Amendment Act: prohibited the transmission of advertisements on tobacco and liquor throughout the country. (10)
- 2003- Cigarettes and Other Tobacco Products Act: replaced the Cigarettes Act of 1975 and also included cigars, beedis, cheroots, pipe tobacco, hookah, chewing tobacco, pan masala, and gutka. (6) according to COTPA direct and indirect advertisements of tobacco products, smoking within a radius of 100 yards of educational institutions are all banned, smoking in public places, tobacco sale to minors; and mandatory display of pictorial warning and mandated testing of tar and nicotine content of all tobacco products. (8,11) 2008- National Tobacco Control Programme (NTCP): under which the following activities were planned – training and capacity building, information, education, and communication (IEC) activities, tobacco control laws; and reporting survey and surveillance (National Health Portal). Tobacco-related education for school children. (12) Health is a state subject in India. (13) State legislation is ever more used for tobacco control but absences uniform strategies to control the demand. (6) Tobacco prevention and control policies in India have focused on increasing awareness and changing the behavior. (14)

AIMS AND OBJECTIVES

To assess the knowledge about tobacco control law among various groups of people at medical college and hospitals.

- To assess the attitude about tobacco control law among various groups of people at medical college and hospitals.
- To assess the Policies and practices in the institution about tobacco law.

Methodology (Material & Methods)

- **Study Centre:** Gandhi Medical College and Hamidia Hospital, Bhopal
- **Duration of the Study:** 1 January 2022 to 31 March 2022
- **Study Design:** Cross-Sectional Study
- **Source of Data:** A cross-sectional study was conducted among 381 participants of various working groups of Gandhi medical college and Hamidia hospital Bhopal during January - March 2021.
- **Method of sampling:** Purposive sampling Study participants: Different groups inside Gandhi Medical College and Hamidia Hospital, Bhopal, M.P

These are

- 1.) **Students** – undergraduate and postgraduate
 - 2.) **Medical working professionals** – doctors, faculty teachers, paramedical staff, nursing staff
 - 3.) **Non- medical working class** – security staff, clerks, computer operators
- Study settings: Gandhi Medical College and Hamidia hospital campus
 - **SAMPLE SIZE** –

According to the **Global Adult Tobacco Survey fact sheet Madhya Pradesh 2016-2017 (GATS-2)** survey, considering the prevalence of tobacco consumption as 34.2%; with absolute precision of 5%, power of 80% and 95% confidence interval, the required sample size is 346. An additional 10% added to compensate for possible non-responders so that sample size become 381

The sample size was calculated using formula:

$$N = z^2 \times PQ / d^2$$

Where, n is the sample size

Z is the statistic corresponding to level of confidence

P is expected prevalence

Q is (1-P)

d is precision.

- **SELECTION CRITERIA** –

Inclusion criteria

- 1.) Participant consenting and willing to participate in the study were taken till the required sample size was obtained.

Exclusion criteria

- 1.) Participants who were not willing to participate in our study.
- 2.) Participants absent in that period.

- **DATA COLLECTION PROCEDURE** –

A cross sectional study design is planned to assess knowledge, attitude and institutional policy and practice regarding smoke free legislation and tobacco usage among various institutional personnel of selected college of Bhopal city. All willing participants who were available at the time of interview via questionnaire were included till the required sample size was met.

A list of undergraduate medical students was obtained from Community Medicine Department; and PG students, Teaching faculty, non-teaching staff and other hospital worker will be obtained from college and hospital establishment of Gandhi Medical College, Bhopal.

Permission and consent from the ethical committee will be taken.

a) FOR OFFLINE QUESTIONNAIRE

Written informed consent will be taken after explaining purpose of study.

b) FOR GOOGLE FORM BASED QUESTIONNAIRE

Online consent form will be compulsory before attempting the questionnaire.

Collected data will be entered in the MS Excel spreadsheet, coded appropriately, and analyzed using Epi-Info software.

- **RESEARCH INSTRUMENT** –

Questionnaire - Data will be collected using a predesigned, pre-tested, semi-structured questionnaire

1. Google form-based e-questionnaire
2. Physical copy of questionnaire in Hindi/English language

The questionnaire was given to 3 experts in the field of medical research and public health and with their response, item and scale content validity was checked; and it came out to be acceptable.

The questionnaire was translated into local language (HINDI) by two bilingual experts.

Questions concerning awareness, attitude and practices towards Smoking and COTPA law were included based on-

3 POINT LIKERT SCALE

Which confines the responder to [“YES”, “NO”; “DON’T KNOW”]

A total of 24 questions were assessed via this scale and questions were divided into various sections as

- Section I** included 7 questions about participant’s **SOCIO-DEMOGRAPHIC DATA** such as age, gender, smoking behavior, etc. Smoking behavior/**PRACTICES** is categorized into non-smoker, smoker or ex-smoker.
- Section II** included 12 questions about participant’s **KNOWLEDGE** about anti-tobacco law.
- Section III** included 4 items that focused mainly on participant’s **Awareness** towards **harmful effects of tobacco**.
- Section III** included 8 items that focused mainly on participant’s **ATTITUDE** towards anti-tobacco (COTPA) Law.
- Section IV** included 3 questions focused on participant **KNOWLEDGE** regarding **INSTITUTIONAL POLICY** and practice.

Sections 2, 4 and 5 were based on Likert scale and participants are requested to show their level of agreement with the three options.

- **QUALITY CONTROL** –

The interviewers will be trained and given proper briefing in their local language about the study as a measure of quality control.

- **CONFIDENTIALITY** –

Confidentiality of all participants will be maintained.

All data obtained will remain discrete and will not be used by the researcher in such a way that it reveals the identity of the participant.

- **PLAN OF ANALYSIS/STASTICAL TOOLS** –

1.) LIKERT scale analysis

Scores assigned to each item are between 1 and 3 points as follows

- Agree/Yes = 3 points
- Neutral /Don’t know = 2 points
- Disagree /No = 1 POINT

According to this the range of total scores lies in Range (24-72)

Considering good awareness as greater than whatever mean will be obtained of the total score

Responders will be classified as:

i. **POSITIVE ATTITUDE or NEGATIVE ATTITUDE**ii. **AWARE or UNAWARE**2.) **STASTICAL tests –**

-Descriptive analysis will be done in the form of mean and standard deviations or proportions wherever appropriate.

-Chi-square test will be used to analyze the difference between proportions. P-value of less than 0.05 will be considered statistically significant.

3.) **SOFTWARE – EPI-INFO and MS Excel**• **ETHICAL CONSIDERATIONS –**

- Ethical clearance was taken from the Institutional Ethical Committee, office of the Dean & C.E.O. , Society Gandhi Medical College, Sultania Road, Bhopal (Letter No.6701/MC/IEC/2022, Bhopal Date:15/02/2022) .

Consent will be taken from all willing participants.

Observation and Result:

381 participants in the present study, 290(76.12%) were 17–24 years old, 30 (7.87%) were 25–30 years old and 61 (16.01%) were more than 30-year-old; males constituted 226 (59.32%) and females 155 (40.68%). Among those, 270 (70.8%) were students, 73 (19.16%) were medical and paramedical staff, 38 (9.97%) were nonmedical college and hospital supporting staff workers.

Table 1: Distribution of study population

Variable	Frequency (n=381)	Percentage (100%)
Age (in year)		
17-24	290	76.1
25-30	30	7.9
>30	61	16
Gender		
Male	226	59.3
female	155	40.7
Residence		
Rural	110	28.9
Urban	225	59
Semi-urban	46	12.1
Occupation		
Student	270	70.9
Medical and paramedical staff	73	19.1
Non-medical	38	10

Table 2: Smoking behaviour of the study population

Smoking behavior	Student, n=270 (100%)	Medical working professionals, n=73 (100%)	Non- medical working class, n=38 (100%)	Total, n=381 (100%)	
Smoker (current+ Ex-smoker)	49 (18.1%)	17 (23.3%)	15 (39.5%)	81(21.3%)	.0093 *
Never Smoker	221 (81.9%)	56 (76.7%)	23 (60.5%)	300 (78.7%)	
Smokeless tobacco user					
User (Current + Ex user)	23(8.5%)	7 (9.6%)	19 (50%)	49 (12.9%)	0.001 *
Never Used	247 (91.5%)	66 (90.4%)	19 (50%)	332 (87.1%)	
Chi-square test, *The result is significant at $p < .05$					

Table 2 summarizes that 18.1% of students, 23.3% of Medical working professionals and 39.5% of Non- medical working staff were current smokers or ex-smoker, and 8.5% of students, 9.6% of Medical working professionals, and 50% of workers were current/ex-smokeless tobacco (SLT) users. 50 % non-medical working staff were SLT user.

Table 3: Knowledge about smoke-free law

Question	Student (270)	Medical working professionals (73)	Non- medical working class (38)	Total (381)	P
Are you aware that there should be a board in the institution saying that “sale of tobacco product in an area within the radius of 100 yards of educational institution is strictly prohibited”					
Yes	162 (60%)	48(65.8%)	22(57.9%)	232(60.9%)	.497 NS
No	61(22.6%)	12(16.4%)	6(15.8%)	79(20.7%)	
Don't know	47(17.4%)	13(17.8%)	10(26.3%)	70(18.4%)	
Have you ever seen any board stating the same in front of any educational institution					
Yes	76(28.1%)	32(43.8%)	19(50%)	127(33.3%)	.007*
No	161(59.6%)	35(47.9%)	13(34.2%)	209(54.9%)	
Don't know	33(12.2%)	6(8.2%)	6(15.8%)	45(11.8%)	
Are you aware that, on any shop/bunk with in radius of 100 yards from educational institution, there should be a board saying that “tobacco products are not sold to persons below 18 years of age					
Yes	115(42.7%)	39(53.4%)	14(36.8%)	168(44.1%)	.097 NS
No	119(44%)	24(32.9%)	14(36.8%)	157(41.2%)	
Don't know	36(13.3%)	10(13.7%)	10(26.4%)	56(14.7%)	
Have you ever seen any board stating the same, in front of any shop					
Yes	69(25.6%)	35(48%)	14(36.8%)	118(31%)	.001*
No	201(74.4%)	38(52%)	24(63.2%)	263(69%)	
Are you aware that under Cigarette and Other Tobacco Products Act (COTPA), the sale of cigarette or other tobacco products to person below the age of 18 years is prohibited/crime					
Yes	166(61.5%)	39(53.4%)	16(42.1%)	221(58%)	.073 NS
No	67(24.8%)	23(31.5%)	11(28.9%)	101(26.5%)	
Don't know	37(13.7%)	11(15.1%)	11(28.9%)	59(15.5%)	
Are you aware that under COTPA act, the sale, offer for sale, or permitting sale of cigarettes or any other tobacco products in an area within a radius of 100 yard of any educational institution is prohibited					
Yes	134(49.6%)	40(54.8%)	15(39.5%)	189(49.6%)	.006*

No	102(37.8%)	19(26%)	10(26.3%)	131(34.4%)	
Don't know	34(12.6%)	14(19.2%)	13(34.2%)	61(16%)	
Are you aware that under COTPA act, employing any person who is under 18 years of age in cultivation, processing, and sale of tobacco or tobacco products is prohibited					
Yes	134(49.6%)	39(53.4%)	10(26.3%)	183(48%)	.004*
No	88(32.6%)	17(23.3%)	12(31.6%)	117(30.7%)	
Don't know	48(17.8%)	17(23.3%)	16(42.1%)	81(21.3%)	
Are you aware under COTPA act that selling, offer for sale, or permitting sale of cigarettes or any other tobacco products loose or in single sticks is prohibited					
Yes	87(32.2%)	33(45.3%)	6(15.8%)	126(33.1%)	.02*
No	125(46.3%)	29(39.7%)	20(52.6%)	174(45.7%)	
Don't know	58(21.5%)	11(15%)	12(31.6%)	81(21.2%)	
Do you know the maximum fine for violation under the act?					
Yes	38(14%)	15(20.5%)	11(36.8%)	64(16.8%)	.035*
No	180(66.7%)	52(71.2%)	22(57.9%)	254(66.7%)	
Don't know	52(19.3%)	6(8.2%)	5(13.1%)	63(16.5%)	
Do you know who is the enforcing agency					
Yes	36(13.3%)	7(9.6%)	5(13.2%)	48(12.6%)	.192 NS
No	179(66.3%)	59(80.8%)	26(68.4%)	264(69.3%)	
Don't know	55(20.4%)	7(9.6%)	7(18.4%)	69(18.1%)	
Have you seen anyone violating anti tobacco law?					
Yes	159(58.9%)	30(41.1%)	20(52.6%)	209(54.9%)	.003*
No	69(25.6%)	36(49.3%)	12(31.6%)	117(30.7%)	
Don't know	42(15.5%)	7(9.6%)	6(15.8%)	55(14.4%)	
To whom should you report in case of any violation of COTPA Act?					
Yes	43(16%)	15(20.5%)	7(18.4%)	65(17%)	<.001*
No	79(29.2%)	39(53.4%)	22(57.9%)	140(36.8%)	
Don't Know	148(54.8%)	19(26%)	9(23.7%)	176(46.2%)	
Chi-square test, *The result is significant at $p < .05$, NS=Non significant					

Table 3 summarizes the knowledge of students, Medical working professionals, and Non-medical working staff about smoke-free law; 54.9 % of the participants not seen any board in the institution saying that “sale of tobacco product in an area within the radius of 100 yards of educational institution is strictly prohibited” 69% of participant were not seen a board saying that “tobacco products are not sold to persons below 18 years of age,” 83.2% of the study population were not aware of the maximum fine for violating the rule, 87.4% of the study population do not know who is the enforcing agency of the law, 84% of the students, 79.4 % of the medical/paramedical staff and 81.6% nonmedical workers do not know to whom should they report if they see any one violating the law, and 66.9% of the study population are not aware that permitting sale of cigarettes and other tobacco products loose or in single sticks is prohibited. statistically significant difference was seen between students, medical/paramedical staff and non-medical supporting staffs towards ever seen any board stating the same in front of any educational institution, ever seen any board stating the same, in front of any shop, awareness that under COTPA act, the sale, offer for sale, or permitting sale of cigarettes or any other tobacco products in an area within a radius of 100 yard of any educational institution is prohibited, employing any person who is under 18 years of age in cultivation, processing, and sale of tobacco or tobacco products is prohibited, selling, offer for sale, or

permitting sale of cigarettes or any other tobacco products loose or in single sticks is prohibited, maximum fine for violation under the act, enforcing agency, seen anyone violating anti-tobacco law, To whom should you report in case of any violation of COTPA Act?

Table-4: Regarding awareness of harmful effects of tobacco among the study population, 85.8% of the total respondents answered no to “smoking is part of our culture,” 88% of the respondents answered yes to “smoking/using tobacco products is harmful to health,” 62.2% of the total respondents are aware of second-hand smoking, 69.6% of the total respondents answered yes to “second-hand smoking is equally dangerous as active smoking.”

Table 4: Awareness of harmful effects of tobacco

Question	Student (270) %	Medical working professionals (73) %	Non- medical working class (38)%	Total (381) %	P
Do you think smoking is part of culture?					.149 NS
Yes	43 (16%)	5(6.8%)	6(15.8%)	54 (14.2%)	
No	227(84%)	68(93.2%)	32(84.2%)	327(85.8 %)	
Are you aware of second hand /passive smoking ?					<.001*
Yes	183(67.8%)	40(54.8%)	14(36.8%)	237(62.2 %)	
No	87(32.2%)	33(45.2%)	24(63.2%)	144(37.8 %)	
Do you think second -hand smoking equally dangerous as active smoking?					<.001*
Yes	201(74.4%)	50 (68.5%)	14 (36.8%)	265(69.6 %)	
No	69(25.6%)	23(31.5%)	24(63.2%)	116(30.4 %)	
[Do you think smoking/using tobacco products is harmful to health?					<.001*
Yes	243 (90%)	67 (91.8%)	25 (65.8%)	335(88%)	
No	27(10%)	6(8.2%)	13(34.2%)	46(12%)	
Chi-square test, *The result is significant at $p < .05$, NS=Non significant					

Table 5: Attitudes of smokers towards the law

Question	ST/SLT		Total (381)	P
	User (98)	Non user (283)		
Are you interested in participating in anti tobacco campaign?				
Agree	65(66.3%)	211(74.6%)	276(72.5%)	.065 NS
Disagree	17(17.3%)	25(8.8%)	42(11%)	
Neutral	16(16.3%)	47(16.6%)	63(16.5%)	
Do you think that COTPA law should be strictly implemented?				
Agree	72(73.5%)	268(94.7%)	340(89.2%)	<.001*
Disagree	15(15.3%)	5(1.8%)	20(5.2%)	
Neutral	11(11.2%)	10(3.5%)	21(5.5%)	
Do you think the enforcing agent should strictly act to punish the person who is violating the COTPA law?				
Agree	72(73.5%)	261(92.2%)	333(87.4%)	<.001*
Disagree	13(13.3%)	6(2.1%)	19(5%)	
Neutral	13(13.3%)	16(5.7%)	29(7.6%)	
Do you think whether strict execution of COTPA saves life?				
Agree	81(82.6%)	258(91.2%)	339(89%)	.014*

Disagree	8(8.2%)	6(2.1%)	14(3.7%)	
Neutral	9(9.2%)	19(6.7%)	28(7.3%)	
Do you support COTPA law?				
Agree	80(81.6%)	265(93.6%)	345(90.5%)	.001*
Disagree	10(10.2%)	8(2.8%)	18(4.7%)	
Neutral	8(8.2%)	10(3.5%)	18(4.7%)	
Chi-square test, *P<0.001 statistically significant, NS=Non significant, COTPA=Cigarettes and Other Tobacco Products Act, ST=Smoked tobacco, SLT=Smoke less tobacco				

[Table 5]:statistically significant difference was seen between smoked tobacco (ST)/smokeless tobacco (SLT) users and nonusers toward strict implementation of COTPA law, strict punishment of the person who is violating COTPA law, strict execution of COTPA saves life and support COTPA law

Table 6: Knowledge of participant regarding Policies and practices in the institution

Question	Student (270) %	Medical working professionals (73) %	Non- medical working class (38) %	Total (381) %	P
Institution written policy against smoking/chewing tobacco?					.273 NS
Yes	97(36%)	27(37%)	16(42.1%)	140(36.7%)	
No	83(30.7%)	30(41%)	10(26.3%)	123(32.3%)	
Don't Know	90(33.3%)	16(22%)	12(31.6%)	118(31%)	
smoking/chewing tobacco prohibited in teaching facilities, laboratories, public areas such as play grounds, libraries, mess, cafeteria?					.261
Yes	163(60.4%)	54(74%)	25(65.8%)	242(63.5%)	
No	66(24.4%)	13(17.8%)	7(18.4%)	86(22.6%)	
Don't Know	41(15.2%)	6(8.2%)	6(15.8%)	53(13.9%)	
information such as posters, sign boards on "no smoking" displayed in your institution?					<.01*
Yes	126(46.7%)	45(61.6%)	27(71.1%)	198(52%)	
No	98(36.3%)	21(28.8%)	5(13.1%)	124(32.5%)	
Don't Know	46(17%)	7(9.6%)	6(15.8%)	59(15.5%)	
Chi-square test , *The result is significant at p < .05, NS=Non significant					

Table-7: Descriptive statistics of knowledge, attitude and practice scores towards smoking.

Variables	N	Minimum	Maximum	Mean	SD	Median
Total Knowledge score	381	12	36	22.66 Approx.23	5.48	23
Total Attitude score	381	5	15	13.7	1.8	15
Total Practice score	381	3	9	6.29 Aprox.6	1.997	7

Variables	Knowledge on COTPA				Attitude on anti-tobacco law				Knowledge on Institutional Practice and policy				TOTAL	
	Poor(< 23)		Good (≥23)		Negative (<14)		Positive (≥ 14)		Poor(≤ 6)		Good (>6)		N	%
	N	%	N	%	N	%	N	%	N	%	N	%		
Student	118	43.7	152	56.3	51	18.9	219	81.1	128	47.4	142	52.6	270	70.9
Medical and paramedical staff	30	41	43	58.9	16	21.9	57	78.1	27	37	46	63	73	19.1
Non-medical worker	19	50	19	50	16	42.1	22	57.9	13	34.2	25	65.8	38	10
TOTAL	167	43.8	214	56.2	83	21.8	298	78.2	168	44	213	56	381	100
Gender														
Male	95	42	131	58	47	20.8	179	79.2	95	42	131	58	226	59.3
Female	72	46.5	83	53.5	36	23.2	119	76.8	73	47	82	53	155	40.7
Total	167	43.8	214	56.2	83	21.8	298	78.2	168	44	213	56	381	100
Age Group in Year														
17-24 year	126	43.4	164	56.6	59	20.3	231	79.7	133	46	156	54	290	75.9
25-30 Year	12	40	18	60	5	16.7	25	83.3	10	32.3	21	67.7	30	8.1
>30 year	29	47.5	32	52.5	19	31.1	42	68.9	25	41	36	59	61	16
Total	167	43.8	214	56.2	83	21.8	298	78.2	168	44	213	56	381	100
Religion														
Hindu	143	42.9	190	57.1	71	21.3	262	78.7	143	43	190	57	333	87.4
Muslim	11	47.8	12	52.2	6	26.1	17	73.9	6	26	17	14.5	23	6.1
Christian	4	33.3	8	66.7	1	8.3	11	91.7	10	83.3	2	16.7	12	3.1
Others	9	69.2	4	30.8	5	38.5	8	61.5	9	69	4	31	13	3.4
Total	167	43.8	214	56.2	83	21.8	298	78.2	168	44	213	56	381	100
Smoking behavior														
Current Smoker	33	55.9	26	44.1	24	40.7	35	59.3	32	52.5	29	47.5	59	15.5
Ex-smoker	9	40.9	13	59.1	3	13.6	19	86.4	13	59	9	41	22	5.8
Never smoked	125	41.7	175	58.3	56	18.7	244	81.3	123	41.2	175	58.8	300	78.7
Total	167	43.8	214	56.2	83	21.8	298	78.2	168	44	213	56	381	100
Smokeless Tobacco behavior														
Current User	20	50	20	50	18	45	22	55	18	45	22	55	40	10.5
Ex-User	4	44.4	5	55.6	3	33.3	6	66.7	4	44.4	5	55.6	9	2.4
Never Used	143	43.1	189	56.9	62	18.7	270	81.3	146	44	186	56	332	87.1
Total	167	43.8	214	56.2	83	21.8	298	78.2	168	44	213	56	381	100

Table 8: Relationship between smoking knowledge , Attitude and knowledge on Institutional practice and policy with various group of study population, Gender, Age, Religion, smoking behaviors and smokeless tobacco user.

As shown in [Table-7], the median knowledge score was 23. The respondents with knowledge score of <23 were classified as having poor knowledge, while those with knowledge score of ≥23 were classified as having good knowledge Current smoker showed the poor smoking knowledge (55.9%), while Medical and paramedical staff showed the highest proportion with good smoking knowledge (58.9%) compared to students and non-medical supporting staff. More male respondents have good knowledge (58%) compared to female respondents (53.5%). Study population have been categorized as having either positive or negative attitude based on

the median of the attitude score (<14 or ≥ 14 , respectively) students and medical/paramedical staff showed the most positive attitude respectively (81.1% and 78.1%) compared to non-medical supporting worker of college and hospital. In contrast, 44.1% of current smoker showed negative attitude towards smoking.

DISCUSSION

Tobacco retail shops that are close to medical colleges may need little time, distance, or effort to access and use tobacco products. The risks of tobacco related diseases are higher among those who start early age and continue using it, [3] The purpose of this cross sectional study was to assess the knowledge, attitudes, and knowledge on Institutional practices regarding the prohibition of sale of tobacco products near medical college and Hamidia Hospital campus of Bhopal, India. Smoking prevalence in our study was 21.2% in people aged 17 years and above. These data are not in similarity to the Global Adult Tobacco Survey India-2 (2016–2017) data, wherein 10.2% of the adults of Madhya Pradesh were reported as current smokers.[5] The National Family Health Survey 5 survey concluded that 35.3% of the Men, age 15 years and above who use any kind of tobacco and 6.5% of Women, age 15 years and above who use any kind of tobacco in Madhya Pradesh [4] Other studies on smoking among medical students showed lower smoking prevalence (13.5% in Cairo University, Egypt [15], 19.2% in Saudi Arabia [16]). According to Azhar A et al., prevalence of smoking among medical students is probable to be little because they have a greater chance of exposure to awareness programs and better knowledge regarding the risk of smoking [17]. Deepthi Athuluru et al. in their study in Nellore, Andhra Pradesh found that 9.3% study population on current smokers.[18] Saraswathi et al. in a study in South India reported the smoking prevalence rate to be 15.02%.[19] Smoking prevalence in the Goal et al. study was 25.4% in people aged fifteen years and above.[20]. Similar studies on awareness of the health hazards of smoking observed that the majority of smokers agreed that smoking was “not good” for their health.[22] We found that 88% were aware that smoking is harmful to health and 69.6% viewed second hand smoking to be equally dangerous as active smoking. Nearly similar findings were reported in a study done by Athuluru, et al.: Knowledge and attitudes regarding tobacco control laws in Andhra Pradesh and Desai et al. on tobacco smoking patterns, awareness, and expenditure in the state of Gujarat, India.[23] non-medical workers are less aware of the harmful effects of smoking compared to others; further, medical students and medical/paramedical staff are more aware of the ill effects of second hand smoking compared to non-medical workers. The finding from the present study is that 85.8% of respondents perceive smoking as not a part of our culture. the present study shows that knowledge of policies and practices followed by institutions toward the COTPA act showed no statistically significant difference between students, medical/paramedical staff and non-medical staff towards that written policy against smoking/chewing tobacco and prohibited in a public place but statistically significance difference on information such as poster, sign-board on “No Smoking” displayed; The knowledge toward COTPA act in our study was significantly better among students, medical and paramedical staff, as compared to nonmedical workers of the institution. In the present study, Study participant who do not use tobacco had a significantly higher positive attitude toward COTPA as compared with tobacco user. A study done by Goel et al. on public opinion on smoking and smoke free legislation in a district of North India reported that nonsmokers have a better positive attitude toward COTPA compared to smokers.[20] A study organized by the WHO to determine the smoking habits, knowledge, and attitude toward tobacco control of health professionals found that smoker participants had less favorable attitude toward tobacco control compared to non-smokers.[21] Nearly 90.5% of the respondents in our study supported smoke free law COTPA. Strict implementation of tobacco control laws in and around educational institutions and licensing and zoning policies to control tobacco shops corner.

Despite of 19 years after the COTPA amendment has passed, the majority of the study population is not aware of this anti-tobacco law, and there is clear evidence that the rules are being violated as tobacco products were available within 100 yards of all the educational institutions in Bhopal. Hence, there is a need for strengthened efforts to limit the distance of tobacco retail shops from educational institutions and execution institution policies, which prohibit the use of all types of tobacco products, by all peoples, at all times, and in all areas of institutional premises. This study was done in Gandhi Medical college of Bhopal, and hence cannot be generalized to all people. Need to more studies should be done for all type educational institutions covering large areas of population.

Conclusion : The study determined that there was a lack of knowledge about smoke free legislation among the study participants and there was high knowledge about the harmful effects of smoking among medical students, medical, paramedical staff, and non-medical workers, a high backing for implementation of COTPA. Efforts should be made to make Gandhi Medical College a “smoke free Institution.” Further, approaches comprising effective wide-ranging tobacco control programs and smoking cessation programs should be focused on educational institutions.

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