Research Article

JRAD Journal of Research and Advancement in Dentistry

J Res Adv Dent 2020;10:2:165-170.

Knowledge Regarding the Various Legal Aspects of Tobacco Consumption in a Dental College in Darbhanga (Bihar): An Original Research

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ABSTRACT

Background: Tobacco is the most common hazardous substance easily available, heavily promoted and widely consumed. For prevention and control of tobacco consumption, legislation lies at the very heart of any effective tobacco control program**.** The aim of this study was to assess knowledge regarding the various legal aspects of tobacco consumption among teachers, patients and students of a dental college in Darbhanga (Bihar)**.**

Materials and methods: A self administered questionnaire was planned to assess the knowledge. A total of 11 questions were asked from each and every participant. Sample size for this study was 156. **Statistical Analysis:** The collected data were subsequently processed and analyzed using SPSS statistical package version 19.0.

Results: knowledge score of patients was 5.7736 ± 1.4229. 93 males and 63 females participated in this study. Mean knowledge score of 156 participants was 6.2115 + 1.418. 116 (74.4%) subjects heard about tobacco cessation therapy.

Conclusion: Knowledge regarding harmful effects of tobacco consumption was present in majority of subjects. Knowledge regarding legislation of tobacco consumption was poor among patients.

Keywords: Knowledge, legal, tobacco consumption.

INTRODUCTION

Tobacco in any form smokable or non- smokable causes a wide range of major diseases which impact nearly every organ of the body. Tobacco use is a major preventable cause of premature death and disease.[1] Tobacco products prematurely kill a half of their consumers and also people who are exposed to secondhand smoke. Tobacco harms nearly every organ of the human body and diminishes the general health of the smokers. Tobacco causes coronary heart diseases, blood vessel constriction, and the nicotine stimulates adrenal epinephrine secretion, which increases blood pressure and heart rate. According to estimates made by the WHO, currently about 5 million people die prematurely every year due to the use of tobacco.[2] By 2030, it is estimated that the number of premature deaths attributable to tobacco and tobacco related products would double to 10 million deaths every year, with about 7 million of the deaths taking place in developing countries. Among people alive today in the world, about 500 million would die prematurely due to tobacco use;

Received: Oct. 12, 2019**: Accepted**: Dec. 27, 2019
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pISSN 2278-0076
eISSN 2321-9270

most of these are children and young adults of today.[3] India has more than 200 million tobacco consumers; only 13 % of them consume it in the form of cigarettes, whereas 54 % consume it in the form of beedies and the rest in raw/gutkha forms. Over the years, India's position has risen from third largest to the second largest unmanufactured tobacco consuming country in the world. An important aspect of comprehensive tobacco control programme is increasing the knowledge and awareness regarding tobacco use, modifying the attitude and practice towards tobacco consumption, and regarding tobacco's law made by Government of India. Many people know about various harmful effects of tobacco consumption. But knowledge regarding various legal aspects of tobacco need to be assessed so that if found low, various measures should be taken to educate them regarding laws of tobacco sale, consumption etc. For effective implementation of legislation, knowledge of legislation is necessary. Very few studies have been done regarding knowledge about various laws of tobacco sale, harmful effects of tobacco in this part of country. Hence this study was conducted to assess knowledge regarding the various legal aspects of tobacco consumption among teachers, patients and students of a dental college in Darbhanga (Bihar).

MATERIALS AND METHODS

This study was conducted in Department of Oral Medicine and Radiology and Department of Public Health Dentistry. A self administered questionnaire was planned to assess the knowledge regarding the various legal aspects of tobacco consumption. The questionnaire gathered information like age, sex, education qualification and occupation. 11 questions were asked from each participant to assess the knowledge regarding the various legal aspects of tobacco consumption and tobacco control laws in India. 156 subjects participated in this study that was divided in three categories. Category 1 consisted of teachers (post graduates, graduates and house surgeons) who taught undergraduate students in dental college. Category 2 consisted of all patients who visited dental out patient department of dental college and gave informed consent to participate in this study. Category 3 comprised of undergraduate students of final year bachelor of dental surgery (BDS) students, third year BDS students and interns of a dental college

Informed consent was taken from each and every subject. Ethical clearance was taken from the institutional board of college. All subjects were given the question form. Each and every question was explained in detail to each and every subject. Participants were informed to attempt all the questions. After each subjects attempted all 11 questions, questionnaire was collected. Inclusion criteria of this study was all participants who were aged 21 years and above and gave their informed consent to participate in this study. The collected data was subsequently processed and analyzed using the SPSS statistical package version 19.0. Chi square test and one way ANOVA test was applied. P value less than 0.05 was considered to be statistically significant.

RESULTS

A total of 156 participants were in this study. Out of 156 participants, 51 (32.7%) subjects were teachers, 53 (34%) subjects were patients and 52 (33.3%) subjects were students. Students were having high knowledge score of 6.6346 $\pm$ 1.414 [Table 1]. Males (93, 59.6%) were having slightly better knowledge score i.e 6.2258 $\pm$ 1.467 compared to female subjects (63, 40.4%) who had a knowledge score of 6.19 $\pm$ 1.35 [Table 2]. Total knowledge score were calculated according to level of education. Knowledge score was highest among post graduates (6.41 $\pm$ 1.58) followed by graduates (6.23 $\pm$ 1.33) and education up to 12th standard (5.6 $\pm$ 1.16) [Table 3]. Maximum subjects were of age group 21 years to 25 years (25%) followed by 31 years to 35 years (24.4%), 26 years to 30 years (19.9%) and 36 years to 40 years (17.3%). Least number of subjects belonged to age group of 45 years and above (6.4%). Mean knowledge score was highest among age group of 31 years to 35 years (6.63 $\pm$ 1.17) followed by age group of 26 years to 30 years (6.51 $\pm$ 1.20) followed by age group of 41 years to 45 years (6.45 $\pm$ 1.44) [Table 4]. Overall mean knowledge score of all subjects (156) of all age groups was 6.2115 $\pm$ 1.418.

Television was the main medium from where subjects had the knowledge regarding the harmful effects of tobacco use. After television, cinema followed by newspaper, family, school and internet sources were the main source of knowledge about harmful effects of tobacco usage. Among students, main source of knowledge was television followed

Table 1: Total knowledge score according to category.

CATEGORY	N	Mean	Std. Deviation	P value
Teachers	51	6.2353	1.30519	.007
Patients	53	5.7736	1.42291	
Students	52	6.6346	1.41461	
Total	156	6.2115	1.41881	

Table 2: Gender wise knowledge score.

Sex	N	Mean	Std. Deviation	P value
MALE	93	6.2258	1.46798	.879
FEMALE	63	6.1905	1.35429	
Total	156	6.2115	1.41881	

Table 3: Education wise knowledge score.

Education	N	Mean	Std. Deviation	P value
Up to 12th education	21	5.6190	1.16087	.094
Graduation	81	6.2346	1.33484	
Post graduation	54	6.4074	1.58434	
Total	156	6.2115	1.41881	

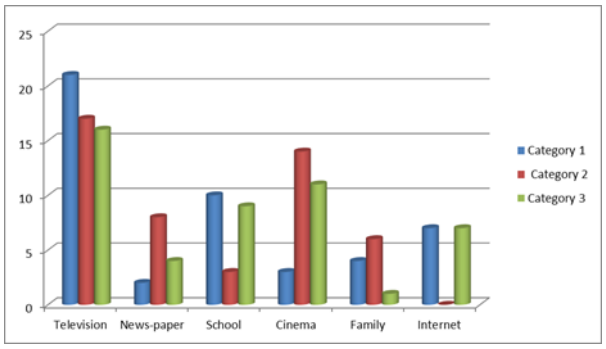
Table 4: Age wise knowledge score.

Age	**N**	**Mean**	**Std. Deviation**	**P value**
21-25 years	39	6.2821	1.43176	.000
26-30 years	31	6.5161	1.20750	
31-35 years	38	6.6316	1.17222	
36-40 years	27	5.6296	1.27545	
41-45 years	11	6.4545	1.43970	
46 and above	10	4.7000	1.94651	
Total	156	6.2115	1.41881	

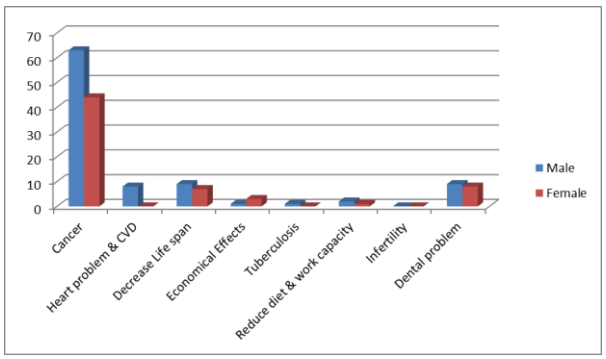
by cinema, school, internet source, newspaper followed by family members [Graph 1]. Subjects were having general information regarding the various harmful effects of tobacco consumption. Males and females believed that cancer was the most common harmful effect of tobacco consumption [Graph 2].

When subjects were asked about penalty of smoking in public places, 109 (69.9%) subjects gave wrong answer about amount of fine one has to pay for smoking in public places and 47 (30.1%) subjects knew the actual amount of penalty for smoking in public place. 60.8% (31) of teachers, 62.3 % of patients who visited OPD and 59.6% (31) students have this information of age limit of sale of tobacco products. 37 (72.5%) of teachers, 67.9 % (36) of patients, 36.5% (19) of subjects did not know correctly regarding prohibition of sale of tobacco products around educational institute. 147 (94.2%) of subjects knew that tobacco is having harmful effects. 76.9% (30) of subjects of age group of 21 years to 25 years said that there should be prohibition on advertisement [Graph 3]. Overall 112 (71.8%) subjects supported prohibition on advertisement whereas 44 (28.2%) believed no

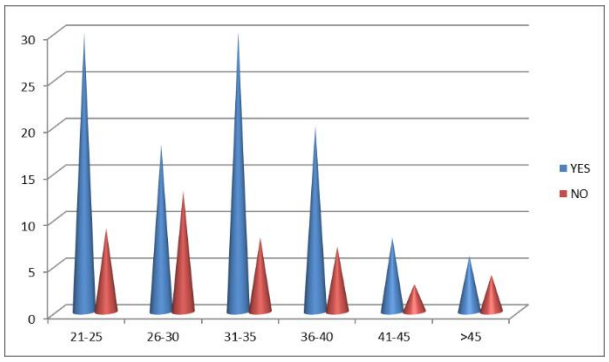
prohibition should be there. 93.5% (87) males knew that a law has been made regarding mandatory depiction of warning on tobacco packets [Graph 4].



Graph 1: category wise distribution of source of knowledge regarding harmful effects of tobacco use.



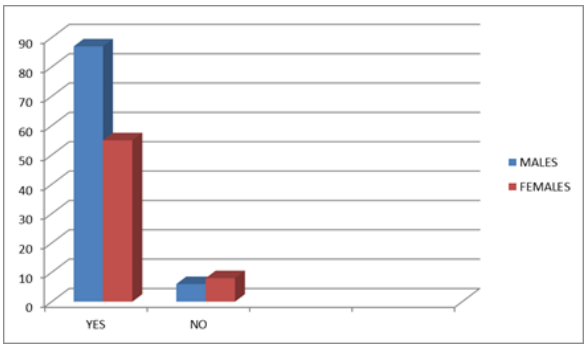
Graph 2: Gender wise knowledge regarding harmful effects of tobacco consumption.



Graph 3: Age wise knowledge regarding prohibition of advertisement of tobacco products.

DISCUSSION

Tobacco control laws are intended to protect and improve public health encompasses various measures to reduce tobacco consumption. Less awareness and negative attitude and practice towards these laws may lead to non-implementation or poor implementation of the act.



Graph 4: Gender wise knowledge regarding mandatory depiction of warning on tobacco packets.

The present study revealed that 30.1 % of the participants were aware of penalty for smoking in public place. The finding of this study was different to study conducted by Ravishankar et al and Pushparaja Shetty et al who found in their study that 62.5% and 45 % were aware of such penalty respectively.[4,5] 60.9 % participants were aware about the legal age of buying tobacco products which is different from the findings of the study conducted by Kalaivani et al.[6] In the study conducted by Kalaivani et al 88% participants were aware of legal age of buying tobacco products. The global youth tobacco survey shows that a disturbingly high number of school children between the age of 13 and 15 years are currently using or have tried tobacco. Recent research suggested that some adolescents begin to experience loss of control over their smoking within weeks of smoking the first cigarette.[7] 41% of participants were aware of the rule that tobacco products should not to be sold within the radius of 100 yards of educational institutions. This was different with the findings of Ravishankar et al and A.R. Rao et al where 78.66 % and 18.9% participants were aware about this rule of sale of tobacco.[8] In order to restrict access of youth for tobacco products, the sale of the tobacco is prohibited in an area within radius of 100 yards of any educational institution. 94.2 % participants were aware of harmful effects of tobacco in our study. This was in accordance with the study conducted by Ravishankar et al and A.R. Rao et al. 71.8 % participants in our study endorsed ban on advertisements of tobacco products which was in contrast to the study conducted by Sharma et al where it was found to be only 61%.[9] Advertisements of various tobacco products are

very common in all forms of media in India. In India, since 2004 direct sponsorship and promotion of tobacco products are banned so fewer advertisements are seen nowadays. So tobacco companies started opting new methods to advertise their products. Therefore, there is need to ban all these advertisements which would lead to initiation and continuation of tobacco use in youths, children or adults.[10] 74.4 % participants in our study heard about tobacco cessation therapy. In study conducted by Ravishankar et al, 74.66 % participants strongly believed that tobacco products should be banned from public sale whereas in our study, 87.2 % participants were against sale of tobacco products in public places. Strong implementation of law is very necessary for reduction in tobacco product's consumption. Most of the people are aware of penalty of violation of law but they are not sure about how much is the amount. Overall, in our study, it was found that people were generally not aware of various legal aspects of tobacco consumption. They knew laws have been made by government but thorough knowledge regarding legislation was not good.

CONCLUSION

Tobacco in any form should be banned. Constant efforts should be taken by doctors to make people aware of harmful effects of tobacco consumption. Government is playing its role in creating awareness but it still is not enough as oral cancer patients are increasing day by day. Medical and dental professionals should take various steps to educate people about it. Seminars, symposiums etc should be organized on regular basis at state and national level to educate people about harmful effects of tobbaco consumption and various legal aspects of tobacco consumption. People should be made aware of laws made by Government of India regarding it. Hence this study was conducted in Darbhanga (Bihar) to assess the knowledge regarding various legal aspects of tobacco consumption.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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