Letter to the Editor**Prevalence and correlates of tobacco use among grade 8–10 students in Peshawar, Pakistan***M.A. Shaikh¹ B.P. Hunt²*

Sir,

Tobacco-related deaths from various diseases are slated to exceed 8 million globally by the year 2030, with over 80% of this mortality burden in developing countries such as Pakistan [1]. A population-based survey of individuals aged 15 years or older in Pakistan reported a smoking prevalence rate of 15.2% [2], while a population-based, representative survey of students in Islamabad and Lahore reported a prevalence rate of 11% in grade 8–10 students [3]. There are no studies of tobacco use prevalence in the city of Peshawar.

To describe the association of sex, school grade, offer of free cigarette from a representative of a tobacco company, parental smoking status, people smoking outside one's home in one's presence, and being taught in school about the effects of smoking with self-reported ever use of cigarettes in male and female students in the city of Peshawar, and its prevalence. We used data from the Global Youth Tobacco Survey (GYTS) for Peshawar, conducted in 2004 [4]. The GYTS is a collaborative project of the World Health Organization, the Centers for Disease Control and Prevention, United States, the Canadian Public Health Association, and the Pakistani health authorities. All the findings and opinions reported are solely those of the authors.

We selected all those who responded to the questions of having ever tried/experimented with cigarette smoking, even one or two puffs, in their lifetime, and those who responded to the question of having used any form of tobacco product other than cigarettes,

e.g. chewing tobacco or snuff, in the previous month. Students responding affirmatively to either or both of these questions were identified as tobacco users. A 2-stage, cluster sample design was adopted for the GYTS–Peshawar to produce representative estimates for grade 8–10 students. Design-based analysis with SUDAAN 10 was done using multivariate logistic regression analysis; adjusted odds ratios (AORs) were computed for the association of ever use of cigarettes with sex, grade, etc.

The overall prevalence of ever use of tobacco, was 17%, [95% confidence interval (CI): 10%–23%] ($n = 2159$). In male students, prevalence of ever use of tobacco was 22% (95% CI: 16%–28%); prevalence in female students was 8% (95% CI: 3%–12%). Compared to female students, males were more likely to have ever used tobacco (AOR 2.52; 95% CI: 1.43–4.44).

Compared to students who were never offered a free cigarette by a representative of cigarette manufacturer, students who did receive such an offer were more likely to report having ever used tobacco (AOR 4.02; 95% CI: 2.80–5.78). Compared to students who reported that neither of their parents smoked cigarettes or they did not know about their parents' smoking status, students who reported that one or both of their parents smoked cigarettes were more likely to report having ever used tobacco (AOR 1.84; 95% CI: 1.16–2.91). And compared to students who did not report having seen people smoking cigarettes in their presence in the past 7 days in places other than their

home, students who had seen people smoking in this time period were more likely to report having ever used tobacco (AOR 1.77; 95% CI: 1.20–2.61).

Logistic regression analysis was carried out on 1959 students for whom all the data were available. No statistically significant associations were found between ever use of tobacco with either grade 8 and 9 versus grade 10 students, or having been taught during the current school year in any of the classes about the effects of smoking. The Hosmer–Lemeshow Wald goodness-of-fit test concluded that the model was a good fit for the data.

The results of this unique representative survey of Peshawar demonstrate that male students were much more likely than female students to report having ever used tobacco. The association with influence of parental cigarette smoking and being exposed to other people smoking cigarette outside the home underlines the need for targeting health education efforts at adults, offering the long term premium of decreased incidence in future generations.

Public health education efforts in concert with effort/input from parents, teachers and school administrations would ensure better outcomes in curbing this addictive behavior in students. The results underline the role of legislative reforms targeting free distribution of cigarettes to youth by the cigarette manufacturers; hence ensuring a decrease in the future disease morbidity and mortality burden associated with tobacco use in the city of Peshawar.

References

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Masood A. Shaikh

Independent Consultant, Cairo, Egypt (masoodali1@yahoo.com).

Barry P. Hunt

Department of Food Science, Nutrition and Health Promotion, Mississippi State University, Mississippi, United States of America.

Gender, women, and the tobacco epidemic

This monograph contributes to the scientific understanding of gender, women, and tobacco in the context of efforts to control the global tobacco epidemic. Topics covered include determinants of starting to use tobacco; exposure to second-hand smoke; the impact that tobacco use has on health; addiction and cessation; treatment programmes; and gender and human rights policy.

The monograph also addresses national economic policy with regard to tobacco control, international treaties, and strategies for tobacco-free mobilization at the regional and international levels. Special attention is paid to an analysis of policies that affect girls and women throughout the life course. Men's responsibility to protect women against second-hand smoke is also highlighted.

The full document or individual chapters can be downloaded at:

http://www.who.int/tobacco/publications/gender/women_tob_epidemic/en/index.html