



Original Article

Perception to Second Hand Smoking Among Adult General Public in Rural Pondicherry- A Cross Sectional Study

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Objective: Exposure of general public to hazards of second hand smoking/passive smoking is not uncommon and is preventable to a large extent. We wanted to find out the knowledge and response of general adult public when exposed to secondhand smoke. **Experimental approach:** A cross sectional, clinic based study was done and after selection of study participants by random sampling, information was collected by a validated questionnaire administered by an interviewer after obtaining informed consent from the participants. Information was compiled and tabulated for further analysis. **Findings and discussion:** None of the participants had knowledge regarding ill effects of passive smoking. Large proportion of women participants, 61.2% were exposed to second hand smoke at home. There appeared to be a glaring lack of implementation of smoking legislation in public places. **Conclusion:** Passive smoking is a real risk in the community we surveyed. Poor knowledge about the health impact and the indifference to this important public health issue needs urgent, community oriented approach for knowledge spreading and confidence building among the public.

Key Words: Secondhand smoking, Passive smoking, awareness, Pondicherry

1. INTRODUCTION

The smoke non-smokers breathe is known as secondhand smoke and the process of breathing secondhand smoke is called involuntary smoking or passive smoking Secondhand smoke (SHS) which is a

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mixture of 2 forms of smoke that come from burning tobacco; Sidestream smoke – smoke from the lighted end of a cigarette, pipe, or cigar & Mainstream smoke – the smoke exhaled by a smoker. Even though we think of these as the same, they aren't. Sidestream smoke has higher concentrations of cancer-causing agents (carcinogens) and is more toxic than mainstream smoke. And, it has smaller particles than mainstream smoke. These smaller particles make their way into the lungs and the body's cells more easily. Non-smokers breathe in the same toxic chemicals in tobacco smoke as the smokers do, with similar, although apparently smaller effects. Passive smoking constitutes a serious public health risk to both children and adults. It is source of indoor air pollution, impacting health of the smoker as well as the health of people around. In adults, passive smoking causes serious cardiovascular and respiratory disease including coronary heart disease and lung cancer. In Infants, it causes sudden death and pregnant women it causes low birth weight babies. In the US secondhand smoke causes about 3,000 lung cancer deaths a year, compared to less than 100 lung cancer deaths per year from traditional forms of outdoor air pollution. Secondhand smoke also causes and aggravates asthma and other breathing problems, particularly in children.¹ In our country though laws related to tobacco smoking have been enacted, their compliance is low as was found in a past study.² In this background we wanted to assess the knowledge regarding passive smoking among general public and give health education to them regarding this important public health issue.

2. METHODOLOGY

The study participants were chosen by systematic random sampling from among the patients visiting our rural health training centre for three consecutive days. The inclusion criteria were 1. The person is a non-smoker and is above 18 years of age ; 2. Visited the

centre in the three days chosen for the study; 3. The first person chosen was the double digit number arrived at by the random numbers table and thence every fifth (this number was arrived at by a throw of dice) non-smoking person in the age above 15 yrs visiting the centre was recruited as a study participant after obtaining their informed consent. A questionnaire was designed consisting of questions pertaining to exposure to smoking from family members and public; their response to such a situation, response from the smoker's side, regarding the health issues due to passive smoking and their awareness on anti-smoking legislation and also their take on ways to tackle this social issue. The questionnaires were administered by a trained investigator and the responses were noted. This information was further compiled, tabulated and analyzed by putting into proportions.

3. RESULTS

We had a total of 77 participants who fitted with our study criteria. Out of these 28 (36.3%) were males and 49 (63.6%) were females. We had a greater proportion of females in our study population. Majority of the participants were in the age group of 21- 40 yrs, 59.7% [Table 1]. Regarding whether exposure to second hand smoke could cause health problems, interestingly none of the 77 participants felt it could be of any health consequence. All the 77 participants had been exposed to second hand smoke in public places. Of these 38 (49.3%) of them were exposed to second hand smoke at home also. The proportion of females exposed to second hand smoke at home was 61.2% which was significantly higher ($p < 0.05$) than what it was 28.5% for males [Table 2]. The main contributor to second hand smoke at home was husbands among the females [Table 3]. The main places for exposure to second hand smoke outside home was bus stand and tea shops [Figure 1].

Most of the participants, 58 (75.3%) felt annoyed or angry when exposed to second hand smoke while 19 (24.7%) were indifferent. Of those who felt annoyed, 31 (53.4%) chose to move away, 20 (34.4%) did nothing while 5 (8.6%) either advised or scolded the smokers [Figure 2].

Table 1: Age distribution of the study participants

| | <20 | 21-40 | 41-59 | >60 | Total |
|--------|-----|-------|-------|-----|-------|
| MALE | 2 | 16 | 8 | 2 | 28 |
| FEMALE | 6 | 30 | 7 | 6 | 49 |

Table 2: Exposure to second hand smoke at home

| | Exposure at home present | Exposure at home absent |
|---------|--------------------------|-------------------------|
| Males | 8 | 21 |
| Females | 30 | 19 |

Table 3: Source of second hand smoke exposure at home

| Relation | Females | Males | Total |
|-------------|---------|-------|-------|
| Husband | 25 | - | 25 |
| Father | 3 | 2 | 5 |
| Brother | - | 4 | 4 |
| Grandfather | - | 1 | 1 |
| Uncle | - | - | - |
| Son | 2 | 1 | 3 |
| Total | 30 | 8 | 38 |

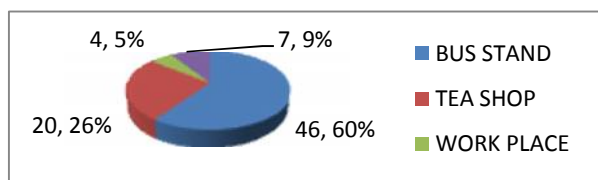


Fig 1: Places of exposure to second hand smoke outside home

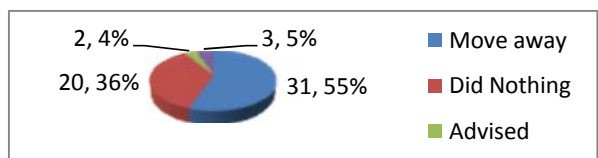


Fig 2: Reaction when exposed to second hand smoke

We also found that 37 (48%) of the study participants were well aware of the Govt.’s legislation against smoking. Regarding their suggestions to tackle this problem, 31 (40.2%) of them wanted Government to stop manufacturing, 20 (25.9%) suggested to create awareness regarding smoking, 14 (18.1%) of them suggested that the smokers themselves should realize

themselves, 7 (9%) of them suggested to increase price and 5 (6.4%) had no idea.

4. DISCUSSION

Secondhand smoke (SHS) is classified as a “known human carcinogen” (cancer-causing agent) by the US Environmental Protection Agency (EPA), the US National Toxicology Program, and the International Agency for Research on Cancer (IARC – a branch of the World Health Organization).³ It was surprising to find that none of our study participants had any knowledge regarding the potential ill effects of passive smoking though the facts of the negative health impact of passive smoking is a fact known for decades. In other countries too similar findings are reported. In Vietnam, nearly 90 per cent of smokers and non-smokers are unaware that secondhand smoke causes heart disease. In China, 57 per cent of smokers and non-smokers are unaware of the link. Even in countries with well-developed health systems and tobacco control regulation - such as Canada, the United Kingdom, the United States, and Australia - between a third and a half of smokers do not know that secondhand smoke can damage cardiovascular health.⁴ It was alarming to find that in spite of the legislation banning smoking in public places in India, all of our study participants had been exposed to second hand smoke. The main place of exposure outside homes was bus stand and tea shops. This is an important concern since it points to the fact that the legislation on smoking is not being strictly implemented in the public places. This finds conference by a past study also.² Exposure of women to passive smoking at home is an important issue to be tackled with sensitivity. Epidemiologic studies of secondhand smoke and lung cancer showed that nonsmoking women married to smokers had a higher risk of lung cancer than did nonsmoking women married to nonsmokers.^{5, 6} The lack of awareness regarding the risk among the general

population coupled with exposure among the women to both home and outside exposure to second hand smoke is a matter of grave concern that needs urgent addressing.

The fact that a majority of the study participants in spite of being annoyed, were unable to actively initiate any positive action when exposed to second hand smoke and chose to respond by either moving away or keeping quiet points to the need for confidence building among the general public. This has to include knowledge transfer to the smokers and non-smokers as well as installation of impactful health educational material at public places discouraging smoking.

5. CONCLUSION

There is gross lack of awareness among general public regarding health damaging effects of second hand smoking. There is a lack of motivation among the public to actively address the issue of second hand smoke when exposed to it. A high exposure to passive smoke among non smoking women in their homes is a matter of concern. Poor implementation of anti smoking legislation in public places is brought out.

This study opens up scope for future large scale surveys and studies to find the awareness levels of people regarding health consequences of second hand smoking as well as the reasons for poor implementation of the anti smoking legislation

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