

Practices regarding secondhand smoking among Malay housewives in rural community in Jempol, Negeri Sembilan

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ABSTRACT

Introduction: Secondhand smoking occurs in public and private spaces and it causes serious adverse health effects. The initiatives to establish smoke free policies in private spaces are more challenging as it is an area of autonomy. Thus, this study aims determine the knowledge, attitude and practices of a group of housewives in a Malay community who were secondhand smokers in the privacy of their own homes and their association with these women's socio demographic profiles.

Methods: A total of 114 housewives who lived with at least one smoker participated in this study. A self-administered questionnaire was used to collect the characteristics of the respondents (age, level of education and income), their knowledge, attitude and practices towards secondhand smoking and also information about their secondhand smoking. Their practices were then categorized into 'appropriate' and 'not appropriate' practices. It was then tested for association with age, level of education, income, knowledge and attitude categories.

Results: The mean age of the respondents was 42.12±11.13 years, 56.1% of them at least finished primary school and 90.4% had monthly household income of less than RM 2000. Exposure to secondhand smoking at home was 59.6%. Most were exposed to less than 10 cigarettes and less than 10 minutes per day (69.3% and 49.1%, respectively). A total 66.7% of the respondents had appropriate practice towards secondary smoking and this practice was significantly associated with the level of knowledge about secondary smoking ($P=0.034$).

Conclusion: National efforts to suppress smoking in private spaces such as homes and cars need to be enhanced. As knowledge is significantly associated with appropriate practice towards secondary smoking, more efforts should be made to increase and disseminate knowledge about the harmful effects of secondhand smoking especially to second hand smokers.

Key Words: knowledge, attitude, practice, secondary smoking, housewife

1.0 Introduction

A person who inhales the cigarette smoke which has been exhaled by smokers is known as a secondhand smoker (SHS) and the act is known as secondhand smoking. Smoke exhaled by a smoker contains harmful chemicals and thus secondhand smoking is proven to have serious adverse effect to ones' health such as increase the risk of diseases such as lung cancer, heart disease and asthma. A systematic review reported that the cardiovascular effect of secondhand smoking is almost as similar as the effect of smoking (Barnoya & Glantz, 2005) while a cohort study in China showed that the effect of secondhand smoking is dose related in chronic obstructive pulmonary disease (COPD) and ischemic stroke (He et al, 2012). A study on the total annual cost of treatment linked to the exposure of secondhand smoking was shown to be equivalent to USD 44.58 (Waters et al., 2009).

World Health Organization (WHO) has recommended the implementation of indoor smoke-free policies in public places and workplaces to reduce the risk of second hand smoking (WHO, 2008). The implementation of these policies had successfully reduced the risk of secondhand smoking. An evaluation study in France reported that the indoor smoke-free policies had led to a near-total elimination of smoking indoors in public places and a considerable reduction of smoking in indoor workplaces (Fong et al., 2013). Despite the success of banning secondhand smoking in public places and work places, banning secondhand smoking in private spaces such as in homes and cars remain a challenge because private spaces such as homes and cars are autonomy spaces. Banning smoking in the houses and cars is difficult to legislate and enforce (Jarvie & Malone, 2008).

A study in Bangladesh showed that 43% of non-smoking adults were exposed to secondhand smoking at home and another study in China showed that 48.3% of household were exposed to secondhand smoking (Abdullah et al. 2014, Wang et al., 2009). The exposure was associated with being female, younger age, lower education and income group (Abdullah et al. 2014; Baheiraei et al., 2013; Wang et al., 2009; Ma et al.2005). Although smoking in front of the children and exposing them to health risk is unethical, studies have shown that smoking frequently took place in the presence of children (Alwan et al., 2010; Wang et al., 2009). A local study in Kota Baharu (a city in the state of Kelantan in East Malaysia) among primary school children reported that 55.6% of the primary school children studied who lived with at least one smoker had significant increase in respiratory symptoms (Sharina D et al, 2007) and many other studies had supported the fact that the ones most vulnerable to secondhand smoking at home are the children (Zafar Ullah et al., 2013; Alwan, et al., 2010).

Findings of other studies which showed that secondhand smoking affect unborn babies, with significant inverse correlation between the maternal exposure to passive smoking and birth weight (Norsa'adah & Omar Salinah, 2014; Wadi & Al-Sharbatti, 2011) are extremely disturbing. Therefore it is important for mothers to protect not only their own health but also the health of their children at home by distancing the children from the smoker, asking smoker not to smoke near the children or even giving advice to the smoker to quit smoking. Although evaluation of smoke free initiative in the western countries (France and Rotherham) has shown that the indoor smoke-free policy for public places have indirectly benefited smoke free home initiative (Fong et al., 2013, Allmark et al., 2011) these practices towards secondhand smoking could be more challenging among most Asian culture, as the Asian

culture is a patriarchal society where the male figure is dominant. As a result, any smoke-free initiatives towards smoker at home could be difficult especially if the smoker is the father (Moa et al, 2012).

This study aimed to access the knowledge, attitude and practices towards secondhand smoking among a group of Malay housewives (who were secondhand smokers themselves) especially regarding to secondhand smoking inside their houses, and the association between the respondents' practice and their socio demographics.

2.0 Methodology

This was a cross sectional study carried out in two villages in Jempol, Negeri Sembilan in December 2014. Housewives who were living with at least one smoker from the houses in the selected villages were included in this study.

Data were collected using a self-administered questionnaire. The questionnaire is in the Malay language and it consisted of 5 parts. The first part was to collect the respondents' characteristics (age, level of education, household income). The second part was the characteristics of secondhand smoking exposure of the respondent (number of cigarette smoked by the smoker who lives in the house, duration and location of their exposure). The third part was to assess the knowledge of the respondent regarding secondhand smoking. Each correct answer was given a score of 1. The fourth part comprised of statements regarding the respondents' attitude towards secondary smoking and each statement was assessed using the 5 point Likert scale. Finally, the fifth part contained questions adapted from a questionnaire used by a study among urban working adults to assess the practices of the respondents toward secondary smoking (Ooi et al, 2014).

Data were analyzed using IBM SPSS version 21.0. The respondent characteristics were categorized. For the "age" variable the categories were age \leq 45 years old and age $>$ 45 years old; for "level of education" the categories were no formal education, primary school, secondary school and tertiary education; and for "income" the categories were income $<$ RM 1000, RM 1000-2000 and $>$ RM 2000). The knowledge, attitude and practices were also categorized into 2 categories. For the variable "knowledge", knowledge score $5 \geq$ = satisfactory and knowledge score < 5 = not satisfactory; for variable attitude, attitude score $23 \geq$ = acceptable and attitude score < 23 = not acceptable; for variable practice, practice score ≥ 6 = appropriate and practice score < 6 = not appropriate. Association between appropriate practice and respondents' characteristics (age group, level of education and income category), level of knowledge and attitude were tested by using Chi Square test.

3.0 Results

A total of 114 housewives who lived with at least one smoker participated in this study. Their mean age was 42.12 ± 11.13 years old, 7% (8 respondents had no formal education, 25.4% (29 respondents) completed primary school education only, 56.1% (64 respondents) completed secondary school education and 11.4% (13 respondents) completed tertiary education.

Majority (90.4%) had a household income of less than Ringgit Malaysia (RM) 2000.00 per month.

Regarding their secondhand smoking exposure, 69.3% (79 respondents) were exposed to smoker who smoked 10 or less cigarette per day; where 15.8% (18 respondents) were exposed for more than 30 minutes per day, 35.1% (40 respondents) for 10 to 30 minutes and 49.1% (56 respondents) for less than 10 minutes. Location of exposure was predominantly inside the house (indoor) for 59.6% (68 respondents) while 40.4% (46 respondents) were exposed predominantly outside the house.

Table 1 shows the distribution of responses to behavior questions towards secondhand smoking. The highest percentage (88.6%) for appropriate response was for statement 'I would leave the area when someone smokes near me' and the lowest percentage (50.0%) was for the statement 'Smoker should ask my permission first before they smoke'.

Table 1: The distribution of responses towards behavior towards secondhand smoking among the respondents (N=114)

Action statements	Yes	No
	Frequency (Percentage)	Frequency (Percentage)
1. I mind if someone smokes near me	91(79.8%)	23(20.2%)
2. I would leave the area when someone smokes near me	101(88.6%)	13(11.4%)
3. I have the right to ask smoker not to smoke near me	92(80.7%)	22(19.3%)
4. I have asked the smoker to stop smoking	92(80.7%)	22(19.3%)
5. Smokers should ask my permission before they smoke	57(50.0%)	57(50.0%)
6. I have asked the smoker to adhere to non-smoking regulation	78(68.4%)	36(31.6%)
7. I have informed smoker about adverse health effects of smoking	93(81.6%)	21(18.4%)

Table 2 shows that there were no significant association between appropriate practice towards secondhand smoking with the respondents' characteristics (age, education level, household monthly income) and level of attitude, but there is a significant association with level of knowledge about secondhand smoking ($P=0.035$)

Table 2: The association between respondents characteristics, level of knowledge and attitude with appropriate action toward secondhand smoking (N=114)

Variables	Practices towards secondhand smoking		χ^2 value	P value
	Appropriate (n= 76)	Not appropriate (n=38)		
<i>Age</i>				
≤ 45 years old	23(74.2%)	8(25.8%)	1.08	0.21
> 45 years old	53(36.1%)	30(36.1%)		
<i>Education level</i>				
No education	3(37.5%)	5(62.5%)	4.18	0.17
Primary school	22(75.8%)	7(24.1%)		
Secondary school	41(64.1%)	23(35.9%)		
Tertiary education	10(76.9%)	3(23.1%)		
<i>Family income</i>				
<RM 1000	18(66.7%)	9(33.3%)	1.30	0.52
RM 1000-2000	49(64.5%)	27(35.5%)		
> RM 2000	9(81.8%)	2(18.2%)		
<i>Level of knowledge about secondhand smoking</i>				
Satisfactory	46(60.5)	15(39.5)	4.513	0.034*
Not satisfactory	30(39.5)	23(60.5)		
<i>Level of attitude towards secondhand smoking</i>				
Acceptable	43(56.6)	16(42.1)	2.125	0.145
Not acceptable	33(43.4)	22(57.9)		

Chi square test, significant if $P < 0.05$

4.0 Discussion

Respondents had the common characteristics of Malay housewives staying in rural communities where majority had low formal education level and in low socioeconomic group. Their exposure to secondhand smoking was found to be predominantly inside the house compared to outside the house. The location of exposure in this study was similar to secondhand smoking studies in other countries such as the study among working women in Jordan (Gharaibeh et al., 2011) and among mothers of pre-school children in Taiwan (Lin et al., 2010). In fact the study in Jordan even reported that the commonest place of exposure to was in their own house followed by in other peoples' houses (Gharaibeh et al., 2011). Although studies have shown that the most common place of exposure to secondhand smoking was inside the house the duration of exposure seemed to differ between studies. In this study the duration of exposure to secondhand smoking for most respondents (84.2%) was less than 30 minutes daily. This is similar to the average exposure of secondhand smoker of the study in Taiwan which was 3 hours per week (less than 30 minutes daily) (Lin et al., 2010). Perhaps the highest secondhand smoking exposure duration was among the respondents studied in Jordan (among non-smoking educated working women) which reported a daily exposure of 5.5 ± 5.5 hours in any setting. The higher duration of smoking exposure in the study among non-smoking educated working women in Jordan could be due to several reasons. First, it could be due to different smoking culture, where all forms of smoking are acceptable in Middle Eastern countries such as Jordan as smoking is an expression of cultural identity (Akl et al., 2013). Second, it could be because they were exposed to secondhand smoking not only at home but also at work. And finally, it could be because the implementation and compliance to smoke free works place policy in the Middle East countries such as Jordan were poor. The study reported only 52.2% of the respondents were aware of the smoke free work place policy and only 54.5% reported the implementation prohibition of smoking in closed areas (Gharaibeh et al., 2011).

Although all of the respondents in this study were secondhand smokers, only 79.8% (91 respondents) mind if someone smokes near them and 88.6% (101 respondents) would leave the area where smokers were smoking. This indicated that approximately 20% of the respondents were tolerant in having smoker smokes to be near them. Compared to other studies in Malaysia, the percentage of those who would leave the area where smokers were smoking in this study was high compared to two other studies (study among urban working adult and a community survey) which reported only 68.2% and 67.3% respectively (Ooi et al., 2014; Abdul Rashid et al., 2014). The higher percentage in this study could be because of different study population as this study was carried out among Malay housewives while the other studies were carried out among the general population which included all genders, ethnic groups and occupations. The percentage of respondents who would leave the area where smokers were smoking (88.6%) in this study was also higher compared to the study among non-smoking educated working women in Jordan where only 74.1% will distance themselves from smokers to avoid the negative effects (Gharaibeh et al., 2011). Again the difference in the percentage could be because different cultural tolerance to smoking between Malay women and Arab women. Another study among workforce in London casino who were

highly exposed to secondhand smoking also reported a higher percentage of intolerance (78%) and 91% of them wanted to get away from exposure (Pilkington et al., 2006).

The percentage of respondents who felt they have the right to ask smoker not to smoke near them and had asked the smoker to stop smoking was 80.7% (92 respondents). This percentage was higher than the percentage (74.9%) found in the study among working adult in urban Malaysia (Ooi et al., 2014). The difference percentages could be due to the different study population. This study was among Malay housewives who were secondary smokers while the other study was among working population, comprising of both genders and both smoking status (smokers and non-smokers). Nevertheless the percentage of respondents who had asked the smoker to stop smoking (80.7%) in this study was higher compared to the studies in other countries. The study among non-smoking educated working women in Jordan showed only 47.8%, while a study done among 1174 Asian American which showed only 71.0% among Chinese, 51.9% among Korean, 57.5% among Vietnamese and 48.4% among Cambodian (Gharaibeh et al., 2011; Ma et al. 2005). These differences could be because the knowledge and the intolerance towards secondhand smoking differed significantly between ethnic groups, gender, education, and smoking status.

An interesting observation in this study was the percentage of those who had asked the smoker to stop smoking (80.7%) was lower than the percentage of those who left the place (88.6%). This could indicate that, for most respondents (Malay housewives) leaving the area of exposure was easier than confronting the smoker especially if the smoker was her husband. This could be because of the cultural reason. This finding is similar to the finding in several other studies among Asian culture such as China and Taiwan. Similarly, the percentage of respondents who informed smoker about adverse health effects of smoking (81.6%) in this study was also lower than those who left the place where smoking took place (88.6%). Secondhand smokers refrain from actively advising smoker because their culture's culture defined the female gender role as submissive in order to maintain the harmony in the family (Mao et al., 2012, Ooi et al., 2014, Lin et al., 2010).

The percentages of respondents who were willing to advise the smoker to conform to the smoking regulation in this study was only 68.4%. This percentage denotes that even though they are all secondhand smoker, not all were willing or have enough courage to speak out against smoking even in legally gazetted areas. The percentage in this study was slightly lower compared to the study among urban working adults which reported 70% would request smoker to follow the smoking regulation (Ooi et al, 2014). This could be because urban working adults could be from a higher social class (i.e. higher education and income) thus have more knowledge and courage to avoid their exposure to secondhand smoking. A study among a group of Hispanic secondhand smokers who lived in multiunit housing (MUH) reported that although they have positive attitudes toward adopting antismoking policies in MUH to protect their health and the health of their family members, they would not speak out to their neighbor who smokes because of fear of retaliation by smokers (Garbanati et al., 2011).

In this study, 76 (66.7%) of the respondents were categorized as having appropriate practice towards secondhand smoking and it was ~~only~~ associated only with level of knowledge about secondhand smoking. The association between appropriate practice towards secondhand smoking and the level of knowledge about secondhand smoking in this study is a positive

observation. This was also the findings of other studies which showed those with good knowledge about matters related to secondhand smoking (such as harmful effect of secondhand smoking and smoke free policies) act appropriately towards secondhand smoking (Abdul Rashid et al. 2014; Lin et al, 2010, Ma et al. 2005). Therefore, having satisfactory level of knowledge about secondhand smoking is a prerequisite that could help them (secondary smoker) negotiate smoking interventions at home to create a smoke free home environment. Studies show that knowledge interventions which is gender specific to increase self-efficacy could help pregnant women and mothers of young children to establish their smoking policy at home (Huang et al., 2013, Chen et al., 2007). However the study in Jordan showed otherwise - even though the level of knowledge about secondhand smoking was good among non-smoking educated working women in Jordan, their level of avoidance was low (Gharaibeh et al., 2011). Therefore, the study in Jordan challenged the common association between appropriate practices with level of knowledge. There were other social factors that might influence this incongruity such as cultural norms and gender gap.

There was no association between appropriate practices towards secondary smoking with age group, level of education, income and attitude. The association was not detected in this study because the variations of level of education, income and age group were minimal in this study group. However, there were studies that showed that 'intolerance of secondhand smoking' and 'support for smoke free initiative' increased with higher level of education and income, but decreased with increased age (Ma et al. 2005; Abdul Rashid et al., 2014).

To summarize, the percentages of appropriate practices towards secondary smoking among the respondents (Malay housewives who were secondary smokers) was 66.6% and was associated with the level of knowledge about secondhand smoking.

The limitation of the study is that it used questionnaire to measure duration of exposure which could results in information bias. The measurement of exposure by using biomarker would be more precise.

5.0 Conclusion and recommendation

Secondhand smoker are harmed by the act of smoking of a smoker either in public or in private spaces. The smoke-free initiatives for public spaces should be continued and enhanced. Concurrently, strategies to start smoke-free initiatives for private spaces (such as homes and cars) should also be established. National efforts should be enhanced in suppressing the habit of smoking while promoting private spaces such as homes and cars to be smoke-free. Specific intervention to increase self-efficacy of secondhand smokers could help them escape from the harmful environment more effectively. More drastic action such listing smoking as legal nuisance and enforcing smoking policies in multistory dwellings could be considered in ensuring that it is smoke-free in private spaces.

Ethical

Ethical approval was obtained from the Ethical Committee for Human Study of Universiti Putra Malaysia.

Declaration of conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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References:

- Abdullah, A.S., Driezen, P., Sansone, G., Nargis, N., Hussain, G. A.K.M., Quah, A.C.K. & Fong G.T. (2014). Correlates of exposure to secondhand smoke (SHS) at home among non-smoking adults in Bangladesh: findings from the ITC Bangladesh survey *BMC Pulmonary Medicine* 14:117 doi:10.1186/1471-2466-14-117
- Alwan, N., Siddiqi, K., Thomson, H. & Cameron, I. (2010) Children's exposure to second-hand smoke in the home: A household survey in the North of England. *Health and Social Care in the Community* 18(3):257–263
- Allmark, P., Tod, A.M., McDonnell, A., Al-Alawy, K., Mann, K., Hollis, E., Qutishat, D. et al. (2011). Evaluation of the impact of a smoke-free home initiative in Rotherham, a deprived district in Northern England. *European Journal of Public Health* 22(2):248 – 251
- Akl, E.A., Jawad, M., Lam, W.Y., Co, C.N., Obeid, R. & Irani, J.(2013) Motives, beliefs and attitudes towards waterpipe tobacco smoking: a systematic review. *Harm Reduction Journal* 10:12 doi:10.1186/1477-7517-10-12
- Baezconde-Garbanati, L.A., Weich-Reushé, K., Espinoza, L., Portugal, C., Barahona, R., Garbanati, J. et al (2011). Secondhand smoke exposure among Hispanics/Latinos living in multiunit housing: exploring barriers to new policies. *American Journal Health Promotion*. 25(50): S82–S90. doi:10.4278/ajhp.100628-QUAL-219
- Baheiraei, A., Ghafoori, F., Nedjat, S., Foroushani, A.R. (2013). Sociodemographic characteristics and secondhand smoke exposure among women. *Tanaffos* 12(2): 41-47
- Barnoya, J. & Glantz, S.A. (2005) Cardiovascular Effects of Secondhand Smoke Nearly as Large as Smoking *Circulation*. 111:2684-2698
- Chen, C.M, Lee, P.H, Chou, Y.H., Kuo, S.F., & Hsu, Y.H. (2007) Avoidance of environmental tobacco smoke among pregnant Taiwanese women: Knowledge, self-

- efficacy, and behavior. *Journal of Women's Health*. 16(6):869-878 doi:10.1089/jwh.2006.0198.
- Fong, G.T., Craig, L.V., Guignard, R., Nagelhout, G.E., Tait, M.K., Driezen, P., Kennedy, R.D. et al. (2013) Evaluating the effectiveness of France's indoor smoke-free law 1 year and 5 years after implementation: Findings from the ITC France survey. *PLOS ONE* doi: 10.1371/journal.pone.0066692
- Gharaibeh, H., Haddad, L., Alzyoud, S., El-Shahawy, O., Abu Baker, N. & Umlauf, M. (2011). Knowledge, attitudes, and behavior in avoiding secondhand smoke exposure among non-smoking employed women with higher education in Jordan. *International Journal of Environmental Research and Public Health* 8:4207-4219; doi:10.3390/ijerph8114207
- He, Y., Jiang, B., Li, L.S., Li, L.S., Ko, L., Wu, L., Sun, D.L. et al. (2012) Secondhand Smoke Exposure Predicted COPD and Other Tobacco-Related Mortality in a 17-Year Cohort Study in China. *CHEST* 142(4):909-918
- Huang, C.M., Wu, H.L., Huang, S.H., Chien, L.Y. & Guo, J.L. (2013) Transtheoretical model-based passive smoking prevention programme among pregnant women and mothers of young children. *European Journal of Public Health* 23(5):777-782 doi: <http://dx.doi.org/10.1093/eurpub/cks177> 777-782
- Jarvie, J.A. & Malone, R.E. (2008) Children's Secondhand Smoke Exposure in Private Homes and Cars: An Ethical Analysis. *American Journal of Public Health* 98(12):2140-2145
- Ma, G.X., Tan, Y., Fang, C.Y., Toubbeh, J.I. & Shive, S.E. (2005) Knowledge, attitudes and behavior regarding secondhand smoke among Asian Americans. *Preventive Medicine* 41(2):446-453
- Ma, G.X., Shive, S.E., Tan, Y., Toubbeh, J.I., Fang, C.Y., Edwards, R.L. (2005). Tobacco use, secondhand smoke exposure and their related knowledge, attitudes and behaviors among Asian Americans. *Addictive Behaviors* 30(4):725-740
- Mao, A., Bristow, K. & Robinson, J. (2012) Caught in a dilemma: why do non-smoking women in China support the smoking behaviors of men in their families? *Health Education Research* 28 (1):153-164
- Norsa'adah, B. & Salinah, O. (2014) The Effect of Second-Hand Smoke Exposure during Pregnancy on the Newborn Weight in Malaysia. *Malaysian Journal Medical Science* 21(2): 44-53
- Ooi, J.X., Teh, K.X., Tam, C.L., Sadasivan, Kadirvelu, S.A. (2014) Passive smoking: perceptions and practices among urban working adults. *International Journal of Collaborative Research on Internal Medicine & Public Health* 6 (6):160-167
- Pi-Li Lin, P.L., Huang, H.L., Lu, K.Y., Chen, T., Lin, W.T., Lee, C.H., Hsu, H.M. (2010) Second-hand smoke exposure and the factors associated with avoidance behavior among

the mothers of pre-school children: a school-based cross-sectional study *BMC Public Health* 10:606

Pilkington, P. A., Gray, S., Gilmore, A. B. & Daykin, N. (2006) Attitudes towards secondhand smoke amongst a highly exposed workforce: survey of London casino workers. *Journal Public Health* 28 (2): 104-110. doi: 10.1093/pubmed/fdi086

Rashid A, Manan AA, Yahya N, Ibrahim L (2014) The support for smoke free policy and how it is influenced by tolerance to smoking – Experience of a developing country. *PLoS ONE* 9(10): e109429. doi:10.1371/journal.pone.0109429

Sharina, D., Zulkifli, A. & Nyi, NN. (2007). Secondhand smoke exposure and respiratory symptoms among primary school children in Kota Bharu, Kelantan. *Malaysian Journal of Public Health Medicine* 7(2):59-63

Wadi, M.A.A. & Al-Sharbatti, S.S. (2011). Relationship between birth weight and domestic maternal passive smoking exposure *Eastern Mediterranean Health Journal* 17(4); 290-296

Wang, C.P., Ma, S.J., Xu, X.F., Wang, J.F., Mei, C.Z., Yang, G.H. (2009). The prevalence of household second-hand smoke exposure and its correlated factors in six counties of China. *Tobacco Control* 18:121–126. doi:10.1136/tc.2008.024836

Waters, H.R., Foldes, S.S., Alesci, N.L. & Samet, J. (2009). The economic impact of exposure to secondhand smoke in Minnesota. *American Journal of Public Health* 99(4):754-759. doi: 10.2105/AJPH.2008.137430

World Health Organization (WHO): WHO Report on the Global Tobacco Epidemic, 2008. The MPOWER Package. Geneva, Switzerland: World Health Organization; 2008. Available at http://www.who.int/tobacco/mpower/mpower_report_full_2008.pdf website. Accessed on 6 January 2015

Zafar Ullah, A.N., Huque, R., Akter, S., Nasreen, S., Akter, H., Thomson, H., Cameron, I. et al (2013). Children's exposure to second-hand smoke at home in Bangladesh: a community survey. *BMJ* 3: e003059. doi:10.1136/bmjopen-2013-003059