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Tobacco use and tobacco control practices of school teachers in Kerala, India: Results of a cross sectional survey

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ABSTRACT

School teachers have an important responsibility for tobacco control among youth and in many countries including India, teachers are considered to be role models in the society. We assessed tobacco use pattern among school teachers in Kerala state of India and studied their practices on tobacco control in the school. We surveyed 2216 school teachers (mean age 44 years, men 6%) in Thiruvananthapuram district in Kerala. The overall prevalence of ever smoking was 5.3%. Current use of any form of tobacco was reported by 4.8% of men. Current use of smoking and smokeless tobacco was reported by men only. Close to 10% of teachers noticed sale of tobacco within 100 yards of their schools. Men teachers who are current tobacco users should quit tobacco to become role models for their students and support implementation of the cigarettes and other tobacco products act in the schools.

Keywords: Tobacco use, school teachers, Kerala, India

Introduction

Tobacco epidemic is one of the biggest public health challenges in the world and majority of the tobacco users live in low-and middle-income countries (WHO, 2018). Tobacco prevalence varies by occupation with comparatively lower rates among educators (Smith, 2008). Teachers are role models for the community and can play a major role in tobacco control among youth (Al-Naggar et al., 2012). Kerala state in India is in an advanced stage of demographic and epidemiological transition (India State-Level Disease Burden Initiative Collaborators, 2017). According to Global Adult Tobacco Survey (GATS-2, 2016-17), tobacco use prevalence in Kerala was 12.7% compared to the national average of 28.6%. There is marked difference in tobacco use among men and women in the state (men:22.9%, women: 3.6%). A significant decrease (relative change: -40.7) in tobacco prevalence was observed in the state from 2009-10 to 2016-17 (IIPS, 2009-10; GATS-2, 2016-17). In 2011, Government of Kerala banned all types of smokeless tobacco. The strong commitment from the state government along with the involvement of various non-government organizations in effectively implementing tobacco control programs with an integrated approach was the main reason for this reduction.

Various studies reported tobacco use among school teachers in India. One study from the state of Rajasthan among school personals including teaching and non-teaching staff reported a current daily smoking prevalence of 14.4% and current daily smokeless tobacco use of 11.7% (Sharma et al., 2004). Another study from Bihar among 755 school personals including principals of the schools, teachers and office staff reported a current tobacco use prevalence of 35.5% (Gupta et al., 2014). The present study was done exclusively among school teachers in Kerala. The objective of this study was to assess tobacco use pattern among school teachers in Kerala state of India and their tobacco control practices in schools.

Materials and Methods

As part of a randomized controlled trial (RCT) on hypertension control, a baseline survey was conducted among 2216 school teachers in the state. The study methodology was published elsewhere (Mini et al., 2019). In brief, the study was done among school teachers aged 30-55 years from 92 randomly selected (using computer generated random assignment) schools (government and government aided) from a total of 900 schools in Thiruvananthapuram district, Kerala. From each selected school, 15 teachers were randomly selected when there were 15-55 teachers and for every additional 50 teachers, we selected another 15 teachers. All teachers were selected if there were <15 teachers. Trained field investigators with the supervision of the research team collected the data from school teachers at the premise of the schools. The interview schedules were administered in *Malayalam*, the local language of the state. Current use of tobacco was assessed by asking the questions “do you currently smoke?” and “do you currently use any type of smokeless tobacco products?”.

Permission to conduct the survey was obtained from the education department, Government of Kerala and the head of each selected school. The study got ethical clearance from the institute ethics committee of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum. Informed written consent was obtained from all teachers before the commencement of the study. Data collection was done using modified World Health Organization (WHO) STEPS questionnaire. We also collected information regarding smoking by other individuals in their home or at their working place. In addition, we collected their practices on tobacco control in the school such as the sale of tobacco within 100 yards of the school noticed by the school teachers, their awareness regarding the ban of tobacco use in the school, also whether they have taken any action against the use of tobacco by the students during the past one year. Data were analysed using SPSS for Windows version 21.0. Correction for clustering was performed in data analysis.

Results

Mean age of teachers was 44 years (SD:5.8) and 16.1% were men. The overall prevalence of ever smoking was 5.3% (95% CI: 4.2-6.6) [men 32.5%, women 0.1%]. Current smoking was reported by men teachers only (2.8%) (CI:1.5-5.1). Among the current users, 70% reported using it daily and majority were using cigarettes. Ever use of smokeless tobacco was reported by 2.9% of teachers (CI:2.1-3.9) [men 12.6%, women: 1.1%]. Current use of smokeless tobacco was reported by men only (2.2%) (CI:1.1-4.1), among them one fourth were using it daily. Snuff and betel quid with tobacco was the main smokeless tobacco products used. Among men, exclusive use of smoking was 2.5%, smokeless tobacco was 2.0%, and use of both products was 0.3% making an overall prevalence of current use of any tobacco product as 4.8%.

Table 1: Tobacco use pattern among school teachers

| Tobacco use | Men N=357 | Women N=1859 | Total N=2216 |
|----------------------------|----------------------|-------------------------|-------------------------|
| Ever Use | | | |
| Smoking only | 83(23.2) | 2(0.1) | 85(3.8) |
| Smokeless only | 12(3.4) | 20(1.1) | 32(1.4) |
| Both smoking and smokeless | 33(9.2) | 0(0.0) | 33(1.5) |
| Any form of tobacco users | 128(35.8) | 22(1.2) | 150(6.7) |
| Never users | 229(64.2) | 1837(98.8) | 2066(93.3) |
| Current Use | | | |
| Smoking only | 9(2.5) | 0(0.0) | 9(0.4) |
| Smokeless only | 7(2.0) | 0(0.0) | 7(0.3) |
| Both smoking and smokeless | 1(0.3) | 0(0.0) | 1(0.1) |
| Any form of tobacco users | 17(4.8) | 0(0.0) | 17(0.8) |
| Never users | 340(95.2) | 1859(100.0) | 2199(99.2) |

Only a few teachers (1.2%) observed someone smoking inside their home and 12 teachers reported to have seen other persons smoking in the school. While asking the question on the anti-tobacco rules in their school, five teachers reported that tobacco use was allowed in certain places in their school, two teachers reported that there are no defined rules on tobacco use in their school, and all other teachers (99.7%) reported that use of tobacco is not allowed in any place in the school. Nearly ten percent of the teachers (9.5%) reported noticing sale of tobacco within 100 yards of the school: more by men (12.0%) than women (9.0%). Majority (98.7%) reported that tobacco use was banned in their schools. More than one fourth (27.0%) of the teachers reported that they made some actions against tobacco use by students within the past one year.

We looked at the association between background characteristics and tobacco use pattern of men. Current as well as previous use of tobacco was higher for older teachers. Current use of tobacco was higher among teachers with comparatively less years of experience, higher for high school teachers, those who were not currently married (single, divorced, separated, widowed) and Muslims compared to their counterparts. However, none of these associations reached statistical significance.

Discussion

Around 5% of the male teachers reported some form of tobacco use in this study, which is lower than the prevalence of tobacco use in general population in the state (GATS 2, 2016-17). However, considering the role model status of teachers in a society in India and Kerala, teachers are not expected to use any form of tobacco. Despite the tobacco control activities of the state including the ban of tobacco in schools in Kerala, these teachers might have used this out of their working time or may be during the school break timings. Our finding that only men teachers reported current tobacco use was similar to the low tobacco prevalence among women in the general population and the taboo related to smoking by women in the state. Overall prevalence of tobacco use in our study was lower than that reported from school teachers of Karnataka state of India (14.5%) (Savadi et al., 2013) and Nepal (64.9%) (Sah, 2007). Overall smoking prevalence in our study was slightly lower than that reported among school teachers in Botswana (3.2%) (Erick & Smith, 2013). Smoking prevalence among men teachers in our study was much lower than that reported among men school teachers in other states of India (Sharma et al., 2004; Gupta et al., 2014) and lower than that reported among men school teachers in other parts of the world such as Botswana (10.8%) (Erick & Smith, 2013) and Turkey (27.8%) (Mermer et al., 2016). Similar to our findings the primary school teachers from Karnataka state of India reported that only men teachers used tobacco (Savadi et al., 2013).

The main strength of the study is that it is based on a large representative sample of school teachers from a district that fairly represents Kerala State (Government of Kerala, 2006) where the tobacco prevalence among general population was the lowest among the major states in India (GATS-2, 2016-17). To our knowledge, this is the first comprehensive study reporting both smoking and smokeless tobacco use among school teachers from Kerala. The main limitation of the study is that data collection was done at the premise of the schools which might have influenced the self-reports of tobacco use among teachers. Since this is a part of a large RCT, personal information like name and phone numbers were collected during the survey. This might also have influenced the reporting of tobacco related questions. So, the actual prevalence of tobacco use in this study may be more than the reported prevalence. All the details are based on self-reports; however, self-reports of tobacco use were reported to correlate with the biochemical findings (Mini et al., 2015).

Teachers are highly respected in a community in India and are having important role on tobacco control especially on student's tobacco use. Measures should be taken for complete abstinence of school teachers from the use of any tobacco product. Men teachers who are current users of tobacco should try to quit tobacco to become role models for their students and support implementation of the cigarettes and other tobacco products act (COTPA) in their schools. The successful implementation of COTPA in the state needs to expand to all the schools so that no teacher or student in the schools uses any form of tobacco. When the State is becoming a model for tobacco control in the country school teachers should be in the forefront of such tobacco control activities. Teachers who are current tobacco users should quit tobacco and join the other teachers to implement tobacco free schools.

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Ethical Approval: The study was approved by the Institutional Ethics Committee.

Competing Interests: The authors declare that they have no competing interests.

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