

Health Effects of Passive Smoking and Socio-Demographic Factors among Tobacco Users: A Retrospective Study

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Abstract

Background: Smoking cessation continues to be an issue of public health concern in Bangladesh, with a high prevalence of male smoking and exposure to second-hand smoke. It is for this reason that it is pertinent to know the socio-demographic characteristics, knowledge attitudes, and health risks and impacts of active and passive smoking. **Objective:** The objectives of this study include assessing the health risks of passive smoking on Bangladeshi adults, understanding the role of socio-demographic characteristics in tobacco use, and determining the awareness of health risks by tobacco users and people exposed to second-hand smoke. **Methods:** The current cross-sectional study was carried out at the Community Based Medical College Hospital in Bangladesh during July 2021 to June 2022. In total, one hundred participants with an age of 18 years and above were selected using the convenience sampling technique. Data was collected by administering a structured questionnaire and interviewing the participants face-to-face. The data was analyzed using descriptive statistics, and chi-square tests were also conducted. **Results:** The sample possessed a mean age of 32 years. 85 years, with male participants being 60%. Understanding about these smoking-related health consequences differed with gender and level of education achieved. 69% of them were aware that smoking causes environmental pollution, and 73% knew that smoking posed danger to pregnant women. As for the negative health consequences of smoking, only 5% of the respondents mentioned that it causes respiratory problems. Self-identified health complaints included cancer, hypertension, and abdominal pain/vomiting in 19%, 18%, and 16% of respondents, respectively. **Conclusion:** There is a lack of adequate information as regards the dangers of active and passive smoking to the studied population. These findings further stress the importance of intensification of tobacco control because of the high burden of severe diseases. Considering these gaps in knowledge, gender disparities, and protection from SHS exposure, appropriate interventions need to be applied to minimize morbidity and mortality from tobacco use in Bangladesh.

Keywords: Smoking, Health Effects, cessation, Tobacco, SHS exposure.

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INTRODUCTION

Smoking and tobacco product consumption continue to be one of the leading but preventable threats to global health [1]. Although secondhand smoking affects non-smokers and their health is now receiving increased attention, it is widely known how smoking directly impacts body health for smokers. Secondary smoking has been associated with several illnesses and diseases, such as respiratory diseases, cardiovascular illnesses, and cancers [2]. In the early and mid-1990s,

tobacco use was identified as a critical public health issue in Bangladesh, as in many other developing countries. The current smoking rate among adults in Bangladesh is relatively high but much lower than that of men—about 35% of male adults and 1% of female adults. Although secondhand exposure rates are considerably higher than primary exposure rates because many individuals smoke in public areas as well as in their homes, primary exposure rates remain much higher [3]. Knowledge, attitude, and practice on tobacco and passive smoking: an important element for synthesizing effective policies

and interventions [4]. Such information is important as they offer the demographic details of tobacco users, which may help in identifying the patterns of use and exposure [5]. Cultural characteristics, including age, gender, education level, and occupation, have been found to have a significant relationship with smoking and secondhand smoke exposure amongst different population groups. Studying these associations within the Bangladeshi population may contribute to understanding who comprises the targeted audience for intervention and maintenance programs for smoking control [6]. Further, it is important to determine the level of comprehension of possible adverse health effects associated with tobacco use and passive smoking among different population groups. Lack of awareness on the potential harm of secondhand smoke means continued exposure is expected and possibly more so amongst targeted groups such as children and pregnant women. Knowledge levels can be helpful in telling the public as to what needs to be avoided [7].

The purpose of this present work was to assess the effects of passive smoking and the factors contributing to the use of tobacco and awareness of the same among a Bangladeshi populace. The objectives were to establish the levels of active and passive smoking, the awareness levels of the health risks associated with tobacco use, the link between socio-demographic characteristics and smoking behaviors, the health risks that smoke and secondhand smoke are exposed to, and opinions towards smoking in public places and homes [8]. Thus, this study aims to fulfill the following objectives: Given these objectives, it is the hope of this study to facilitate the evidence in favor of tobacco control policies and interventions in Bangladesh with a view to safeguarding the rights of non-smokers against passive smoking. The research study outcomes can be used to create awareness campaigns, policies of non-smoking areas, and cessation support programs pertinent to the region.

MATERIALS AND METHODS

This cross-sectional study was done at Community Based Medical College Hospital in Bangladesh over one year, starting from July 2021 to June 2022. There were one hundred participants involved in the study, and the researcher used convenience sampling methods. The eligibility criteria included participants who were currently using tobacco products or had been exposed to environmental tobacco smoke, and the participants had to be at least 18 years of age. In this study, both the independent and the dependent variables were measured by a structured questionnaire that was administered through face-to-face interviews. The self-administered questionnaire collected details about social and demographic details, tobacco

consumption, exposure to passive smoking, awareness of the health risks of smoking, and self-reported health consequences. The participants were informed about the interview process, and their consent was sought before the interview was conducted. In order to portray the demographic data of the sample, descriptive statistics were applied. To check the relationship between two or more categorical variables, the chi-square test was used. Interviewees' knowledge was considered poor, average, or good assessed according to their answers to questions regarding risks associated with tobacco use. The required permission to conduct the study was sought from the institutional review board regarding ethical practices.

RESULTS

The participants in the study included 100 individuals; the average age of the participants was 32 years. About gender distribution, more than half of them (60%) were male. As for education level, 20 percent completed honor's degrees, while 16 percent could not read or write. As for occupations, 20% of the respondents were day laborers, 20% were housewives, and 18% were businessmen (Table 1).

Table 1: Distribution of the patients according demographic (N=100)

Age Group	N	%
16-20 year	10	10.0
21-25 year	15	15.0
26-30 year	18	18.0
31-35 year	26	26.0
36-40 year	10	10.0
41-45 year	5	5.0
46-50year	11	11.0
Above 50	5	5.0
Mean ± SD	32.85±9.92	
Gender		
Male	60	60.0
Female	40	40.0
Education		
Illiterate	16	16.0
Primary	19	19.0
SSC	17	17.0
HSC	16	16.0
Honors	20	20.0
Masters	12	12.0
Occupation		
Business	18	18.0
Day Leber	20	20.0
House wife	20	20.0
Jobless	12	12.0
Other	17	17.0
Service	13	13.0

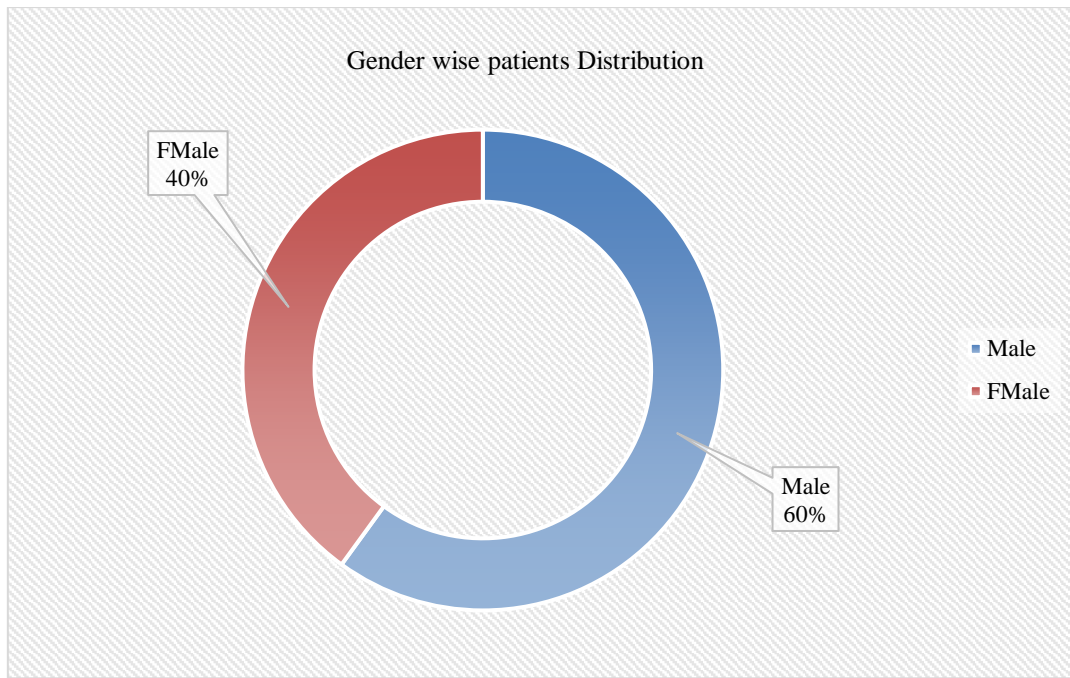


Figure I: Pie chart showed distribution of the patients by Gender (N=100)

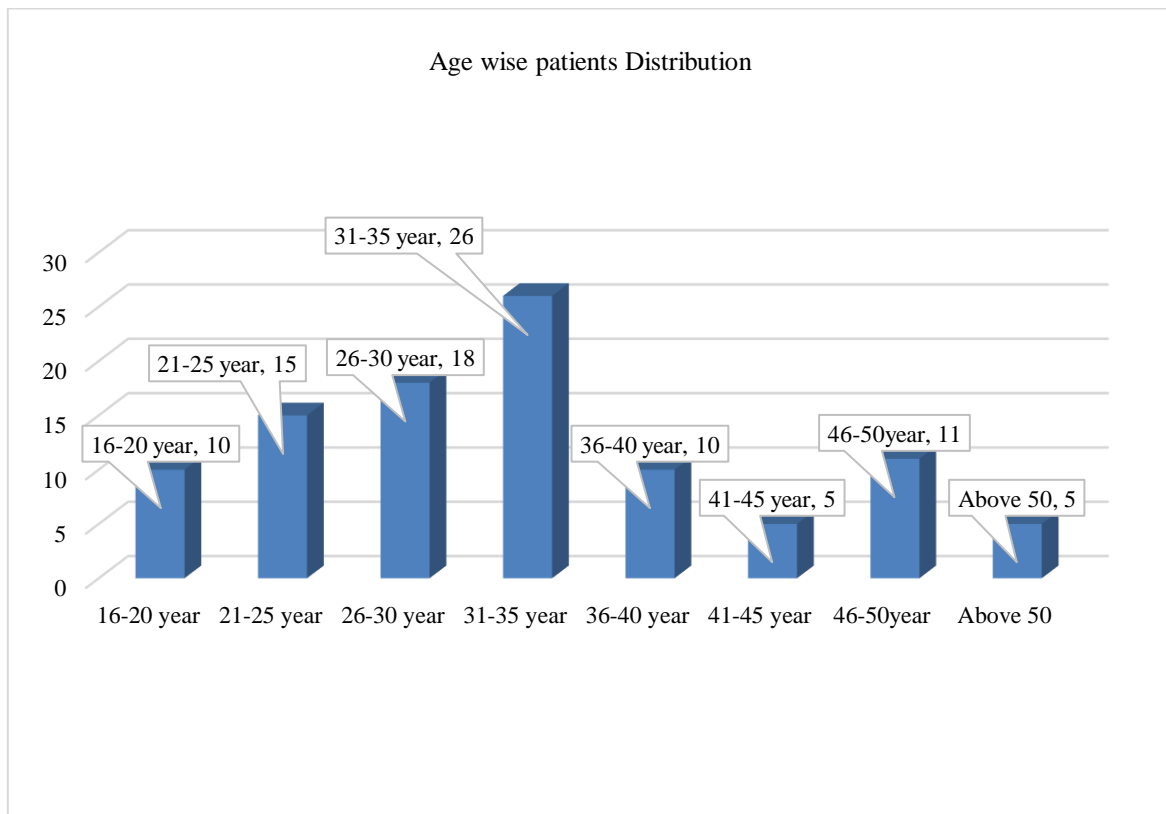


Figure II: Bar chart showed distribution of the patients by Age (N=100)

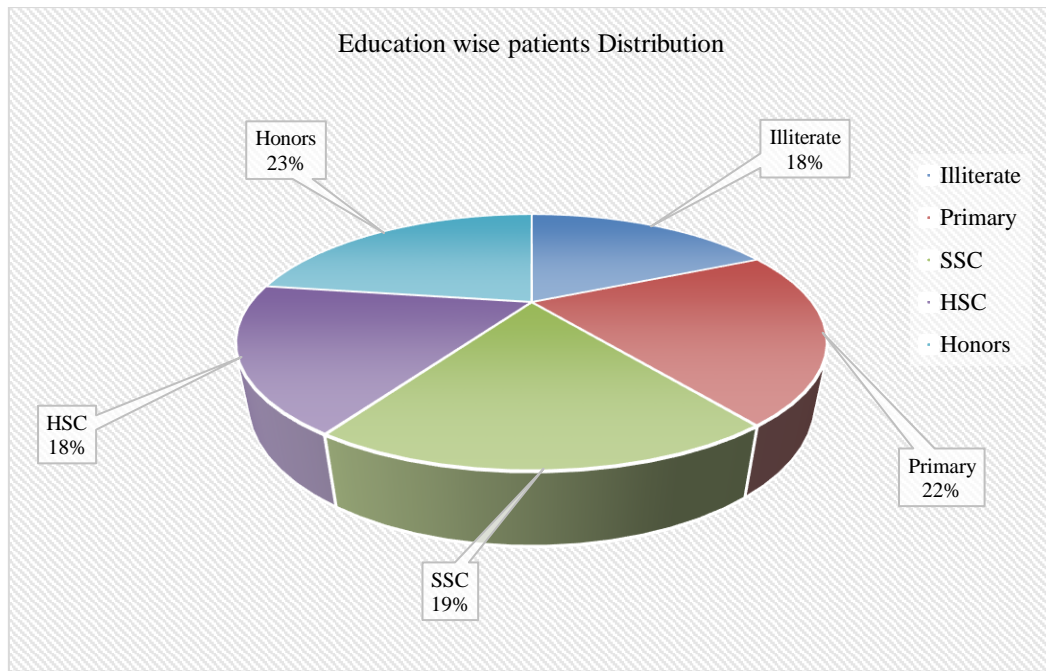


Figure III: Pie chart showed distribution of the patients by Education (N=100)

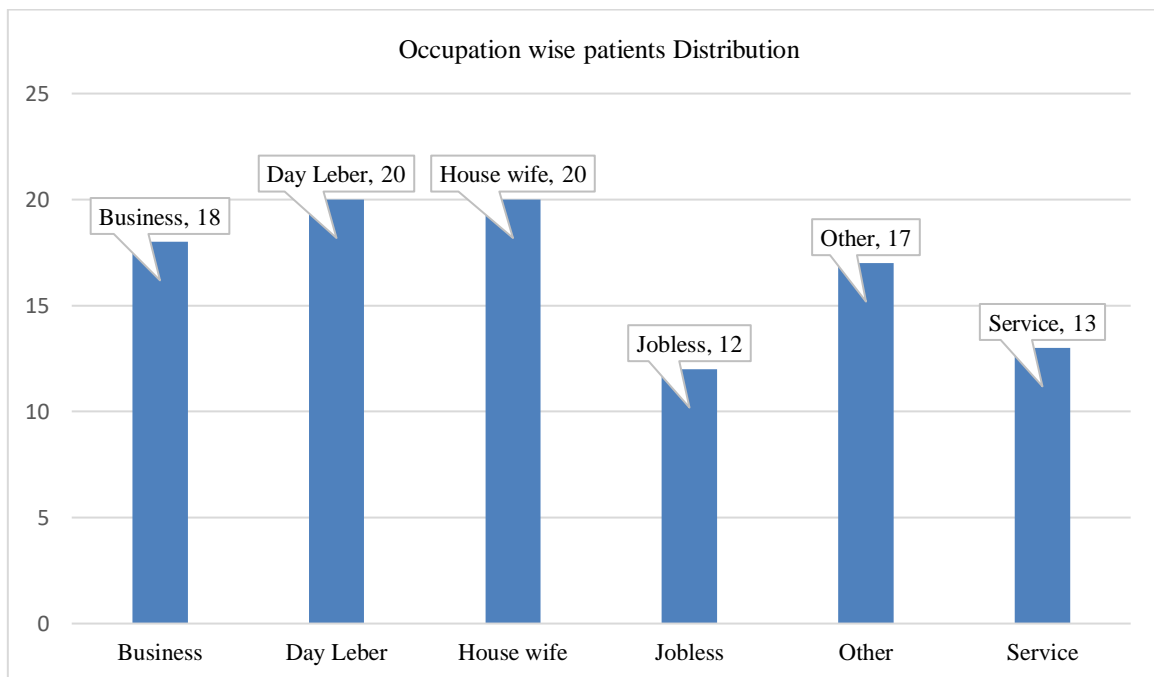


Figure IV: Bar chart showed distribution of the patients by Occupation (N=100)

Awareness of some of the problems caused by smoking was done, and 65% of the respondents agreed that smoking caused environmental pollution. A

relatively larger number (75%) was aware that smoking has dangers for pregnant mothers (table 2).

Table 2: Distribution of the respondents according to knowledge of problem for smoking (N=100)

Knowledge of problem		N	%
Pollution Problem of Environment	Yes	65	65%
	No	35	35%
Problem Of Pregnant Woman	Yes	75	75%
	No	25	25%
Total		100	100.0

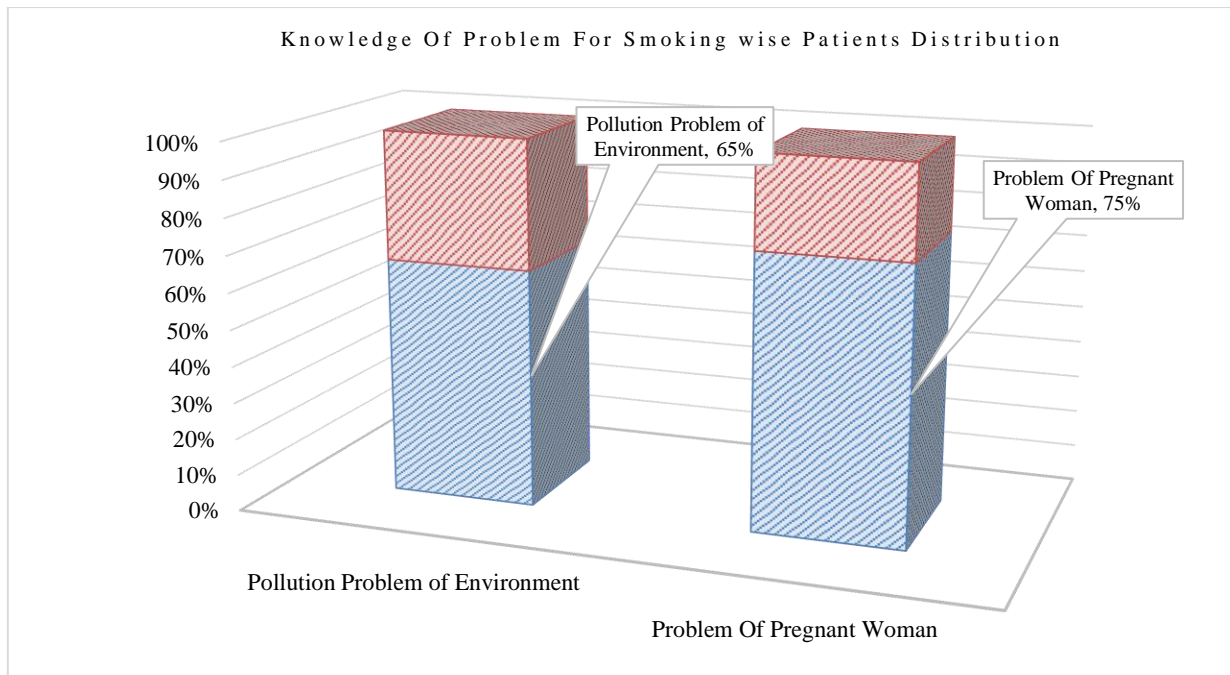


Figure V: Bar chart showed distribution of the patients by knowledge of problem for smoking (N=100)

When further asked about specific problems due to smoking, 69 percent of the subjects pointed to smoking as a problem, and only 5 percent mentioned

difficulty breathing. Notably, 67% responded that non-smokers are equally at risk as smokers due to secondhand smoking (Table 3).

Table 3: Distribution of the respondents according to types of problem due to smoking (N=100)

Types of problem		N	%
Problem of Smoking	Smoke	69	69%
	Difficulty in Respiration	5	5%
	Cough	26	26%
Problem of Non-Smoker	Same Problem	67	67%
	No Problem	33	33%
Total		100	100.0

The research also showed that the respondents' gender and their education influenced their knowledge about the health risks of tobacco products. 7% of the candidates, as a result, had good knowledge as compared to 34. Understanding levels seemed to be related to

education in that 45. Only 2% of respondents having honors degrees only exhibited poor knowledge, although 32%. average: 4% of those with HSC qualification had average knowledge (Table 4).

Table 4: Distribution of the respondents according to Knowledge level of health Hazards of tobacco (N=100)

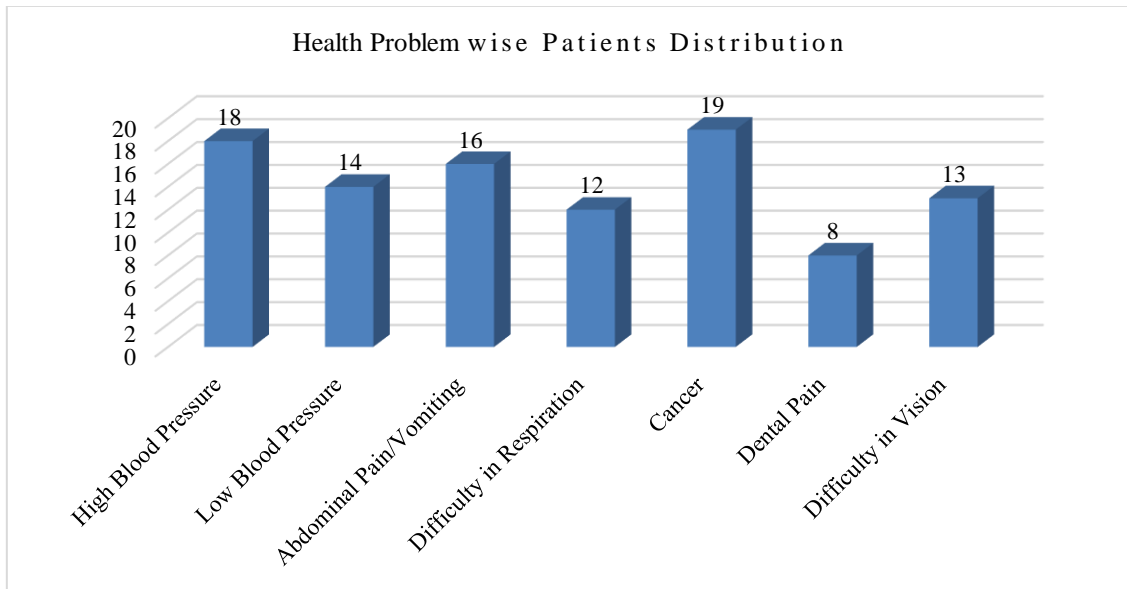
variable		Knowledge Level					
		Poor knowledge		Average knowledge		Good knowledge	
		N	%	N	%	N	%
Sex	Male	19	61.3%	18	52.9%	23	65.7%
	Female	12	38.7%	16	47.1%	12	34.3%
Education	Illiterate	2	6.5%	7	20.6%	7	20.0%
	Primary	8	25.8%	4	11.8%	7	20.0%
	SSC	1	3.2%	7	20.6%	9	25.7%
	HSC	1	3.2%	11	32.4%	4	11.4%
	Honors	14	45.2%	4	11.8%	2	5.7%
	Masters	5	16.1%	1	2.9%	6	17.1%

Globally, the health challenges which the respondents claimed to have faced most often were high blood pressure (18%), cancer (19%), and abdominal

pain/vomiting (16%). COPD and asthma were reported by 12 % of the participants as shown in table 5.

Table 5: Distribution of the respondents according to health problem of the respondents (N=100)

Health problem	N	%
High Blood Pressure	18	18.0
Low Blood Pressure	14	14.0
Abdominal Pain/Vomiting	16	16.0
Difficulty in Respiration	12	12.0
Cancer	19	19.0
Dental Pain	8	8.0
Difficulty in Vision	13	13.0
Total	100	100.0

**Figure VI: Bar chart showed distribution of the patients by health problem (N=100)**

The given findings reveal issues in the level of passive smoking risk awareness and disparities within the target population sample. One of the limitations of the study is also evident in the high proportion of participants with severe diseases such as cancer and cardiovascular diseases; hence, further research should be conducted to determine the relationship between tobacco exposure and such diseases.

DISCUSSION

Thus, the present research holds important implications for understanding the interaction of socio-demographic factors, knowledge status, and health effects associated with active and passive smoking among a Bangladeshi population. The results show several significant trends and concerns that have to be further explored and compared with the findings of other research. The observation of more male participants in our sample (60%) is consistent with the global gender difference in smoking prevalence in Bangladesh. This is indicative of deeply entrenched cultural beliefs regarding tobacco use and its social acceptability among men, consistent with other studies in South Asian settings. Nevertheless, the fact that 40% of the participants in the current study were females should draw attention to the fact that women are also frequently exposed to SHS in home environments. The participants in this study come from various educational backgrounds, thus making it

possible to compare how various levels of education affect tobacco-related knowledge and behaviors. Surprisingly, we found that higher education does not play a role in increasing the knowledge of health risks associated with tobacco, as evidenced by 45.2% of honors degree holders having poor knowledge. This contradicts expectations of education as a preventive factor and differs from results suggested by Mathers and Loncar (2006) [2] revealing a direct correlation between education level and smoking cessation in LMICs. The findings emerged highlighted the lack of awareness of the diverse health risks related to active and passive smoking. Overall, 75% of participants acknowledged risks for pregnant women, but only 65% identified environmental pollution as a result of smoking. This disparity raises the possibility that public health communication is more effective at transmitting some risks as opposed to others. Such gaps of knowledge have also been noted in other developing nations. For instance, Bauld (2009) [7] established that even though 82% of the respondents knew the health risks associated with smoking in general, only 54% of the respondents had the accurate knowledge of diseases occasioned by use of tobacco products. Apparently, only 5% of respondents point at respiratory difficulties as an issue caused by smoking, though respiratory problems are among the most frequent and tangible consequences of tobacco smoke impact. This major knowledge deficit might lead

to underappreciation of the risks associated with second-hand smoke, particularly in enclosed settings.

The finding that 67% of the respondents felt that non-smokers are also affected by similar health issues as smokers when exposed to second-hand smoke shows that the respondents are not fully aware of the differences between risks associated with active and passive smoking. That said, that perception might increase concern about passive smoking but could also exacerbate fatalistic attitudes among non-smokers to discourage protective measures. This finding is dissimilar to the work done by Argacha *et al.*, (2008) [1] on Polish participants, where as many as 89% of the respondents were accurate in their understanding that passive smoking is not as dangerous as active smoking. Cancer, with 19% of positive responses, and cardiovascular issues, with 18% positive responses for high blood pressure, are alarming. However, due to the cross-sectional study design, it is not possible to determine causality. In light of these results, it is within the broader framework of the long-term health effects of tobacco exposure in adults. That the mean age of respondents is relatively young (32.85 years) only implies higher rates of chronic diseases that may have commenced as early as from tobacco use or exposure. This conforms to global trends identified in the WHO Global Report on Trends in Prevalence of Tobacco Use 2000-2025, indicating that the burden of tobacco diseases amongst youths is escalating in low and middle-income countries. The fact that respondents identified respiratory difficulties less frequently (12%) than other physical concerns and less often said that these difficulties started after beginning to use tobacco raises questions about underdiagnosis of respiratory problems among smokers, perception of such problems as 'normal', or failure to link their respiratory problems to tobacco use. The gap between self-assessed respiratory effects of smoking and the epidemiological data could be an important avenue for health promotion. Data from Rasid (1992) [4] reveal that 35% of smokers responded yes to respiratory symptoms, and thus, there is a possibility of underreportage in our sample.

The study underscores the importance of focusing on multiple levels and domains in tackling tobacco use and exposure in Bangladesh.

Limitations

Overall, this study has a cross-sectional design, and thus, convenience sampling means that causal relations and generalizations cannot be drawn accurately. This type of problem may contain the following limitations: Self-reporting may lead to recall bias or underreporting. More comprehensive and increased longitudinal investigations using samples of greater size and diverse sociodemographic representation may strengthen the findings referring to the links between tobacco exposure profiles and future health statuses.

CONCLUSION

This research also reveals several knowledge deficits regarding the health implications of active and passive smoking among a multicultural population from Bangladesh. This is also evidenced by the fact that a large number of participants in the given sample were reported to be suffering from severe illnesses that require increased attention to tobacco control. A number of targeted measures should be launched: to fill specific gaps in knowledge; to address gender-specific factors; and to reduce second-hand smoking. Further studies should aim to assess the health effects over time and to conduct efficacy studies of health promotion education and policy initiatives to help address averted tobacco-related morbidity and mortality in Bangladesh.

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