Original Article

Medical students' perspectives on gender and smoking: A mixed methodology investigation in Karachi, Pakistan

Syed Muhammad Mubeen,[1] Martha Morrow,[2] Simon Barraclough[3]

Department of Community Health Sciences, Hamdard College of Medicine & Dentistry, Hamdard University, Karachi, Pakistan.[1]
Nossal Institute for Global Health, The University of Melbourne,[2] School of Public Health, La Trobe University,[3] Melbourne, Australia.

Abstract

Objective: To explore the gender dimensions on influences of tobacco uptake on medical students using both qualitative and quantitative methods.

Methods: A phased mixed-method study design was used with in-depth interviews followed by a survey questionnaire in a 'smoke-free' medical college campus in a private university of Karachi. Eight in-depth interviews were conducted to under-pin themes that were further used for developing the questionnaire. Tabulation and analysis of the quantitative data was done using SPSS software version 12. All the ethical issues for the research were taken into consideration.

Results: One hundred and sixty-five (72 male, 93 female) students participated in the study. Mean age was 21.57 ± 1.66 years. The survey results reported perceived reasons for male smoking as stress relief (74%), image (62%), companionship (54%), leisurely independence (46%) and male power and masculinity (44%). Among reasons for women for not smoking by the majority was that it was frowned upon (87%) while the reasons for smoking clustered around concepts of images (65%), western culture (66%), stress relief (51%) and advertising (36%). A large proportion (55%) of students felt bad and bothered by male and female smoking.

Conclusion: Despite being medical students, the anti-tobacco future role models, traditional concepts of gender were frequently involved that explains smoking and non-smoking gendered behaviours.

Keywords: Gender, Medical students, Tobacco, Smoking, Karachi (JPMA 61:773; 2011).

Introduction

Gender is a key — but often overlooked - determinant of tobacco use, especially in East, South and Southeast Asia, where sex-linked differences in prevalence rates are very large. In all World Health Organization (WHO) regions, men use tobacco more than women. The stark sex-linked differences are greatest in the WHO Western Pacific Region, which covers countries with some of the greatest contrasts, including China, Vietnam, Malaysia and Japan. In these countries, male tobacco use rates are between 3.4 (Japan) and 14.5 (China) times those of women.[1]

While current smoking (any tobacco product) by sex varies greatly in Asian countries that include Bangladesh, China, India, Indonesia and Thailand, this distinction is not as great in Pakistan as in some countries; recent figures put male smoking rates at over 6 times that of women.[2] It also indicates that rates are very high in some predominantly Muslim countries despite the fact that some Islamic scholars have deemed tobacco haram (forbidden for Muslims) due to its negative effects on health and family income, though others have argued that it is merely makruh (advised against).[3]

Interestingly, where cigarette smoking among women is considered a taboo in some Asian countries including Pakistan, its use in other forms among women is more common and acceptable.[4,5] Medical students, the doctors of the future, have the potential to occupy an important position as anti-tobacco advocates and non-smoking role models. However, medical students are members of their society and, as such, may be influenced by normative behaviours that are sex-linked. In order to develop effective tobacco control approaches, gender differences in tobacco use across time, culture and tobacco product should be considered.[6] There are gaps in understanding of the broad influences on tobacco uptake among medical students in Pakistan. This paper presents data on the gender dimensions of a broader study that aimed to document knowledge, attitudes and practices related to tobacco use among a mixed-sex group of medical students in Karachi. We have published main findings from the study elsewhere.[7] The focus here in on the subset of data relating to the ways males and females explain and perceive tobacco use among their own, and the opposite, sex. Both qualitative and quantitative data relevant to gender are presented.

Methods

The study was conducted among medical students of an undergraduate degree programme at Hamdard University, one of Karachi's largest private universities, and one officially designated as a "smoke-free" campus. The study design was mixed-method. It commenced with a qualitative phase using

semi structured, in-depth interviews with eight medical students (4 male, 4 female) to refine areas of enquiry in relation to students' tobacco-related knowledge, attitudes and practices (KAP). Findings were extracted using thematic analysis and, together with review of existing literature, applied to the development of a structured KAP survey for the second phase. The self-report survey was administered to two batches of medical students (total 167) from the second and final years. Participation in the survey was 100%, but two incomplete questionnaires were discarded for non-compliance to instructions. Tabulation and analysis of the quantitative data was done using SPSS software version 12.

Ethical approval for the research was given by Hamdard University authorities as well as the University of Melbourne's Human Research Ethics Committee. Plain language statements were provided to all participants and informed consent were obtained. Participants were assured of anonymity and confidentiality, as well as voluntariness of participation.

Results

Demographic characteristics:

Of the 165 students who participated in the study, females were the majority (58.5%), and the mean age was 21.57 ±1.66 years. The overall prevalence of current (daily or occasional) smoking was dramatically higher among males (32%) than females (1%). In the subsections below, we synthesise findings from both interviews and surveys as they pertain to students' explanations of normative sex-linked patterns of tobacco use and non-use, and their expressed attitudes towards male and female smoking.

Explanations for disparities in tobacco smoking by sex:

Perceived reasons for male smoking:

All surveyed students were asked why they thought many men smoke. The reasons they gave are summarised in Table-1. The main reasons were similar in interviews as well as surveys, and included stress relief, the features of normative gender roles (related to male power, economic independence, image and masculinity) and social norms relating to companionship. It should be noted that the respondents included smokers and non-smokers, which means that for some the concepts reflect their own perceived motivations, and for others the motivations they attribute to those who practise this behaviour.

As can be seen in the table, nearly three-quarters of students of both sexes were of the opinion that cigarettes provided male smokers relief from tension. Only a quarter of males and females identified dependency on cigarettes as a reason for male smoking. The influence of media and tobacco promotional advertisements on men was reported by less than half. While there were only small differences between male and female students on some other popular views (for example 'for glamour/attractive', 'for companionship'), over half the females but less than a third of males cited the influence of 'masculinity', whereas 'for fun' was cited by nearly 53% of males but just 40% of females.

The following extracts from in-depth interviews show how some students expressed their views on the reasons for male smoking.

[Long pause] maybe ... tension ... tension of some kind, hard life ... there could be so many causes. Like it depends ... tension of life, raising a family ... like some people think it is very manly if a man smokes…in school just to show their friends…. (A female student, ex-smoker)

In our society [men] smoke more… maybe he smokes more in company… you can say that it is a sign of masculinity. You look more better and superior ... immature thinking ... fantasy ... usually impressed by others, looks good when you smoke. (A male student, ex-smoker)

Yes, men smoke more… because the men have more exposure with the external environment… as soon they get the company [of smokers] they become like that. Maybe some use to relieve tension. (A female student, non-smoker)

...Males usually do [smoke] ... for a pastime or releasing stress you know ... they are smoking because others smoke ... and some people [men] smoke because they are in stress and tension. Some [smoke] to be cool…(A female student, non-smoker)

Perceived reasons for women being non-smokers:

An overwhelming majority of students, both males and females, believed that the main reason for women not smoking was that it is frowned upon for women (i.e., female gender norms) (Table-1). No other reason was selected by proportions that came anywhere close to this one, although some other reasons also incorporate concepts of gender. During interviews, students cited gender norms, along with the perceived waste of expenditure and limited financial power of women. One former smoker, however, suggested female smoking is more prevalent than is acknowledged, and is hidden for the same reason, i.e. its perceived inappropriateness in Pakistani culture.

First of all there is an economic factor in Pakistan ... economically man is much stronger and most women would not find much money for that ... secondly, there is a cultural phenomena, cultural taboo you can say…[of] women not smoking. (A male student, smoker)

Table-1: Gender perceptions of tobacco smoking by sex (> 1 answer permitted).

	Sex		Total
	Male n = 71 (%)	Female n = 93 (%)	N = 164 (%)
Reasons for men being smokers			
For stress relief	52 (72.2%)	69 (75.0%)	121 (73.7%)
For glamour/attractive/ it is fashionable	43 (59.7%)	59 (64.1%)	102 (62.1%)
To share companionship with smokers	36 (50.0%)	53 (57.6%)	89 (54.2%)
Just for fun/as a pastime	38 (52.8%)	37 (40.2%)	75 (45.7%)
As a symbol of manhood/ masculinity	22 (30.6%)	50 (54.3%)	72 (43.9%)
Influenced by media/ advertisements	29 (40.3%)	40 (43.5%)	69 (42.0%)
Easily addicted to cigarettes	18 (25.0%)	23 (25.0%)	41 (25.0%)
A famous person's influence	20 (27.8%)	15 (16.3%)	35 (21.3%)
Imitate elders	13 (18.1%)	15 (16.3%)	28 (17.0%)
Economic stability/ having enough money	11 (15.3%)	10 (10.9%)	21 (12.8%)
To increase intellectual ability	7 (9.7%)	8 (8.7%)	15 (9.1%)
Reasons for not smoking women being non smokers			
Culturally considered bad	59 (83.1%)	83 (90.2%)	142 86.5%)
Not preferred for marriage	31 (43.7%)	30 (32.6%)	61 (37.1)
Afraid of parents/husband	28 (39.4%)	27 (29.9%)	55 (33.5)
Consider cigarettes to be for males only	18 (25.4%)	37 (40.2%)	55 (33.5)
Aware of religious prohibitions	15 (21.1%)	31 (33.7%)	46 (28.0)
Health conscious	15 (21.1%)	15 (16.3%)	30 (18.2)
Reasons for women being smokers			
Influenced of western culture	48 (67.6%)	60 (64.5%)	108 (65.8%)
As a status symbol	47 (66.2%)	60 (64.5%)	107 (65.2%)
To relieve stress/tension	29 (40.8%)	55 (59.1%)	84 (51.2%)
Influenced by the media and advertisements	28 (39.4%)	31 (33.3%)	59 (35.9%)
A rebellious attitude	12 (16.9%)	22 (23.7%)	34 (20.7%)
To lose weight	15 (21.1%)	11 (11.8%)	26 (15.8%)
Lack of education	2 (2.8%)	1 (1.1%)	3 (1.8%)
A smoker husband	1 (1.4%)	0 (0%)	1 (0.6%)

Yes, it's because the culture does not permit. You wouldn't see a woman standing in corridor, smoking ... She is going to get a heck from the people. (A female student, non-smoker)

I think [smoking] is common in both [sexes] but women hide it in Pakistan. I am sure a lot of girls have not tried as yet but over here [in Pakistan] every thing is more 'hush hush' with girls ... girls can't do this ... it's bad. If a girl does like this she is bad, right ... (A female student, ex-smoker)

More than one-third of students combined believed that women would have problems getting married if they were found to be smokers. As one of the interviewed participants said:

She had only one chance. The society rejects them ... do not get proposals. The remarks of being a smoker makes her non-acceptable…(A male student, non-smoker)

A sizeable minority of females regarded smoking to be exclusively for men and considered that women did not smoke because of the influence of either parents or husband. Although over one-third cited religious prohibitions, much smaller proportions among both sexes cited health (Table-1).

Perceived reasons for female smoking:

Survey respondents were asked why they thought some women in Pakistan had become smokers. Their reasons mainly clustered around concepts of image, often driven by external influences such as 'western culture' and advertising, but stress reduction was also frequently identified (Table-1). Only three out of 164 students thought that a lack of education accounted for smoking among women.

During in-depth interviews, students endorsed the same range of reasons. Several saw female smoking as a symptom of social change, associated with other hallmarks of change, such as the internet, emancipation, individualism and materialism, especially among the affluent. Some also mentioned weight loss as a key motivator.

I have seen it where women smoke openly because of the western culture being brought in right ... She must be doing by her own or she thinks she has to lose weight. [The] most common reason I have seen women smoke is to lose weight ... smoking decreases appetite. (A female student, ex-smoker)

But in our upper class it is a status symbol; they are very liberal. You could only see an upper class lady smoking in a fine restaurant ... (A male student, ex-smoker)

There could be some family problems, some boyfriend problems, social problems… lots of reasons ... tension ... (A male student, non-smoker)

Maybe stress in females ... it can be both in married and unmarried ... and then parents don't have a check over their children ... They're given a free hand by ... majority of the parents, plus media, plus internet explosion. (A female student, non-smoker)

Maybe because of isolation with the environment and maybe their husband smokes ... Maybe out of curiosity to find out the taste of a cigarettes and then develops gradually. (A female student, non-smoker)

Reactions to male and female smoking:

Students were asked how they felt when seeing or thinking about male versus female smoking. Only a tiny fraction acknowledged positive perceptions of male smoking, for example, that it looked masculine, glamorous or worthy of admiration (Table-2). Nearly one-fifth in both sexes disapproved of having male friends who smoke, whereas

Table-2: Reactions to male and female smoking by sex (> 1 answer permitted).

	Sex		Total
	Male n = 72 (%)	Female n = 93 (%)	N = 165 (%)
Reactions to male smoking			
It bothers me/I feel bad	31 (43.1%)	60 (64.5%)	91 (55.1%)
It looks unattractive/awful	18 (25.0%)	36 (38.7%)	54 (32.7%)
Don't feel anything (unconcerned)	25 (34.7%)	14 (15.1%)	39 (23.6%)
I think they are bad men	11 (15.3%)	22 (23.7%)	33 (20.0%)
I do not want them as a friend	12 (16.7%)	17 (18.3%)	29 (17.5%)
It looks masculine	6 (8.3%)	4 (4.3%)	10 (6.0%)
It looks glamorous/ appealing/cool	4 (5.6%)	2 (2.2%)	6 (3.6%)
I admire them	3 (4.2%)	1 (1.1%)	4 (2.4%)
Reactions to female smoking			
It bothers me/I feel bad	40 (55.6%)	50 (53.8%)	90 (54.5%)
I think they are bad women	39 (54.2%)	51 (54.8%)	90 (54.5%)
It looks unattractive/awful	35 (48.6%)	42 (45.2%)	77 (46.6%)
I do not want them as a friend	15 (20.8%)	28 (30.1%)	43 (26.0%)
It looks masculine	7 (9.7%)	9 (9.7%)	16 (9.6%)
Don't feel anything (unconcerned)	4 (5.6%)	9 (9.7%)	13 (7.8%)
It looks glamorous/ appealing/cool	6 (8.3%)	2 (2.2%)	8 (4.8%)
It looks very feminine	3 (4.2%)	0 (0%)	3 (1.8%)
I admire them	2 (2.8%)	0 (0%)	2 (1.2%)

over a third of males said they were 'unconcerned' by male smoking, versus just 15% of females.

During in-depth interviews, non-smoking students spoke negatively about male smoking:

I don't like it ... [By] smoking they are on their own. But I personally feel they are not doing the right thing. (A male student, non-smoker)

I feel very sorry that he is not caring for his health and is smoking for his own satisfaction, and I am also irritated by the smoke and feel suffocated. (A female student, non-smoker)

However, during the interviews, students of both sexes who had either quit smoking or were currently smokers expressed more neutral views, and also described the ways their own concepts had altered with the change in their smoking status.

As long as he doesn't blow the smoke in my face I don't feel anything ... or he is careless and not considerate with the people around ... if they don't like it and are saying please put it away or please go somewhere else ... and still they been rude about it ... that bothers me. Otherwise, if it is not affecting me or anybody around them I have no problem with it. (A female student, ex-smoker)

After now that I have quit smoking ... I feel [that smoking is] bad. But when I was a smoker I used to admire those who smoke ... I am smoking, they are smoking ... No problem ... (A male student, ex-smoker)

Table-3: Current tobacco smoking, change over time by sex (adults*), selected countries.

Japan (2, 26)	1990 (Age 20+)	2004 (Age 20+)
	Male 61%	Male 43.3%
	Female 14%	Female 12%
Malaysia (2) (18)	1996 (Age 18+)	2006 (Age 25-64)
	Male 49.2%	Male 46.5%
	Female 3.5%	Female 3.0%
Vietnam (2) (18)	1992 (Age 6+)	2003 (Age 18+)
	Male 63.1%	Male 49.4%
	Female 4.7%	Female 2.3%

* Age range varies.

In the beginning when I didn't use to [smoke] ...I used to feel [it was] very bad but now gradually I [feel] it doesn't make any difference. (A male student, smoker)

Reactions to female smoking:

As illustrated in Table-2, the majority of students reported negative views of female smoking linked to gender norms; smoking was seen as culturally unacceptable for women. More than half of the respondents (both male and female) considered female smokers as "bad women" and felt 'bothered' or 'bad' about this phenomenon. Similar views about female tobacco use were expressed during interviews.

(Immediately) I become angry ... I took it that way that they are very innocent. Innocent in the sense that man can afford to take tobacco but it is difficult to [see women take tobacco] in our society. (A male student, non-smoker)

Very irritated ... I feel that she has knocked down some sense within herself ... but I will always try to tell [females] whether she likes it or not ... not to carry on with it. (A female student, non-smoker)

A higher proportion of respondents among both sexes, especially among females, did not want to be friends with a female smoker compared to a male smoker; overall, only 13 out of 165 students were 'unconcerned' by female smoking.

Few students voiced positive perceptions about female smoking in the survey or during interviews. Among those who were interviewed, two males described female smoking as physically appealing:

It is cute when she smokes. Little fingers carrying thin cigarettes that looks good to everyone but eeeeee sometimes it appears masculine to women as well ... it reduces feminism as well it is definitely threat to her typical feminist. She poses to be like a man (laughing) ... but she thinks [she'] shaping this planet or something. (A male student, smoker)

When I was a smoker ... the female smoker attracted me. Although she looks pretty but at the same time I used to think this is not [good] for her ...when you see by the smoker's

eye, a pretty female smoking a cigarette looks very appealing ... looking very gorgeous. (A male student, ex-smoker)

Discussion

Despite being designated as a 'smoke-free' university campus, smoking was found to be prevalent among male medical students. The strong sex-linked differences in rates nationally were replicated among students. Moreover, traditional concepts of gender were invoked frequently to explain male smoking and female non-smoking. To these students, it is clear that smoking is a gendered behaviour.

Around the world, the masculine role typically is associated with risky behaviours such as smoking.[8] Although researchers have suggested that smoking is a mark of transition to manhood in many countries,[9,10] stress and anxiety have frequently been reported to be major reasons for smoking among Pakistani males.[11-13] Male respondents in this study also gave greater weight to 'stress' as an influence on smoking. This may simply be reasoning after the fact, because female students, studying the same course, presumably face high levels of stress but do not 'self-treat' their stress by becoming smokers.

As longitudinal tobacco epidemiological studies reveal a decreasing prevalence among men in many developed countries, a steady or increasing prevalence rate has been seen among women in these countries.[14,15] Researchers have suggested that this shift is due to social change in gender roles.[16,17] However, in many Asian countries smoking is still considered a taboo for women.[9,18,19] As well, comparative data show small decreases over time, rather than the increases once predicted, among women in a number of Asian countries (Table-3). This gender gap has been consistently found among medical students in several Asian countries,[20-24] which suggests that medical students in these countries were — at the time of studies — influenced by traditional socio-cultural attitudes.

While the female medical students in this study shunned tobacco, their reasons overwhelmingly related to gender norms rather than to scientific evidence of the harm of tobacco. Obviously, such evidence is a far more robust and desirable source of influence, given that gender norms can and do change over time. There has been a recent influx of western popular culture into Pakistan, along with a massive promotion of tobacco in the form of advertisements in the mass media. While Pakistani women are not explicitly targeted by advertising, it remains to be seen whether their tobacco use will increase in future. Indeed, there is some evidence for this trend in some urban centres. A recent study of young adults aged 16 to 21 years in Karachi reported 19% of females were cigarette smokers.[25] In our study, several participants perceived an increase in female smoking, which they explained in terms of influences of western culture and higher social status.

The findings from this study are cause for concern; a cohort of young men with high levels of education about medical science and illness, studying on an officially designated non-smoking campus, nonetheless have high rates of smoking and do not view this with much alarm. The fact that these young people — of both sexes — will become health role models and have the potential to influence public health makes this finding especially worrying. In addition, these young students largely endorse behavioural gender norms that are damaging for males. These norms may be protective for females in relation to smoking, but lie within broader norms that result in female disadvantage in other realms, such as power and life chances. Therefore, such norms should never be used on their own to discourage female tobacco use. It is critically important that awareness is raised among these students about the health consequences of tobacco, as well as the negative impacts of gender norms for males; both steps are essential for preventing further uptake of tobacco among women, and preventing or reducing its use among men. While this study was conducted among medical students, the sex-linked disparities in tobacco use across Pakistan suggest that these steps are also essential on a population level.

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