Tobacco use among school personnel in Bihar, India

Tobacco use often starts in adolescent years when school personnel form important role models, potentially influencing tobacco use. To plan effective interventions, it is essential to have information on the extent and the type of tobacco use among school personnel, their attitudes towards tobacco control, and the existence of school health policies about tobacco.

Tobacco use among 13–15 year old students is being studied worldwide through the Global Youth Tobacco Survey (GYTS) which incorporates the Global School Personnel Survey (GSPS). The objectives of GSPS are: (1) obtain baseline information on tobacco use; (2) evaluate the existence, implementation, and enforcement of tobacco control policies in schools; (3) understand the knowledge and attitudes towards tobacco control policies; (4) assess training and material requirements; and (5) verify some information obtained from the GYTS. The GSPS was piloted in the state of Bihar, India and this report presents the results from the first pilot of GSPS.

GSPS is a cross sectional survey that employs a cluster sample design to produce a representative sample of school personnel drawn from the same schools that were selected for GYTS. For GYTS, schools were sampled with probability of selection proportional to the school enrolment size in grades 8–10 (corresponding to ages 13–15 years). A total of 50 schools out of 9905 listed for Bihar state were sampled. All school personnel (including all non-teaching staff) in the selected schools were eligible to participate. In India, education is a state responsibility and almost all schools were part of Bihar state educational system.

Bihar GSPS was conducted in the months of September and October 2000 using the same survey personnel who had conducted GYTS. The questionnaire contained 46 multiple choice questions. Survey procedures allowed for anonymous and voluntary participation. School personnel completed the self administered questionnaire during the break hours, recording their responses directly on a sheet which could subsequently be optically read by machine. The data file obtained was analysed using Epi Info. This software took the sampling weights into account for producing unbiased estimates of proportions and confidence intervals.

All selected schools participated in the survey (response rate 100%). Selected schools reported having a total of 697 eligible personnel, out of which 637 returned the completed questionnaire. The main reason for non-response was absence from school on the day of the survey. The school personnel response rate was 91.4%.

Out of 637 participating school personnel, 73% were men. Some 22.5% were less than 40 years old and 38.6% were 50 years or older. Very few were more than 60 as mandatory retirement age is 60 years. Women were somewhat younger than men. The majority of school personnel (83.5%) were teachers and there were only two health personnel.

Table 1 shows tobacco use prevalence among school personnel. Some 77.4% reported using tobacco in one form or the other. The prevalence was almost identical among men (77.6%) and women (77.0%). There was little difference in smokeless tobacco use among men (58.7%) and women (55.4%). Although smoking among women in India is generally proscribed, prevalence of smoking among women in this sample was quite high (31%). Most of it was cigarette smoking (26.9%). Among men, overall smoking prevalence was 47.4%, and cigarette smoking 40.5%. It should be noted that prevalence of cigarette smoking and other smoking habits do not add up to the prevalence of smoking because prevalence of smoking and smokeless tobacco use do not add up to prevalence of tobacco use. This is because many individuals reported using tobacco in multiple forms.

Almost all school personnel (91%) agreed that tobacco was addictive, and 85% admitted that it had serious health consequences. While 92% of never users of tobacco believed that environmental tobacco smoke (ETS) was harmful to people who were repeatedly exposed to it, 83% of current tobacco users agreed with that statement. While 83% of never tobacco users complained that ETS was a nuisance, only slightly fewer (77%) current tobacco users did so.

Except for two people, everyone replied that there was no policy on tobacco use either for students or personnel. Even though tobacco use among school personnel was high, a vast majority was concerned about youth tobacco use (84.7%). A large proportion (90.4%) wanted a policy prohibiting tobacco use by students and, surprisingly, even more wanted a policy prohibiting tobacco use among school personnel (93.9%).

Another striking finding was that 80% thought that tobacco companies deliberately encourage youth to use tobacco. Some 88.3% wanted tobacco companies not to sponsor sports events and 95% wanted a complete ban on tobacco advertisements. Surprisingly, even though a majority were tobacco users, 78.4% agreed with the need to increase prices of tobacco products, with no difference between users and non-users.

The GSPS study findings reveal an alarming picture of very high tobacco use among school personnel, and a total absence of any tobacco control policy in schools administered by the state government in Bihar. The results dispel the myth of smoking as taboo among middle class women in India in so far as self administered, anonymous questionnaires revealed 31% of female school personnel reported current smoking and 26.9% reported smoking cigarettes. This social change is likely to be due to several factors such as female emancipation and role modelling from western media. The role of marketing strategies by cigarette companies however, cannot be underestimated. Almost all cigarette advertising imagery includes women, and a cigarette brand specially targeted at women with the name “Ms” is available on the market. This kind of cigarette smoking is still practised away from public view—unlike hukka (hubble bubble) and cheroot smoking by rural women—but clearly it may not remain so for long.

The findings, however, do present an encouraging picture of widespread and near total support towards the formulation and implementation of effective tobacco control policy measures.

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References
Exposure to environmental tobacco smoke in public places in Barcelona, Spain

Exposure to environmental tobacco smoke (ETS) has adverse health effects for both children and adults. Southern European countries have not had the same level of ETS control measures as other western countries. The purpose of this study was to assess current ETS exposure in several locations in Barcelona, Spain.

We collected airborne nicotine with 31 diffusion monitors containing sodium bisulfate coated filters. Between September 1999 and March 2000 different locations were chosen from among the following 18 sites in Barcelona: five underground (subway) stations (n = 5, one measurement in each station); two restaurants (n = 3, one of the restaurants, located in one of the two teaching hospitals referred to below, had measurements taken from smoking and non-smoking areas); two large stores (n = 4, two measurements in each store); two teaching hospitals (n = 4, two measurements from newborns inpatients and pediatrics outpatients departments from one hospital, and two from emergency rooms and radiography emergency departments from the other hospital); one medical school (n = 5), one official language school (n = 2); one secondary school (n = 1); one general practice (n = 2); one public health centre (n = 1), and three households (n = 4, one smoker's home and two non-smoker's households). Nicotine concentrations for the three field blanks all corresponded to airborne concentrations of less than 0.02 µg/m³.

The results of this study are intended to raise awareness of involuntary exposure to ETS and the need to enforce compliance with legislation. Such legislation already exists in Catalonia, affecting the public transport system, health and education centers, and large department stores, where smoking is not allowed except in designated areas. Smoke-free policies not only protect non-smokers from second hand smoke, they also create an environment that makes it easier for smokers to stop.

<table>
<thead>
<tr>
<th>Locations</th>
<th>Sampling time (days)</th>
<th>Nicotine concentration (µg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground (subway) stations (mean)</td>
<td>7</td>
<td>2.2</td>
</tr>
<tr>
<td>Platforms</td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td>Connection 1†</td>
<td>7</td>
<td>3.8</td>
</tr>
<tr>
<td>Connection 2</td>
<td>7</td>
<td>2.1</td>
</tr>
<tr>
<td>Connection 3</td>
<td>7</td>
<td>4.1</td>
</tr>
<tr>
<td>Coach</td>
<td>12</td>
<td>1.0</td>
</tr>
<tr>
<td>Restaurants (mean)</td>
<td></td>
<td>12.4</td>
</tr>
<tr>
<td>Main dining room (no division)</td>
<td>7</td>
<td>10.6</td>
</tr>
<tr>
<td>Hospital A canteen (non-smoking area)</td>
<td>7</td>
<td>11.5</td>
</tr>
<tr>
<td>Hospital A canteen (smoking area)</td>
<td>7</td>
<td>15.0</td>
</tr>
<tr>
<td>Large stores (mean)</td>
<td></td>
<td>2.8</td>
</tr>
<tr>
<td>Store A, Floor 1</td>
<td>7</td>
<td>0.7</td>
</tr>
<tr>
<td>Store A, Floor 2</td>
<td>7</td>
<td>0.4</td>
</tr>
<tr>
<td>Store B, information centre</td>
<td>13</td>
<td>6.2</td>
</tr>
<tr>
<td>Store B, hall</td>
<td>13</td>
<td>3.9</td>
</tr>
<tr>
<td>Medical school (mean)</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Corridor 1</td>
<td>7</td>
<td>2.1</td>
</tr>
<tr>
<td>Corridor 2</td>
<td>7</td>
<td>0.0</td>
</tr>
<tr>
<td>Classroom</td>
<td>7</td>
<td>0.1</td>
</tr>
<tr>
<td>Cafeteria</td>
<td>7</td>
<td>2.0</td>
</tr>
<tr>
<td>Hall</td>
<td>7</td>
<td>0.2</td>
</tr>
<tr>
<td>Language school (mean)</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>Hall 1</td>
<td>7</td>
<td>3.0</td>
</tr>
<tr>
<td>Hall 2</td>
<td>7</td>
<td>1.7</td>
</tr>
<tr>
<td>Secondary school (mean)</td>
<td></td>
<td>9.5</td>
</tr>
<tr>
<td>Teacher’s room</td>
<td>7</td>
<td>9.5</td>
</tr>
<tr>
<td>Hospitals (mean)</td>
<td></td>
<td>0.7</td>
</tr>
<tr>
<td>Hospital B, newborns inpatients</td>
<td>7</td>
<td>0.0</td>
</tr>
<tr>
<td>Hospital B, paediatric outpatients</td>
<td>11</td>
<td>0.2</td>
</tr>
<tr>
<td>Hospital A3, emergency department</td>
<td>7</td>
<td>1.0</td>
</tr>
<tr>
<td>Hospital A, radiography department (emergencies)</td>
<td>7</td>
<td>1.6</td>
</tr>
<tr>
<td>General practice (mean)</td>
<td></td>
<td>1.1</td>
</tr>
<tr>
<td>Doctor’s room</td>
<td>7</td>
<td>2.0</td>
</tr>
<tr>
<td>Stairs</td>
<td>7</td>
<td>0.4</td>
</tr>
<tr>
<td>Public health centre (mean)</td>
<td></td>
<td>3.7</td>
</tr>
<tr>
<td>Room</td>
<td>12</td>
<td>3.7</td>
</tr>
<tr>
<td>Households, non-smokers (mean)</td>
<td></td>
<td>0.0</td>
</tr>
<tr>
<td>House A, living room 1</td>
<td>9</td>
<td>0.0</td>
</tr>
<tr>
<td>House B, living room 2</td>
<td>8</td>
<td>0.0</td>
</tr>
<tr>
<td>House B, bedroom</td>
<td>8</td>
<td>0.0</td>
</tr>
<tr>
<td>Households, smokers (mean)</td>
<td></td>
<td>7.9</td>
</tr>
<tr>
<td>House C, living room</td>
<td>7</td>
<td>7.9</td>
</tr>
</tbody>
</table>

*The monitors were left exposed for 24 hours a day.
†All connections where measures were taken from corresponded to different sites.
§The same hospital where the canteen’s measurement were taken from.

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A smoking cessation telephone resource: feasibility and preliminary evidence on the effect on health care provider adherence to smoking cessation guidelines

Physicians have frequent opportunities to intervene with their smoking patients as approximately 70% of smokers see a physician each year. Even brief counselling by a physician significantly improves the rate of smoking cessation according to meta-analyses performed by the Tobacco Use and Dependence Guidelines Panel and summarised as "ask, advise, assist, and arrange follow-up" in the Agency for Health Care Policy and Research (AHCPR) guidelines. Despite these evidence based recommendations, physicians identify only about half of current smokers, advise less than half, and assist and arrange follow up with a small minority. There are several explanations for this disparity between physicians' knowledge and their actual behaviour including inadequate training, resource and time constraints, and lack of information on community cessation resources.

Table 1 Adherence of health care providers to smoking cessation interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Baseline (n=54)</th>
<th>Post-implementation (n=111)</th>
<th>Relative risk post-implementation v baseline (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asked</td>
<td>37 (69%)</td>
<td>71 (64%)</td>
<td>0.9 (0.7 to 1.2)</td>
</tr>
<tr>
<td>Advised to quit</td>
<td>29 (55%)</td>
<td>65 (59%)</td>
<td>1.1 (0.8 to 1.4)</td>
</tr>
<tr>
<td>Quit date discussed</td>
<td>5 (9%)</td>
<td>14 (13%)</td>
<td>1.4 (0.3 to 3.6)</td>
</tr>
<tr>
<td>Assistance offered</td>
<td>14 (26%)</td>
<td>46 (41%)</td>
<td>1.6 (1.0 to 2.6)</td>
</tr>
<tr>
<td>Follow up arranged</td>
<td>9 (17%)</td>
<td>38 (34%)</td>
<td>2.1 (1.1 to 3.9)</td>
</tr>
</tbody>
</table>

*pOne subject's data missing for this item, n=53. †p=0.052 versus baseline. ‡p<0.02 versus baseline. CI, confidence interval

Table 1

References


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Ophthalmologists' and optometrists' attitudes and behaviours regarding tobacco cessation intervention

Although health care providers can be effective in motivating and helping patients to quit their tobacco use, the potential role of eye care professionals has been under recognised. Several chronic ocular diseases are associated with smoking, including formation of cataracts and age related macular degeneration (a leading cause of blindness). As a cardiovascular risk factor, smoking may also play a role in the development of anterior ischaemic optic neuropathy. In addition, smoking may increase the risk of ocular disease from other disorders, such as diabetes, the main cause of blindness in persons 20–74 years of age.1
Before developing a tobacco cessation intervention for eye care professionals, it is essential to assess the current status of tobacco cessation activities in routine eye care. We sent a 12 item questionnaire to all currently licensed ophthalmologists (n = 1209) and a random sample of 1234 optometrists in four western states of the USA (Arizona, California, Oregon, and Washington), assessing demographics and behaviours, attitudes, and barriers regarding intervention with tobacco using patients. The final return rate was 39% for ophthalmologists and 53% for optometrists. Data are presented only for those in current practice (90% of the ophthalmologists and 53% for optometrists). Since ophthalmology and optometry practice (90% of the ophthalmologists and 53% for optometrists), we report data for each professional group separately without comparing the two.

Table 1 Eye care professionals’ attitudes, beliefs, and perceived barriers regarding intervention with tobacco using patients

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Ophthalmologists (n=422) (%)</th>
<th>Optometrists (n=629) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in practice</td>
<td>23 (SD 11.33)</td>
<td>16 (SD 11.23)</td>
</tr>
<tr>
<td>Sex</td>
<td>85% male</td>
<td>72% male</td>
</tr>
<tr>
<td>Sex</td>
<td>73</td>
<td>70</td>
</tr>
<tr>
<td>Tobacco related behaviours: “How often do you...”</td>
<td>71</td>
<td>38</td>
</tr>
<tr>
<td>Ask patients about tobacco use?</td>
<td>91</td>
<td>81</td>
</tr>
<tr>
<td>Sometimes advise patients to quit tobacco?</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td>Regularly advise patients to quit tobacco?</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Provide educational materials on the ocular effects of tobacco use?</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Barriers to intervening with smokers</td>
<td>83</td>
<td>70</td>
</tr>
<tr>
<td>Lack of time</td>
<td>62</td>
<td>79</td>
</tr>
<tr>
<td>Lack of patient materials</td>
<td>64</td>
<td>78</td>
</tr>
<tr>
<td>Lack of referral resources</td>
<td>63</td>
<td>76</td>
</tr>
<tr>
<td>Concerns about effectiveness</td>
<td>63</td>
<td>69</td>
</tr>
<tr>
<td>Concerns about patient resistance or loss</td>
<td>61</td>
<td>72</td>
</tr>
<tr>
<td>Lack of reimbursement mechanism</td>
<td>57</td>
<td>52</td>
</tr>
<tr>
<td>Concerns about office staff resistance</td>
<td>32</td>
<td>40</td>
</tr>
<tr>
<td>Attitudes about intervening with smokers</td>
<td>81</td>
<td>69</td>
</tr>
<tr>
<td>Believe it is appropriate for them to document patients’ tobacco use</td>
<td>82</td>
<td>71</td>
</tr>
<tr>
<td>Believe it is appropriate for them to advise patients to quit tobacco</td>
<td>74</td>
<td>80</td>
</tr>
</tbody>
</table>

and optometrists who had graduated more recently from their programmes perceived fewer barriers to providing cessation services (r = 0.18, p < 0.01 for ophthalmologists; r = 0.16, p < 0.01 for optometrists). Previous studies have shown a reduction in perception of barriers due to receiving education in tobacco cessation intervention.

Surprisingly, female ophthalmologists were less likely to believe they should advise patients to quit (t(381) = 2.16, p < 0.05), and both female ophthalmologists and optometrists perceived more barriers to doing so (t(365) = −2.34, p < 0.05 for ophthalmologists, t(586) = −2.93, p < 0.01 for optometrists). This reluctance may be due to female eye care providers’ concerns about possible negative patient reactions, or fears of losing patients from their practices. Although this is a convenience sample, our results suggest the feasibility of brief, office based tobacco cessation interventions for use in eye care settings. An intervention must, however, focus on reducing perceived barriers by training eye care professionals in providing an effective, brief intervention that is readily received by patients, as well as providing resources and materials to practitioners. Our data suggest that cooperative agreements with insurance companies to provide reimbursement to providers would facilitate the adoption of the intervention.

As summarised by the Clinical Practice Guidelines, many types of general and specialist providers have successfully incorporated tobacco cessation activities into their practices. One way to extend the reach of tobacco cessation interventions is to utilise other medical specialists to motivate tobacco users to quit. Ophthalmology and optometry

may provide such an opportunity, given the role of smoking in ocular disease, the fact that most visits are for routine rather than acute care, and the presence of support staff who can help implement an intervention.

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References

CORRECTION

The authors of Health impact of “reduced yield” cigarettes: a critical assessment of the epidemiological evidence (Tobacco Control 2001;10(suppl 1):i4-i11) would like to correct a statement in figure 1. The legend to figure 1 and the corresponding text on page 15 should say “Each milligram decrease in machine measured nicotine... rather than “Each milligram decrease in machine measured tar...”.

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Exposure to environmental tobacco smoke in public places in Barcelona, Spain

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