

The perspective of the adult's on exposure to passive smoking on their children in the rural area, Bangladesh: A qualitative approach

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ABSTRACT

Introduction: Passive smoking exposure is a global public health issue. Children are the most vulnerable population considering the geographical situation. In Bangladesh, the prevalence of exposure among children is 40.0% which indicated a significant public health concern. The study aimed to explore individuals' perspectives to exposure of passive smoking among children living in rural households in Bangladesh. **Method:** Qualitative approach was executed between May and September 2018 in selected participants living in six villages of Munshigonj District, Bangladesh. Data was collected through 16 in-depth interviews and three heterogeneous focus group discussions. Participants' aged was 18 years or above who met the inclusion criteria. The analyses were performed by thematic and content analyses. **Result:** Perspectives on negative attitudes, lack of knowledge, smoke-free rules, some traits of social norms, poor social awareness, and religious faith of participants were related to passive smoking exposure to their children. **Conclusion:** The government should take more interventions, especially in adjusting social norms, improving knowledge and awareness related to the impacts of smoking to reduce exposure to passive smoking among rural children and ensure a healthy life.

Keywords: Bangladesh, Children, Passive smoking exposure, Qualitative study, Rural area

Introduction

Tobacco smoking was a massive burden for low and middle-income countries as nearly 80.0% of the global smokers live in these countries [1]. Worldwide, approximately 1.1 billion people smoke tobacco smoking products, which is the leading cause of preventable death [1-2]. Like smoking, passive smoking exposure is also a significant public health issue as it was accountable for nearly 1.2 million deaths globally [3]. Passive smoking is the inhalation of smoke or environmental tobacco smoke by persons other than the intended 'active' smoker and in this study, exposure of passive smoking indicates exposure to another person's tobacco smoke in the household for at least 15 minutes daily for more than one day every week in the past 30 days [4].

Children are considered the most vulnerable population to passive smoking exposure and globally,

almost half of the total children are being victimized by some means exposed to passive smoking [5]. The prevalence of passive smoking exposure rate was high worldwide as 49.2 % of children were being exposed to passive smoking in the United Kingdom, in Australia, it was 43.0%, 35.0% in the USA, and 33.0% in Canada [6]. Furthermore, there is a substantial health effect on children due to exposure to passive smoking, which causes respiratory problems, allergic rhinitis, ear infection, and different types of cancer [1, 7].

In Bangladesh, exposure to passive smoking is also robust, as the overall prevalence of exposure was 39.0% [8]. However, exposure among children was found 40% [9]. Additionally, household smoking was more common in rural areas [10]. Bangladeshi people have a very low concern regarding the side health effect of exposure to passive smoking [11]. Male behavior and attitude of Bangladeshis is a significant

barrier to reducing passive smoking exposure [9]. Furthermore, age, gender, household incomes, literacy, and the number of smokers in the family were influential factors for the exposure [12]. Among women, religious beliefs, poor socio-economic status, educational status, and having children had a significant role in passive smoking exposure [13]. Despite the considerable prevalence, very few studies have been conducted regarding passive smoking focusing on children. Our research explored smokers' perspectives in exposure to passive smoking among their children. Thus it could help reduce the disease burden related to smoking exposure in the future.

Methods

Study design

In-depth interviews (IDI) and focus group discussions (FGD) were used for collecting data between May 2018 and September 2018 from six villages of Munshigonj District, Bangladesh. The district has been selected purposely as the district villages reflect the rural areas of Bangladesh, and the population density is high, indicating 1439/km² [14]. In Bangladesh, there is a lack of research data in every sector. Smoking is a big concern though the data regarding smoking is mainly on active smoking and reflects the whole country. Therefore, district-wise data is not available. Munshigonj reflects the same culture and socio-economic and demographic condition of all the districts of plain land except the hilly district [15].

Participants

People aged ≥ 18 years, those who were fully aware and able to understand and answer the question of the interview and discussion, both male and female active smokers and non-smokers, local political leaders, local government officials, law enforcement officials, health-related officials, religious leaders, teachers, lawyers, and shopkeepers were invited for the IDIs and FGDs. The purposive sampling method was used to determine the participants.

Instruments

The guidelines of the IDIs and FGDs were developed based on the study area's personal, cultural, economic, environmental, and social factors. The interviews and discussion were conducted to determine the actual scenario regarding passive smoking exposure. The interview began with general questions focusing on passive smoking exposure (e.g. what do you think about passive smoking?, what are the causes for passive smoking in your opinion?, as a parent, what do you do to reduce the exposure for your children?, etc.). More specific questions were followed regarding promoting the health of children, protection from harm, smoking practices and behaviors in the home and community, beliefs and attitudes related to smoke exposure, health protection, and smoke exposure, rules

and regulations, and enforcement of the law on smoking in the household and methods of implementation comprising more sensitive topics were included (e.g. how can we make the house smoke free?, what do you think about social norm and culture to reduce exposure of passive smoking?, how peer support can help to reduce exposure of passive smoking?, etc.). Methods and data source triangulation were used for IDIs and FGDs to find a particular phenomenon.

Data collection

Data were collected until data saturation occurred through 16 IDIs and three heterogeneous FGDs. At first, the IDIs were completed, followed by FGDs. The participant number for each FGD was 12, 9, and 10, respectively, and the duration of the discussion was 40 to 50 minutes. First, FGD was conducted with the stakeholders, including local political leaders, local government officials, law enforcement officials, health-related officials, religious leaders, teachers, shopkeepers, and active smokers and non-smokers. The second and third FGDs were conducted with active adult smokers and adult non-smokers. There was no external impact while respondents gave their views, and a non-participatory observational approach was applied. The interview was conducted by the principal investigator (PI) with the help of two research assistants (RA). The interviews and discussions were audio-recorded, and field notes were taken. The researchers transcribe the conversation and print it in writing.

Data analysis

IDIs data was analyzed by thematic analysis, whereas, for FGDs, the qualitative content analysis method was applied [16-18]. The thematic analysis was conducted through six steps. At first, the information obtained from interviews, the PI, and RAs analyzed and interpreted the data to determine the initial themes keeping the research objective in mind (becoming familiar with data). Then, by removing dissimilar information, the PI encrypted the data (generating initial code), created issues (searching for themes), reviewed issues (reviewing themes), and defined and finalized the issues (naming of themes). Finally, the PI and RAs linked the issues and made reports (producing the report). For qualitative content analysis, the PI and RAs analyzed the research, read and re-read the discussion to determine the initial themes keeping the research objective in mind. Later, separating the text into meaningful units, the located meaning units were shortened additional while keeping the dominant meaning intact. After that, codes were developed. Codes concisely described the condensed meaning unit, and there were tools to help researchers reflect on the data in new ways and finally, the researcher converted the code into the category to determine the answer to the research question.

Results

Out of the 16 participants in IDI, the majority of them were male (68.7%), aged between 25 to 44 years (62.6%), and married (75%). Besides, three-fourths of the participants completed university, 81.3% had at least one child in the family, and 62.5% were non-smokers (Table 1). In the focus group discussion, 58.01% were male, 38.7% were between 25 to 44 years old, and 70.9% were married. Moreover, the majority of the participants completed secondary education (38.7%), worked in the agriculture or business sector (41.9%), and 64.5% were non-smokers (Table 2).

Table 1 Characteristics of the participants of in-depth interview

Characteristics	n=16	%
Gender		
Male	11	68.7
Female	5	31.3
Age in year		
18-24	3	18.7
25-44	10	62.6
≥45	3	18.7
Marital status		
Single	4	25.0
Married	12	75.0
Education		
Completed Primary/Secondary	4	25.0
Completed University	12	75.0
Employment		
Service	7	43.7
Business/Agriculture	6	37.6
Unemployed/Retired	3	18.7
Have at least one child in the household		
Yes	13	81.3
No	3	18.7
Smoking Status		
Smoker	6	37.5
Non-smoker	10	62.5

The themes that emerged from the IDIs and FGDs on passive smoking exposure were classified into six broad categories: (1) attitude, (2) lack of knowledge, (3) smoke-free rules, (4) social norms, (5) social awareness and (6) religious faith. The quotes representing each category are presented in Table 3.

Attitude toward any behavior was essential. A positive attitude could help to repeat the behavior, while on the other hand, a negative attitude could meaningfully impact the same behavior. Same as people, attitude toward passive smoking exposure was a significant cause of exposure. Generally, people took this as an everyday practice (Quotes A1 and A2).

People have limited knowledge of passive smoking exposure. They did not understand how a smoker's smoke also affects the people surrounding him. Limited knowledge of this issue increased

Table 2 Characteristics of the participants of the focus group discussion

Characteristics	n=31	%
Gender		
Male	18	58.01
Female	13	41.9
Age in year		
18-24	8	25.8
25-44	12	38.7
≥45	11	35.5
Marital status		
Single	9	29.1
Married	22	70.9
Education		
Completed Primary	9	29.1
Completed Secondary	12	38.7
Completed University	10	32.2
Employment		
Service	7	22.6
Business/Agriculture	13	41.9
Unemployed/Retired	11	35.5
Smoking Status		
Smoker	11	35.5
Non-smoker	20	64.5

exposure. Lack of knowledge was very much related to passive smoking exposure. People who smoked did not know the consequences (Quotes LK1- LK3).

Smoke-free rules could also be defined as a smoke-free household. This was a critical point that came out in the interview. People of low socio-economic status and low education qualifications were more likely to smoke inside the house. They had less knowledge about the harmful effects. Therefore, their children were more vulnerable. Although it was difficult to stop smoking, it might be possible to implement smoke-free rules inside their houses by explaining the harmful effects. Self-control was essential to implement smoke-free rules in a smoker's house. In the rural area, families consisted of grandparents, uncle-aunts, and sometimes also distant relatives. Among them, not all family members are aware of the exposure. This was why the family head should be restricted and had the self-control to make the house smoke-free (Quote SRF 1- SRF 3).

Some social norms bind every society. Norm was usually a reflection of culture and religion. It had a significant influence on the human life of that particular society. Social norms and some customary rules also guided the rural area of Bangladesh. For example, in the rural area of Bangladesh, it was very much unlikely that any person spoke in front of any elderly. It was considered as showing disrespect to the elderly. It was a kind of unwritten social norm. In rural areas, females usually did not interfere with their husband's opinions. It was almost rare that females spoke about smoking in earlier times. However, things are now changed. Females were now more educated, and some females were also doing some work besides

Table 3 Selected quotes representing exposure of passive smoking among children

Theme	Quotes
1. Attitude	<p>A1 - <i>'Many adult people from our society saw their parents smoke in front of them while they were children. They don't have any idea what this exposure affects them. They took it as a normal matter, and they also do the same. Smoke in front of their children.'</i> (Male, 32 years)</p> <p>A2 - <i>'Smoker is everywhere. People do not think it is a bad habit. They take it as a regular matter like eating rice every day.'</i> (Male, 39 years)</p>
2. Lack of knowledge	<p>LK 1 - <i>'Many people know to smoke. But they do not have any knowledge of passive smoking. They do not know how a smoker's smoke affects others. They do not have an idea of the health consequences on others. They do not know about the law on passive smoking.'</i> (Female, 26 years)</p> <p>LK 2 - <i>'Most of the people know one thing that cigarettes cause cancer. Especially lung cancer. Only that. Nothing further. In the case of passive smoking? No knowledge. They think about how the smoke causes any disease to others. If it had any effect, the effect is only upon them.'</i> (Male, 28 years)</p> <p>LK 3 - <i>'Majority of the people know smoking is not permitted in any public place. But why is it prohibited? You can ask. Most of them cannot answer. People do not know that much about laws and also the implementation of the law.'</i> (Female, 33 years)</p>
3. Smoke-free rules	<p>SFR 1 - <i>'Objection should come from the home first. If the cigarette is not allowed inside the home, it eventually reduces the exposure.'</i> (Female, 33 years)</p> <p>SFR 2 - <i>'Let's think about those who are farmers or day laborers. I am talking about the low social-economic conditions. Those who have these types of occupations are very hard working. When they return home, they cannot help themselves from smoking. Their house is small, and most have one room only. In my opinion, the exposure rate is very high in these types of families. If it is possible to explain why smoking is harmful inside the house, they may smoke in the yard. It is not possible to stop smoking, but it may be possible to stop inside the house.'</i> (Male, 48 years)</p> <p>SFR 3 - <i>'Often grand-parents, uncle even sometimes father send his child to buy cigarette. Those who send their children to buy cigarettes will eventually smoke inside the house and in front of children. But if the children know passive smoking, they may prevent themselves and ask the family members not to smoke in front of them. With smoke-free rules inside the house, this can be stopped. I think the head of the family's self-control is very must important to implement these rules.'</i> (Male, 39 years)</p>

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4. Social norm
- SN 1 - *'Till now in this society, people do not smoke in front of the elderly or any respectable person. I think not only in our society but also around the whole country. I think this is a key point. If I cannot smoke in front of an older person, how can I smoke in front of children? In the case of the elderly, it is due to respect, and it should come from love.'* (Male, 41 years)
- SN 2 - *'Woman cannot control a man, and in the case of smoking, it is almost impossible. The man never heard us. They showed us hundreds of reasons for smoking. And if we force, they were getting angry.'* (Female, 38 years)
- SN 3 - *'Government has started microcredit loan for the rural female. Females are helping their families with that money. They are doing small business. Husbands are now very polite to them as they give them money or contribute to their families. Many rural women are empowered in this way.'* (Female, 32 years)
5. Social awareness
- SW 1 - *'Poor family has very less awareness. Their thinking is like why I should smoke outside. It's my house. They are very less aware of this. By building awareness through the workshop, and posterage can help to reduce the exposure'* (Male, 27 years)
- SW 2 - *'I suggest for the passive smoking awareness day. People know about smoking, but people are not aware of passive smoking. Like the vitamin A campaign, we can observe passive smoking awareness day. I think it will be more effective to convey the awareness of passive smoking exposure to mass people.'* (Male, 39 years)
- SW 3 - *'Hmm... you know we nonsmokers should be more active. We should ask our family and friend not to smoke. Yes... I know it is tough to stop smoking. But we can be aware of the child's health effects. Is there anyone who does not love his child? I don't think so. Repeatedly telling him not to smoke inside the home or in front of children may be effective. It may grow awareness in him.'* (Female, 42 years)
- SW 4 - *'People do not understand that smoking is also a part of addiction. They think if it is so bad, why is it available everywhere? Moreover, about passive smoking, they never think about it. Awareness is essential to reduce exposure.'* (Male, 48 years)
6. Religious faith
- RF 1 - *'Religion is a major part of society. You just maintain the rules and regulation of Islam. I am sure the smoking will reduce drastically.'* (Female, 41 years)
- RF 2 - *'Not only in Islam, as per my knowledge, there is also no religion allow smoking. There is no benefit from smoking. No religion also allows it. Proper practice of any religion will reduce smoking.'* (Male, 36 years)
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their household work, like vegetable grading near the open places of her house, which also brought some money for the family (Quotes SN 1 -SN 3).

Families with low socio-economic conditions were less aware of smoking. They had low educational attainment and were mainly employed to do physically demanding work. They usually smoked inside the home most of the time. Therefore, their awareness was very much essential. As smoking was a common practice in society and for those mass people, awareness buildup was critical for reducing the exposure. It was not only possible for local people to reduce the effect, but the government should also take a solid initiative to create awareness. Non-smoking family and friends could strongly support lowering passive smoking exposure (Quotes SW 1 – SW 4).

Religion has a tremendous influence on human life. It also influenced the culture, norms, and different customary practices. Islam was the religion followed by the majority of people in Bangladesh. Therefore, the Islamic way of life could reduce exposure. Other than Islam, other religions also had a similar idea on smoking tobacco as it had no benefit for health and the environment. Therefore, different religious practices reduced passive smoking exposure (Quotes RF 1 – RF 2).

Discussion

In Bangladesh, the prevalence of passive smoking exposure was much higher, and this was the first qualitative research that described passive smoking exposure among children in the household of rural areas [8]. Our qualitative findings indicated that six factors: attitude, lack of knowledge, smoke-free rules, social norms, social awareness, and religious faith, are connected with exposure to passive smoking.

An individual attitude was a relation to that individual behavior. The attitude was a feeling or way of thinking that affects a person's behavior. A positive attitude could significantly identify the risk of exposure to passive smoking, whereas, on the opposite, a negative attitude towards exposure to passive smoking increases the chances of exposure. Our finding was in the same line with other studies where the perspective was found a potential factor for predicate smoking [19]. Moreover, for preoperative smoking, abstinence, attitude was considered a significant predictor [20].

This study also explained that the knowledge regarding the exposure of passive smoking consequences of cancer was high among participants. The previous study showed the same result among Bangladeshi adults [21]. Although Global Adult Tobacco Survey (GATS) data reflected the overall knowledge of tobacco smoking, our work was also reflected in the same line with the GATS data [8]. Another study conducted among Pakistani women, it was also in the same line with our result [22].

Nevertheless, the knowledge of smoking legislation was also low reflected in our study. The practice of anti-smoking law was not accurately applied and monitored in Bangladesh, which may be a reason for the low knowledge of smoking legislation [23].

Moreover, awareness was essential to give up harmful behavior. Increased individual awareness could help understand health behaviors and inspire people to accept healthy practices. A study in the United States among African-born women indicated similar results [24].

In the rural area of Bangladesh, it is hard to make a smoke-free house. The no-smoking policy was more prevalent in an urban area than in a rural area [10]. The household's surrounding environment, structure, and rural area behavior are barriers to making the house smoke-free. However, although it seems complicated, our study found that involving children to make the home smoke-free and practicing healthy behavior can reduce passive smoking exposure in the household. Similar results were found in past research in an urban area of Bangladesh [25]. The result was also consistent with a study in China [26]. In Bangladesh, it is rare to smoke in front of the elderly, which helps to reduce exposure. Besides, a controlled cultural norm has given limited liberty to a woman to prevent her husband from smoking inside the house. However, giving true freedom to women can effectively reduce smoking exposure. A previous study among rural Bangladeshi and urban Indian women also observed male behavior is a potential factor for reducing smoking [27]. Human behavior and social culture have been influenced by religion. As a Muslim majority country, the religious leaders' support reduced passive smoking exposure as smoking is prohibited according to Islamic rule [28]. This finding is similar to recent research where it was shown that religious leaders influence general people and, by utilizing them, positively reduce the exposure of passive smoking in Bangladesh [29].

Our study has some limitations. The study has been conducted only in one district of Bangladesh. Moreover, the research was only focused on the household. Other settings, such as public places, were not included in the study. Despite the limitation, the research is the first qualitative research focused on passive smoking exposure in Bangladesh, and eventually, it will help reduce the disease burden related to passive smoking around the country.

Conclusion

Passive smoking is a global public health concern, and children are key victims of this exposure. In Bangladesh, the scenario is almost the same with other developing countries. Strong government policies and proper advocacy on the exposure of passive smoking may help reduce the exposure.

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