

Perception of School Personnel towards Implementation and Enforcement of Tobacco Control Policies and Tobacco Curriculum in Schools in Bangalore- A Cross-Sectional Study

Dr. SG Sushma

Senior Lecturer, Department of Public of Health Dentistry, Rajarajeswari Dental College and Hospital, Bangalore, India

Dr. Bhat Padma K

Professor, Department of Public of Health Dentistry, Rajarajeswari Dental College and Hospital, Bangalore, India

Dr. MY Jayachandra

Reader, Department of Public of Health Dentistry, Rajarajeswari Dental College and Hospital, Bangalore, India

Dr. Devi Rajkumari Surbala

Assistant Professor, Department of Public of Health Dentistry, Dental College, Regional Institute of Medical Sciences, Imphal, Manipur, India

Dr. Byakod Abhilasha S

Post Graduate, Department of Public of Health Dentistry, Rajarajeswari Dental College and Hospital, Bangalore, India

Dr. Sandeep Kashyap

Reader, Department of Oral and Maxillofacial Surgery, Rajarajeswari Dental College and Hospital, Bangalore, India

Corresponding Author: **Dr.Sushma SG**

Abstract

Non-smoking school personnel and schools that have Tobacco-free school environment provide Positive role models for children and young people to have awareness about tobacco use. This report features availability of tobacco control teaching materials and training, and school anti-tobacco policies implementation in schools. **Methods-** Cross sectional study was carried out for over a period of six months .Stratified cluster sampling technique was done to include the Government Kannada medium schools and English medium schools in Bangalore south. The data collection was done using GSPS questionnaire (WHO FCTC Tobacco control). Chi square test and Fisher's Exact Test was used to demonstrate cross tabulation with confidence intervals. Significance levels of 0.05 were considered for statistical analyses. **Results-** About 86.5% of English medium and 95.5% of Kannada medium school personnel indicated schools should have a policy or rule specifically prohibiting tobacco use among school personnel on school premises/property. More than 80.9% of English medium and 87.7% of Kannada medium school personnel agreed that tobacco product advertising should be completely banned. Majority of 71.9% of both English medium and 53.7% of Kannada medium school personnel said that there were no non-classroom programs or activities (such as an assembly) used to teach tobacco use prevention to students in the school. **Conclusion-** The findings of this study has implications for future tobacco prevention strategies in schools with strict smoking policies among young adults, school personnel and around school premises where it might provide support to establish smokefree schools.

Keywords – Smoking, WHO FCTC, GSPS (Global School Personnel), School personnel

Introduction

The tobacco epidemic is one of the biggest public health threats the world has ever faced, killing more than 8 million people a year, including around 1.2 million deaths from exposure to second hand smoke. The WHO FCTC and the Global Tobacco Surveillance System (GTSS) share the same goal of supporting development, implementation, and evaluation of effective tobacco control programmes. This report presents data from the Global School Personnel Survey (GSPS), conducted in 69 sites in 30 countries and the Gaza Strip/West Bank between 2000 and 2005. The report features a cross-country comparison of school personnel regarding tobacco use patterns, knowledge of and

attitudes toward tobacco, availability of tobacco control teaching materials and training, and school anti-tobacco policies.^{1, 2} Since the last WHO report on the global tobacco epidemic in 2019, the world has changed immeasurably. Despite the challenges of the COVID-19 pandemic, over the past year many countries have persisted in advancing tobacco control as a key health priority.³

The Framework Convention on Tobacco Control (FCTC) is the most important global initiative for tobacco control. One key strategy to implement FCTC is MPOWER, a technical assistance package developed by WHO that consists of six evidence-based tobacco demand reduction measures contained in the FCTC that includes: 1) monitor tobacco use & prevention policies

2) Protect people from tobacco smoke 3) Offer help to quit tobacco use 4) Warn about the dangers of tobacco 5) Enforce bans on tobacco advertising, promotion & sponsorship 6) Raise taxes on tobacco.

School personnel play an important role model for school children's. In accordance with social cognitive theory, adolescents are more likely to smoke if they observe their close ones smoking (Bandura 1986) therefore, parents, siblings, friends and teachers as role models enact adolescents to observe and imitate smoking behaviours.⁴

Since teachers have daily interaction with the students and are important influential group on tobacco smoking control this potential can be limited if teachers restrict using tobacco in school premises.⁵ During 2019-2020, current use of any tobacco products among middle to high school students decreased. These declines resulted 1.73 million fewer current youth tobacco products users in 2020(4.47million) compared to 2019(6.20 million).⁶ The present study was conducted in the frame of Global School Personnel Survey (GSPS) to collect baseline information on the existence and effectiveness of tobacco control policies in schools, to assess training and materials requirements for implementing tobacco prevention to and control interventions in schools.

Method

A cross sectional study was conducted among teaching and nonteaching staff working in government and private schools of Bangalore south region. Stratified random sampling technique was used. In the first phase stratification was done to select government and private schools. The list of schools was procured from DDPI (Deputy Director of Public Instruction) website.⁷ There are a total 962 government school and 357 private schools. A total of 40 government and 20 private schools were selected to obtain a total sample of 420 study participants. In the second phase simple random sampling technique was used to include schools from the strata. Government aided private schools were excluded from

the study because of the non-accessibility of the schools as it was not feasible and permission for the study from schools were delayed repeatedly. The study was conducted for a period of six months from May to October 2019.

The sample size was calculated based on the study done by Sinha et al^[8] with the prevalence of 25.7% tobacco use and using formula $N = z^2 P(1-P) / D^2$ The Global School Personnel Survey (GSPS) uses two-stage stratified random sampling design.¹ School personnel participation was voluntary and kept anonymous by means of self-administered data collection method. Those who were present on the day of study were explained the study protocol and those given informed consent were eligible to participate and included in the study. Institutional ethical clearance was obtained. The questionnaire used for Global School Personnel Survey (GSPS) was a common tool standardized for this purpose by the Center for Disease Control and Prevention (CDC) and World Health Organization (WHO),¹ Cultural habits like betel nut chewing with tobacco and other forms of tobacco such as bidi smoking are prevalent among Indian population so pre-validated question related to these topics were added in the questionnaire.⁹ The questionnaire was designed with no skip pattern to allow all respondents to answer all questions. The final India questionnaire were translated by a professional translator into local language (Kannada) and back translated into English to check for accuracy and pretested. The questionnaire was pilot tested among 30 school personnel to check for the validity and reliability before starting the study. Cronbach's α derived was 0.75 which was acceptable. In the present study question regarding existence, implementation and enforcement of tobacco control policies in school and assessment of training and material requirement for implementing tobacco prevention and control interventions were used and the final questionnaire consisting of 15 questions. Statistical analysis- All data were analyzed using Statistical Package for the Social Sciences (SPSS) v.22 IBM Chicago. Chi-square test and Fisher's Exact Test was used to demonstrate cross tabulation with confidence intervals. Significance level of 0.05 was considered for statistical analyses. ANOVA was used to compare the mean knowledge among the staff group.

Results

Over 86.5% of English medium and 83.1% of Kannada medium school personnel denied the purchase of cigarettes or tobacco products inside the school building. Majority of the Kannada medium school personnel (74.2%) agreed that tobacco products should not be sold or bought within 100 meters of the school buildings. Over 87.6% Kannada medium school personnel were aware that the school had policy or rule specifically prohibiting tobacco use among students inside the school building. Majority of the Kannada medium

school personnel (75.3%) knew the existence of policy or rule specifically prohibiting tobacco use among students outside school buildings, but on school premises/property.

Over 78% of English medium school personnel were unaware that their school had policy or rule specifically prohibiting tobacco use among school personnel inside school building. Both the medium school personnel were unaware about the schools policy or rule specifically prohibiting tobacco use among school personnel outside school buildings, but on school premises/property. Majority of the Kannada (66.7%) school personnel did not knew the school had policy or rule specifically prohibiting tobacco use among school personnel at school sponsored activities wherever they occur.

About 69% of English medium school personnel said that their school had complete enforcement of its policy on tobacco use among students and 63.9% of Kannada medium school personnel had partial enforcement of its policy on tobacco use among students in their schools. Around 90% of English medium school personnel said and 70% of Kannada medium school personnel had complete enforcement of its policy on tobacco use among school personnel in their schools. Over 66.0% of English medium school personnel and about 70.8% of Kannada medium school personnel had policy or rule prohibiting the use of all forms of tobacco by school personnel, visitors, and students in all school buildings, on school grounds, and at school- sponsored events in their schools.

Over 80% of English medium school and 89.9% of Kannada medium school personnel had tobacco use prevention included in their school curriculum. About 72% of English medium school and 82.4% of Kannada medium school personnel had access to teaching and learning materials about tobacco use and how to prevent its use among youth. Over 80% of English medium school and 89.9% of Kannada medium school personnel had received training to prevent tobacco use among youth. About 55% of English medium school and 47% of Kannada medium school personnel had limited non-classroom programs or activities (such as an assembly) used to teach tobacco use prevention to students in your school.

Nearly all the school personnel agreed that their school should have a policy or specific rule promoting smoking cessation among school personnel and school students and majority of the schools had completely enforced rules for tobacco free school campus. Very less of both the school personnel had not received training to prevent tobacco use among students. Both the English and Kannada medium school personnel were equally aware of the policies that were implemented in the schools, about the curriculum that was included in the school and the teaching and learning material assess to prevent tobacco use which was statistically significant.

Table1- School policy or rule specifically prohibiting tobacco use among students inside school buildings

CHI SQUARE TEST							
			group		X ²	df	p
			ENGLISH MEDIUM	KANNADA MEDIUM			
Does your school have a policy or rule specifically prohibiting tobacco use among students inside school buildings?	Yes	Count	48	78	24.576	2	<0.001
		% within school policy among students inside school	38.1%	61.9%			
		% within group	53.9%	87.6%			
	No	Count	31	9			
		% within school policy among students inside school	77.5%	22.5%			
		% within group	34.8%	10.1%			
	I Don't Know	Count	10	2			
		% within school policy among students inside school	83.3%	16.7%			
		% within group	11.2%	2.2%			

Measure of Association			
		Value	p
Nominal by Nominal	Phi	0.372	<0.001
	Cramer's V	0.372	<0.001

Table 2- Enforcement of Policy for students in schools.

CHI SQUARE TEST							
school enforce policy for students * group		group		X ²	d f	p	
		ENGLISH MEDIUM	KANNA DA MEDIU M				
school enforc e policy for studen ts	No policy	Count	46	9	18.12 5	3	<0. 001
		% within school enforce policy for students	44.7%	31.0%			
		% within group	51.7%	10.1%			
	completel y	Count	20	57			
		% within school enforce policy for students	69.0%	55.3%			
		% within group	22.5%	64.0%			
	Partially not at all	Count	13	23			
		% within school enforce policy for students	36.1%	63.9%			
		% within group	14.6%	25.8%			
	Not at all	Count	10	0			
		% within school enforce policy for students	100.0%	0.0%			
		% within group	11.2%	0.0%			

Measure of Association			
		Value	P
Nominal	by	Phi	0.319
Nominal		Cramer's V	<0.001

Table3 – Tobacco policy and enforcement of policy in schools and training material access

VARIABLES	PERCENTAGE %		
	YES	NO	I DONT KNOW
Does your school have a policy or rule specifically prohibiting tobacco use among students inside school buildings?	87	22.5	16.7
Does your school have a policy or rule specifically prohibiting tobacco use among students outside school buildings, but on school premises/property?	62.6	37.5	22.6
Does your school have a policy or rule specifically prohibiting tobacco use among school personnel inside school buildings?	85.4	10.1	28.6
Does your school have a policy or rule specifically prohibiting tobacco use among school personnel outside school buildings, but on school premises/property?	62.9	22.5	37.1
Does your school have a policy or rule specifically prohibiting tobacco use among school personnel at school sponsored activities wherever they occur?	74.2	33.3	26.2
How well does your school enforce any of its policy (or rule) on tobacco use among students?	55.3	31	25.8
Is tobacco use prevention included somewhere in your school curriculum	80%	89.9%	10%
Did you have access to teaching and learning materials about tobacco use and how to prevent its use among youth?	72%	82.4%	12%
Have you ever received training to prevent tobacco use among youth?	68%	56%	31%
Are non-classroom programs or activities (such as an assembly) used to teach tobacco use prevention to students in your school?	55%	47%	30

Discussion

Majority of countries of the world are in a state of tobacco epidemic, with larger population of tobacco users emerging day by day. Tobacco has been proven to be addictive & harmful to health in many ways. In India, various forms of smoke & smokeless tobacco are used by the people. Tobacco related lung diseases & cardiovascular diseases cause a significant proportion of morbidity & mortality.¹⁰ The present study conducted gives baseline information about the policy or specific rule prohibiting tobacco use among school personnel and students inside and outside of the school building and enforcement of policy on tobacco use among students, school personnel, visitors inside the school.

In India the government has imposed strict rules and regulation regarding the selling and using of tobacco products around the school surroundings as well as in the public places. Both the private and public schools have policy or rules prohibiting the use of all forms of tobacco by school personnel, visitors, and students in the schools and the school personnel will be provided training to create awareness among the youth prevent the tobacco use.

Previous studies have shown that schools with antismoking policies have a reduced probability of student exposure to teachers who smoke in school as well as significantly lower prevalence of student smoking. The small number of studies that have showed the effect of school smoking policy on adolescent smoking behavior suggest that the prevalence of smoking declines when there is a ban on student smoking on the school grounds.¹¹

According to the study by Dorot et al.,¹¹ most of the study participants expressed the need for a training dedicated to the youth to prevent their tobacco use, but only about half of them thought that information about health consequences of smoking given by a professional had impact on the youth's decision about tobacco use. Whereas in study conducted by Dhirendra et al.,¹² over 60% of the school personnel reported that there was no policy on prohibiting tobacco use; either for students or for school personnel. In the present study 87.6% of the school personnel had received training to prevent tobacco use among youth and were aware about the schools having policy or rule prohibiting the use of all forms of tobacco by school personnel, visitors, and students in all school buildings, on school grounds, and at school- sponsored events in their schools.

In the present study 72% of English medium school and 82.4% of Kannada medium school personnel had access to teaching and learning materials about tobacco use and how to prevent its use among youth in comparison to the study by Farshad et al.,¹³ only 27.7% asserted that access to such resources for knowledge of the effects of cigarette

smoking and skills to prevent smoking, which are far behind the global statistics. Tobacco use prevention and reduction among students requires a comprehensive approach involving teachers, administrators, parents, and other influential persons. School personnel may even under-estimate the smoking behavior of students, therefore more training may enhance their knowledge towards smoking hazards, better estimation of the problem and planning appropriate interventions to reduce smoking and adopt smoking policies at schools.¹³

School programs are often one of the most important approaches mentioned in efforts to denormalize tobacco. Willingness to conduct anti-smoking activities among the youth, access to appropriate educational materials and knowledge are important elements of an effective curriculum to prevent and reduce tobacco use among students.¹¹ In the present study 89.9% of Kannada medium school personnel had tobacco use prevention included in their school curriculum and about 82.4% of Kannada medium school personnel had access to teaching and learning materials about tobacco use and how to prevent its use among youth. The limitation of the study is a self-reported study; it may affect the extrapolation of the results.

Recommendation

- 1) To organize regular training sessions about the health effects of smoking given by nurses in health institutions or at schools
- 2) School curriculum that includes tobacco use prevention
- 3) Access to teaching and learning material about tobacco use and its prevention

Conclusion

We can conclude from the results of the present study that the school personnel's were well aware of the policy or rule prohibiting the use of all forms of tobacco by school personnel, visitors, and students in and around the school buildings. The school personnel's had received training to prevent tobacco use and they had access to teaching and learning materials about tobacco use and how to prevent its use among youth. From this study it can be understood that every school should organize regular training sessions to school personnel about the effects of smoking on health to the school students.

Declaration

Funding: None

Conflict of interest: None declared

Ethical approval: Obtained by institution.

Reference

- 1) GTSS Collaborative Group (2006). The Global School Personnel Survey: a cross-country overview. *Tob control* 15: 120-130.
- 2) CDC Fact Sheet, Global School Personnel Survey (GSPS) Participating Countries. Available at: nccd.cdc.gov. Accessed on 13/02/2023
- 3) World Health Organization. WHO report on the global tobacco epidemic, 2021: Addressing new and emerging products. Available at: www.who.int. Accessed on Jan 17, 2023.
- 4) Huang HW, Lu CC, Yang YH, Huang CL. Smoking behaviours of adolescents, influenced by smoking of teachers, family and friends. *Int Nurs Rev.* 2014; 61(2):220-227.
- 5) Erick and Smith: Prevalence of tobacco smoking among school teachers in Botswana. *Tobacco Induced Diseases.* 2013 11:24.
- 6) Gentzke AS, Wang TW, Jamal A, Park Lee E, Ren C et al. Tobacco product use among Middle and High School Students. United States, 2020. *Morbidity and Mortality weekly report* 2020; 69(50); 1881-1888.
- 7) Education in Karnataka state 2011-12. A state wise and district wise analytical report. Department of Education Government of India. Accessed on 20.01.2017. Available from: www.ssakarnataka.gov.in.
- 8) Sinha D N, Gupta P C, Pednekar M S. Tobacco use among school personnel in eight Northeastern states of India, *Indian Journal of Cancer.* 2003;40 (1):3-14.
- 9) Global Adult Tobacco Survey, India 2009- 2010. Ministry of health and family welfare. Government of India .Accessed on 28th Feb 2017. url at ntcp.nhp.gov.inGlobal-Adult-Tobacco-Survey-India-2009-2010-Report.pdf .
- 10) Savadi P, Wantamutte AS, Narasannavar A:Pattern of tobacco use among primary school teachers in Belgaum city, India- A cross sectional study. *Global Journal of Medicine and Public Health.* 2013,2(4).

- 11) Kaleta D, Polanska K, Rzeznicki A, Stelmach W, Wojtysiak. Tobacco use patterns, knowledge, attitudes towards tobacco and availability of tobacco control training among school personnel from a rural area in Poland. *Tobacco Induced Diseases*. 2017; 15(1):3.
- 12) Sinha DN, Gupta PC. Tobacco use among school personnel in Orissa. *Indian J Public Health*. 2004; 48(3):123-127.
- 13) Farshad AA, Vesali S, Azaripour H, Rahimi Z, Akbari F, Asadi-Lari M. School personnel tobacco use in Iran: Results of the global school personnel survey. *Prim Health Care*. 2012; 2:119.