

## KAP STUDY

# Awareness of Health Policies and Risks Regarding Tobacco Smoking Among School Teachers in Pakistan

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## ABSTRACT

**Background:** The phenomenon of smoking among schoolchildren has been observed to stem from lenient attitudes of teachers towards smoking. Smoking, a health hazard, proven over years of research, leads to increase in morbidity and mortality rates. This study determined the role of school policies and teacher attitudes towards the perception and adoption of smoking habits by students of private and public schools.

**Method:** This was a cross-sectional study in which 632 school personnel in various private and public schools of South Karachi filled a questionnaire. Informed consent was obtained from all participants; ethical approval for this study was obtained from the Ethical Review Committee of JPMC before the study was conducted. Data was collected via survey forms after consent from individuals. Statistical analysis was done using SPSS v.17.

**Results:** The prevalence of teacher smoking within school premises was found to be 8.8% and 5.9% in private and public sectors, respectively. A significant difference was found between the school policies enforced in private and government schools against personnel found smoking ( $p=0.00016$ ). Even though private school personnel smoked more in school premises than government but 32.6% of private school teachers felt responsible for teaching about health compared to only 21.5% public school teachers ( $p=0.0072$ ).

**Conclusion:** There is a pressing need for awareness and education of teachers regarding their attitude towards smoking on school grounds and its significant link with students adopting smoking. Other exposures and risk factors influencing student tobacco usage needs to be studied in more depth.

**Keywords:** Health Policy; Tobacco Smoking; Awareness; Schools.

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## INTRODUCTION

The use of tobacco is a global epidemic killing up to six million people annually. In the next decade, that number is expected to increase up to eight million, with 80% of these deaths taking place in developing and third world countries<sup>1</sup>. Smoking cigarettes is a health hazard, proven over years of research. It can lead to long-term comorbidities such as hypertension and diabetes, cause early aging of the skin, and maintains an undeniable link with up to 90% of lung cancer cases<sup>2</sup>.

A Chinese study regarding cigarette smoking revealed that smoking is also linked to higher rates of postoperative complications. A significantly higher number of cigarette smokers reported infection, bile leakage, and hepatic insufficiency among other surgical complications as compared to their non-smoking counterparts<sup>3</sup>.

According to Senate Standing Committee on National Health Services, Regulations and Coordination (NHSRC) Pakistan in October 2017, it was

directed to ensure enforcement of tobacco control laws that prohibit use of tobacco in any form at all places of public work or use and public service vehicles. These same laws also prohibit sale of cigarettes to minors along with banning the storage, sale and distribution of any smoking substances or tobacco products within fifty metres of any educational institution. Violation of these laws is punishable with up to 3 months of imprisonment or a heavy fine<sup>4</sup>. However, tobacco use remains a persistent public health issue, commonly seen socially and affecting millions more through second hand smoking.

Many researchers have highlighted focusing on adolescents, as the most cost-effective approach to decrease the development of cigarette smoking. Alongside addiction, another major factor reducing effective decline of smoking interventions is social environment; including smoking habits in teachers<sup>5</sup>. Even in Spain, a country with the highest level of smoke-free legislation, 9.2% of teachers reported other teachers smoking somewhere in the school vicinity.

This level of exposure to teacher smoking may explain the link seen between student smoking and teacher smoking<sup>6</sup>. Tobacco control policies implemented in schools are therefore considered potentially effective methods of tobacco prevention among students and tobacco cessation among teachers<sup>7</sup>. This study aimed to determine the effects of school policies and teacher attitudes in the perception and adoption of smoking habits by students of private and public schools.

### MATERIALS AND METHODS

This study was conducted at public and private schools in Karachi, Pakistan. This was a cross-sectional study, conducted from September 2012 to February 2013. Ethical Approval for this study was obtained from the Ethical Review Committee of JPMC before the study was conducted. Questionnaires, constructed with 48

questions were distributed to each teacher after taking their verbal consent. The questionnaire was self-administered and collected back one day after they were distributed. A total of 24 schools from every zone in Karachi in which 6 schools (3 private and 3 public) were selected for random distribution. In the start of each zone, one public/private school was randomly selected and another public/private school was selected at the end of the same zone. The third school was selected equally distant from the first and last school in the same zone. All school employees involved in teaching directly or indirectly (lecturers, principal etc.) were selected. A total of 1000 questionnaires were distributed, out of which 632 were filled and returned, anonymity of the subject was maintained. Data was collected and entered in Statistical Package for Social Sciences (SPSS) Version 17. Chi Square tests were applied and p-values of the mentioned variables were obtained.

### RESULTS

Regarding tobacco smoking preventive teaching and learning materials being provided by the school, 249(68.8%) teachers from private schools and 200(74.1%) teachers from government schools said they had not. Despite the large difference from 113(32.1%) and 70(25.9%) teachers who reported receiving teaching and learning materials, no significant difference was established by chi square between responses from teachers from the two different types of institutes.

There was also no significant difference between private and government schoolteachers who stated that they had never advised directly or indirectly to their students to stop using tobacco. About 252(69.6%) private school teachers claimed they had, compared to 110(30.4%) who said they had not. At government schools 186(68.8%) claimed to have given tobacco warnings to their students compared to 84(31.2%) who said they had not. Table 1 shows the comparative knowledge

**Table 1: Teacher Awareness of School Tobacco Policies and their Effects.**

Questions	Response	Private School N (%)	Government School N (%)	p-value
Have you ever smoked on school premises?	Yes	32 (8.8%)	16 (5.9)	0.171
	No	330 (91.2)	254 (94.1)	

<b>How often do you smoke?</b>	Daily	38 (10.5)	12 (4.4)	0.016
	Occasionally	62 (17.1)	44 (16.3)	
	Not at all	262(72.4)	214 (79.3)	
<b>How well does your school enforce any of its policy or rule on tobacco use among school personnel?</b>	Completely	86 (23.7)	10 (3.7)	0.00016
	Not at all	46 (12.7)	24 ( 8.9)	
<b>To what extent are you responsible for teaching about health?</b>	Primary responsibility	118 (32.6)	58 (21.5)	0.0073
	Do not teach health	54 (14.9 )	52 (19.3)	
<b>Have you ever received training to prevent tobacco use among the youth?</b>	Yes	34 (10.0 )	8 (2.9)	0.00069
	No	308 (90.0)	262 (97.1)	

and awareness of private and public school teachers regarding tobacco use among staff and students.

In response to the question regarding the use of 'bidi's', cigars or pipes within school premises, only

8(2.2%) and 6(2.2%) subjects from private and government institutes respectively, replied in the affirmative. When asked if the teachers think that tobacco use influences tobacco usage in the youth, similar numbers of 306(84.5%) private school teachers and 232(85.9%) government school-

**Table 2: Teacher Perceptions and Attitudes of Tobacco Smoking.**

Questions	Response	Private School	Government School	p-value
<b>Do you think teachers need specific training to train students on how to avoid or stop using tobacco?</b>	Yes	240 (66.3)	186 (68.9)	0.522
	No	66 (18.2)	40 (14.8)	
	Don't know	56 (15.5)	44(16.3)	

<b>Do you think school should have a policy or rule specifically prohibiting tobacco use among students with school premises?</b>	Yes	320 (88.4)	214 (79.3)	0.0018
	No	18 (4.97)	34 (12.6)	
	Don't know	24 (6.63)	20 (7.4)	
<b>How does your school enforce its policy or rule on tobacco use among students?</b>	No policy or rule	76 (20.9)	122 (45.2)	0.00016
	Completely	112 (30.9)	30 (11.1)	
	Partially	92 (35.4)	26 (9.6)	
	Not at all		28 (10.4)	
<b>How concerned are you about tobacco use among youth in your community?</b>	Very Concerned	199 (55.3)	74 (27.4)	0.00001
	Somewhat Concerned	115 (31.9)	68 (25.2)	
	Not at all concerned	46 (12.8)	128 (47.4)	

teachers agreed. Table 2 highlights the perceptions and beliefs of private and public school teacher regarding tobacco usage among students.

### DISCUSSION

According to the Global Youth Tobacco Survey (GYTS 2012-2015), 13.3% boys and 6.6% girls are currently tobacco users. A major point of concern is the narrowing of male and female tobacco user ratio<sup>8</sup>. The results of this study had shown that 88.4% private and 79.3% government schoolteachers believed that there should be policies prohibiting tobacco use among students. It was also noted that only 30.9% private schools along with a bare 11.1% government schools comprehensively enforce anti-tobacco policies among their students.

Evidence from previous studies exhibited that rather than isolated classroom education, a comprehensive School Health Education Program, tobacco-free policies, positive role models, cessation support and community programs that involve parents, mass media and local organizations appear to enhance and sustain the effectiveness of school-based smoking prevention efforts<sup>9</sup>. This is an effort required at a national and local government level, however, along with the cooperation and serious implementation by school administration.

Results from this study reflected that 20.9% private school teachers and 45.2% government schoolteachers did not have any knowledge of institutional anti-smoking policies aimed at students. A gap in understanding and vision may

lead to difficulties in enforcing policies curbing tobacco usage, without clearly promoted and communicated goals and outcomes. The students may view their teachers' tobacco smoking to represent an undermining or rebellion of the school authority and the realistic need to enforce such rules among students<sup>10</sup>. The results of this study showed that 91.2% private school teachers and 94.1% government schoolteachers did not smoke within school premises.

Cigarette smoking among teachers on school grounds, gives rise to notions that school tobacco policies are unnecessary and easily disregarded<sup>11</sup>. Consequently, the perceived severity and actual implementation of the punishment associated with violating this policy can also be expected to exponentially decrease<sup>12</sup>.

Highlighting a huge gap conflicting with the importance of enforcing policies believed globally to be essential for students. Along with actively making them, aware of tobacco rules at school as well as the associated punishments for engaging in it<sup>13</sup>. Only 46.9% private and minimal 14.8% government teachers believed that their school of employment completely enforces anti-smoking policies among the staff. Varying smoking policies for teachers and students can create inconsistencies that potentially damage health promotion and smoking prevention efforts. Additionally, blanket smoke-free policies for teachers and students alike are concerning to administrative personnel in context of isolating teachers who are smokers<sup>14,15</sup>.

Cigarette smoking outside of school premises is more likely to come in the range of vision of students, confusing their understanding of the correctness of tobacco smoking<sup>16</sup>. A study conducted in Spain, noted that 54% of students had witnessed teachers smoking on school grounds at some point. Teachers, who serve as role models, could serve to consequently undermine and weaken tobacco-free policies by exhibiting their smoking on school premises<sup>17</sup>.

It was observed that 55.3% of the private school subjects and 27.4% of government school subjects were concerned about tobacco usage among their students. Although there is no evidence that any of the existing school-based approaches to smoking prevention is more superior to the other. One of the only UK studies showing significant benefit, initiated conversations among school pupils and their peers regarding smoking and showed up to 2 years' delay in the initiation of smoking<sup>18</sup>.

Although major changes have been seen in public perception towards tobacco smoking as well as in the tobacco control and education environments since this study was conducted, the significance of

approaching young student groups through their peers cannot be undermined<sup>19</sup>.

It was also observed that 8.8% private school teachers and 5.9% government schoolteachers agreed to having smoked on school premises at some instance. Previous studies show that smoking behaviour of parents and teachers can influence the youth around them to smoke as well as adopt a pro-smoking attitude. Their exposure to smoking outside of the school environment and psychological factors such as dealing with academic stress may further reinforce these habits<sup>20</sup>. Findings from a Chinese study on anti-smoking policy highlighted the importance of a well-structured system with education, monitoring and enforcement processes. However, in consistent studies attempting tobacco management in the West<sup>21</sup>, such policies do not appear to be wholly effective.

Interventions such as school policy and parental modelling proved unsuccessful in inhibiting middle school students' smoking initiation<sup>22</sup>, along with the employing a more holistic approach<sup>23</sup>. This highlights the need for appropriate training and communication tools to be given to personnel interacting with and shaping the perspectives of young students. As seen in the results of this study, only 10% of private and 2.9% of government school personnel received some sort of training, although up to 66.3% private school teachers and 68.9% government schoolteachers think that there needs to be specific teacher training on how to avoid or prevent tobacco usage among their students.

However, strategies employed by the school for prevention and management of tobacco usage are not expected to result in successful outcomes if within-campus and off-campus influences remain. Students gain knowledge about smoking through multiple active exposures rather than passively through schools<sup>24</sup>. An estimate shows that almost 90% of existing smokers initiated their smoking habit before the age of 21<sup>25</sup>. The results taken from this study show that 12.8% of private school teachers and 47.4% of government schoolteachers are not at all concerned about the tobacco usage among today's youth. Although numerous tobacco control strategies have been employed to attempt prevention of adolescent smoking, on average 48% of the Canadian youth have been noted to experiment with tobacco products<sup>26</sup>.

The primary influencers on adolescent tobacco smoking seem to be related to their perceived understanding, impressions and personal stance<sup>27</sup>. Some evidence goes as far as to suggest that the feelings of the youth crucially depend on relatedness and belonging at school may depend on deviant behaviour such as cigarette smoking. About 10.5% of the teachers working in private schools and 4.4% of teachers from government

schools were found to be smoking on a daily basis.

The prevalence of smoking, both daily and weekly averages, were predictably lower in schools that strictly implemented restrictions on their students. However, there are many roadblocks in the path to policy implementation, particularly regarding policies concerning teachers' smoking. School activities and events must constantly reinforce a comprehensive approach to smoking prevention, clearly reflecting school policy<sup>28</sup>. It was noted that 84.5% private and 85.9% government teachers think that teacher tobacco use influences youth tobacco use. Support and guidance of teachers can serve to protect against student initiation of health-risk behaviours, but reduction or termination of health-risk behaviours once initiated can prove to be a lot more challenging. A solution to this phenomenon may be through 'engagement', a component of connectedness that reflects how committed students are to personal relationships with their teachers. A connection that could potentially lead to students seeking out and in turn complying with the advice and opinions of their teachers<sup>27</sup>.

The World Health Organisation's MPOWER campaign proposes a collection of strategies and interventions expected to setback the epidemic of tobacco use with six major strategies: Monitoring tobacco usage policies, protection of the public from tobacco smoke, offering resources to assist quitting tobacco, issuing warnings regarding risks of tobacco, enforcing restrictions on tobacco advertising and sponsorships and raising tobacco taxes. In Pakistan, great commitment and dedication to these strategies is needed to assist in diverting the unnecessary morbidity and mortality caused by tobacco smoking efforts<sup>28</sup>.

### CONCLUSION

All-inclusive and well thought-out tobacco smoking prevention policies and campaigns should target teachers to raise their awareness and student understanding of smoking behaviour and effects. School policies should include teacher training regarding their role as role model in preventing initiation as well as assisting with cessation of cigarette smoking in their students.

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### CONFLICT OF INTEREST

The authors have no conflict of interest with any organisation or subject involved in this research study. No funding was received for the purpose of this study.

### ETHICS APPROVAL

The Chest Health and Education Society Board, JPMC granted ethical approval for this study.

### PATIENT CONSENT

Data was collected via questionnaires; consent was taken from each subject before they completed the survey forms.

### AUTHORS' CONTRIBUTIONS

Each author has contributed to the data collection, analysis, result compilation, literature review or paper writing process of this research article.

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