

## Awareness of an obstetric population about environmental tobacco smoking

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### ABSTRACT

**Background and Objectives:** The reported rate of women's smoking is typically low. However, many pregnant women are exposed to environmental tobacco smoke (ETS), which could affect their own health and the health of their growing fetus. The aim of this study was to estimate the magnitude of the problem of exposure to ETS and assess the awareness of postpartum women to ETS and its possible effects. **Designs and Settings:** This was a cross-sectional study conducted on 1182 postpartum women at a university hospital in Riyadh, Saudi Arabia, between 1<sup>st</sup> January and 30<sup>th</sup> June, 2012. **Materials and Methods:** A structured questionnaire was used for data collection. Factors associated with the level of understanding of the possible effects of ETS exposure were analyzed. **Results:** The majority of the participating women knew that exposure to ETS had adverse effects on maternal and fetal health (>80%), but their knowledge of the specific effects on fetal health was limited. The level of mothers' education was found to be associated with better knowledge of effects on mother and fetal health ( $P < 0.01$ ). **Conclusion:** This study revealed that pregnant women in our sample had limited knowledge of the specific effects of ETS on fetal health. This shortcoming in knowledge needs to be addressed by improving health.

**Key words:** Environmental tobacco smoking, knowledge, pregnant woman, smoking

### INTRODUCTION

Globally, the consumption of tobacco products is unfortunately increasing, especially in high and upper middle income countries.<sup>[1]</sup> Tobacco use is also reported to be the leading modifiable risk factor of preventable morbidity and mortality world-wide. Currently responsible for around 6 million annual deaths, tobacco use is expected to cause the death of 8 million people every year by 2030, 80% of whom would be people living in developing countries.<sup>[2]</sup>

On a global scale, tobacco use among males is estimated to be about 4 times that of females (42% vs. 12%) respectively.<sup>[3]</sup> Nevertheless, the number of females who smoke is increasing at alarming rates especially among young cohorts, which raises the issue of the side effects of tobacco use affecting women of reproductive age.<sup>[4]</sup> The average estimated prevalence of tobacco use in the Eastern Mediterranean Region (EMR) is 50% in men and 10% in women.<sup>[5]</sup> In women, it ranges from a reported low of 0.7% in Egypt to a high of 33.7% in Lebanon.<sup>[5]</sup> Reports on tobacco use in Saudi Arabia (SA) ranges from 13% to 38% in males and 1-16% in females.<sup>[6]</sup>

Although there is a paucity of reports on tobacco use among pregnant women in EMR, some reports provide estimates as high as 23% (Lebanon), 19% (Jordan) and 14% (Turkey), respectively.<sup>[7-9]</sup> Nevertheless, the rates in reports on environmental tobacco smoke (ETS) during pregnancy are much higher, reaching 50.6% among Saudi pregnant women<sup>[10]</sup> and 35.5% in Iran.<sup>[11]</sup> Moreover, these

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reports of active tobacco use during pregnancy<sup>[7-9,12]</sup> and ETS confirmed the adverse pregnancy outcomes associated with tobacco use. Similar reports have been published from other parts of the world.<sup>[13-15]</sup> In fact, ETS is reported to be associated with several maternal and neonatal adverse outcomes including premature labor, low birth weight (LBW), stillbirth, shorter infant length, smaller head circumference and congenital malformations.<sup>[13,14,16]</sup> It has been confirmed that exposure to ETS during the pregnancy increases the risk of stillbirth by 23%, congenital anomalies by 13%<sup>[14]</sup> and lowers the birth weight of infants by an average of 60 g.<sup>[13]</sup> A study in SA showed a significant association between passive smoking and LBW and intrauterine growth restriction.<sup>[10]</sup>

Many tobacco users worldwide are reported to be unaware of the risks and adverse consequences of tobacco use,<sup>[17]</sup> while many non-smokers are unaware of the possible harm of ETS.<sup>[18]</sup> Few studies<sup>[8]</sup> have reported on the poor knowledge of the adverse effects of the use of tobacco on pregnancy outcomes.

The aim of the study was to estimate the magnitude of the problem of ETS exposure and assess the awareness of postnatal women of ETS and its harmful effects on pregnancy outcomes at a university hospital in Riyadh, SA.

## MATERIALS AND METHODS

The approval of the Institutional Review Board was obtained before the start of the study.

A cross-sectional survey was conducted at the postnatal ward of the university hospital in Riyadh, SA. The obstetrics department provides services for 3500-4000 deliveries per year.

This study was conducted on a convenience sample of 1182 women between 1<sup>st</sup> of January 2012 and 30<sup>th</sup> of June 2012. Women who were admitted consecutively to the postnatal ward were invited to complete a self-administered questionnaire designed to assess the knowledge of women who had recently delivered, about the harmful effects of ETS on the pregnant woman and her unborn child. ETS is defined as exposure that occurred when a pregnant woman did not smoke at all during the index pregnancy, but lived with family members (husband, son, daughter, or other relatives) who were reported to have smoked during her pregnancy.

The objectives of the study were explained to the potential participants and confidentiality was guaranteed. The women were given the right to abstain from participating in the study with no unfavorable consequences. Consent

was obtained from all the women before they completed the questionnaire.

Published studies, which included questionnaires on the knowledge of women about adverse effects of tobacco use and ETS on pregnancy outcomes, were reviewed.<sup>[19-21]</sup> A modified questionnaire was developed by a consensus of the authors and its face validity was subsequently evaluated by two content experts (an obstetrician and a public health professional). Women who could not read or write were interviewed by one of the authors using the same questionnaire. The questionnaire was designed in English, translated into Arabic and back into English again. Non-Arabic speaking women completed the questionnaire in English.

The first part of the questionnaire was designed to collect data on the demographic variables of the women including nationality (Saudi, Asian and Arab), age and educational level, occupational and smoking status (active smoke or ETS). Knowledge of the effects of ETS on a woman's health, on pregnancy and on the fetus was included in the second part of the questionnaire. The questions were: "Exposure to ETS affects mother's health?", "Exposure to ETS affects the unborn baby's health?", "Exposure to ETS causes miscarriage?", "Exposure to ETS leads to early delivery before the due date?", "Exposure to ETS leads to the delivery of a small baby?", "Exposure to ETS causes birth defects?"

Responses were recorded as "Agree", "Disagree" and "Neither". The average time for the completion of the questionnaire was 15 to 20 min. The questionnaire was piloted on 20 women from the same target population (subsequently excluded from the analysis).

### Statistical analysis

Data were managed and analyzed using Statistical Package for the Social Sciences, version 18.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics were computed to explore the characteristics of the respondents.

For the knowledge questions, the "Disagree" and "Neither" responses were combined because the number who responded "Neither" was small. Descriptive statistics (percentages) were calculated to describe the characteristics of the study sample. The associations between knowledge of adverse effects of ETS on the maternal and fetal health and nationality, age, gravidity, educational level, work status and gravidity were analyzed using Chi-squared test.  $P < 0.05$  was considered to be statistically significant.

## RESULTS

Over a period of 6 months (January-June, 2012), the number of deliveries was 1284. Out of this number, 1182 mothers completed the questionnaire giving a response rate of 83%. The majority of the study participants were older than 25 and the characteristics of the study population are described in Table 1.

Almost all of them had formal education and more than half had a university education or higher (611) (51.7%). The rate of illiteracy was very small at 10 (0.8%). Only 18.1% had paid work. Approximately one-third of the respondents admitted exposure to ETS during the index pregnancy and in 81.6% the husband was the source. Only 3 (0.3%) mothers admitted to smoking during pregnancy.

Table 2 summarizes the responses of participants to the knowledge questions. Most of the respondents strongly agreed/agreed that ETS had adverse effects on the mother (86.4%) and the fetus (81.2%). However, the respondents did not know the specific possible adverse effects of ETS on the unborn child.

**Table 1: General characteristics of participants (n=1182), Riyadh, 2012**

Characteristics	n (%)
Nationality	
Saudi	1118 (94.6)
Asian	41 (3.5)
Arab	23 (1.9)
Age	
<25 years	386 (32.7)
25-35 years	524 (44.4)
>35 years	270 (22.8)
Gravidity	
Primigravida	389 (32.9)
Multigravida	793 (67.1)
Educational level	
Illiterate	10 (0.8)
School (primary/preparatory/secondary)	560 (47.4)
University or higher	611 (51.7)
Working status	
House wife	824 (69.7)
Students (basic education/university)	143 (12.1)
Employee	215 (18.2)
Smoking pattern	
ETS	347 (29.4)
Husband smokes	283 (23.9)
Son/daughter	18 (1.5)
Someone in the same house	114 (9.6)
Active smoking	
Smoker	3 (0.3)
Ex-smoker	7 (0.6)
Smoker but stopped during pregnancy	11 (0.9)

ETS, Environmental tobacco smoke

Respondents agreed that ETS may cause prematurity, spontaneous abortion, LBW and congenital anomalies (only 15%, 17%, 24% and 30%) respectively.

Associations of knowledge about health effects of ETS with nationality, educational level, age, gravidity and work status are also shown in Table 2. More than 80% of Saudi respondents strongly agreed/agreed to the general effects of ETS whilst a smaller proportion of them recognized the effects of ETS on prematurity or congenital anomalies (14.1% and 29.4% respectively). Age was not associated significantly with respondents' knowledge. Illiterate respondents neither agreed nor strongly agreed with effects of ETS. They showed a significantly lower level of knowledge of all questions. Significantly, a smaller percentage of housewives agreed/strongly agreed with the effects of ETS on spontaneous abortions and congenital anomalies, while a larger percentage of those in employment knew that ETS could result in having smaller babies and prematurity. Being primigravida or multigravida was not significantly associated with knowledge.

The reliability of the questionnaire was measured using Cronbach's Alpha, which estimated at 0.768, reflecting a good level.

## DISCUSSION

Our findings showed a high rate of exposure to ETS, where one third of our respondents reported to have been exposed to ETS. This is consistent with reports from several previous studies in which postnatal women who reported been exposed to ETS (through exposure to smokers at home during their pregnancy) were more than smokers, ex-smokers and transient quitters combined. Smoking, a very popular global habit, is much more common in men than women. Hence, the rate of pregnant women who would possibly be exposed to ETS from a spouse who smokes would be generally greater than the rate of women who smoke during pregnancy.<sup>[8,21]</sup>

Furthermore, our study showed that postnatal women who did not recognize the specific outcomes of exposure to ETS were more than those who acknowledged that exposure to ETS was generally harmful. This is consistent with the study conducted by Al-Bedah *et al.* in 2010, which reported that 40% of Saudi youths were unaware of the harmful effects of exposure to ETS.<sup>[22]</sup> This rate is higher than those reported in some developing countries such as China (4.1-18.4%),<sup>[23]</sup> Bahrain (8.6-12.4%)<sup>[24]</sup> and some developed countries like the Nordic Countries (5-9%).<sup>[25]</sup>

**Table 2: Knowledge towards smoking and its associated factors among women in the studied sample, Riyadh, 2012**

Knowledge questions	n (%)					
	Q1	Q2	Q3	Q4	Q5	Q6
Total cohort	1021 (86.4)	960 (81.2)	204 (17.3)	176 (14.9)	287 (24.3)	355 (30.0)
Nationality						
Saudi	966 (86.3)	908 (81.1)	185 (16.5)	158 (14.1)*	265 (23.7)	329 (29.4)
Asian	33 (80.5)	30 (73.2)**	9 (22.0)	11 (26.8)	13 (31.7)	14 (34.1)
Arab	22 (95.7)	22 (95.7)	10 (43.5)**	7 (30.4)	9 (39.1)	12 (52.2)**
Age						
<25 years	330 (85.5)	306 (79.3)	62 (16.1)	42 (10.9)	73 (18.9)	124 (32.1)
25-35 years	452 (86.1)	428 (81.5)	94 (17.9)	88 (16.8)	141 (26.9)	152 (29.0)
35 years or more	237 (87.8)	224 (83.0)	47 (17.4)	45 (16.7)	72 (26.7)	77 (28.5)
Education						
Illiterate	6 (60.0)**	5 (50)**	0 (0.0)*	0 (0.0)**	1 s (10.0)**	1 (10.0)*
Schools	471 (84.1)	434 (77.5)	77 (13.8)	59 (10.5)	101 (18.0)	144 (25.7)
University or higher	543 (88.7)	520 (85.0)	126 (20.6)	116 (19.0)	184 (30.1)	209 (34.2)
Work						
Housewife	703 (85.2)	655 (79.4)	115 (13.9)**	101 (12.2)	179 (21.7)	221 (26.8)**
Student	129 (90.2)	124 (86.7)	32 (22.4)	21 (14.7)	32 (22.4)	55 (38.5)
Employee	189 (87.9)	181 (84.2)	57 (26.5)	54 (25.1)**	76 (35.3)**	79 (36.7)
Gravidity						
Primigravida	330 (84.6)	305 (78.2)	72 (18.5)	53 (13.6)	93 (23.8)	133 (34.1)
Multigravida	691 (87.1)	655 (82.6)	132 (16.6)	123 (15.5)	194 (24.5)	222 (28.0)

Q1: Exposure to ETS affects mother's health?; Q2: Exposure to ETS affects fetus's health?; Q3: Exposure to ETS causes spontaneous miscarriage?; Q4: Exposure to ETS leads to prematurity?; Q5: Exposure to ETS leads to the delivery of a small baby?; Q6: Exposure to ETS causes congenital malformation?; \* $P < 0.01$ ; \*\* $P < 0.001$ ; ETS, Environmental tobacco smoke

Furthermore, although most people knew that ETS was harmful, not much was known about the specific effects of exposure to ETS on the overall health.

Knowledge levels in our study were found to be much lower than the levels found in studies in other countries, which indicate the need to educate the population and particularly pregnant women about the harmful consequences of smoking and exposure to ETS on the health of the mother and her unborn child. Several studies reporting on an assessment of awareness and practices of pregnant women toward exposure to ETS and smoking indicated high rates of 80-90% of knowledge of the adverse effects of ETS on pregnancy outcomes, particularly stillbirth and LBW.<sup>[23,26]</sup>

In addition, our study showed that the majority of pregnant women (86%) knew that exposure to ETS was harmful to pregnancy and the fetus, which was slightly more than the study (84%) conducted in Pakistan.<sup>[19]</sup> However, their knowledge of specific harmful effects of active smoking and exposure to ETS on the mother and fetus's health, such as prematurity, congenital anomalies and LBW, was less (1-7%) compared to our results (14-30%). A possible explanation of these differences in knowledge is the relatively high level of education in our study sample (51.7%).

Prochaska *et al.* explained the effectiveness of the change model, or the trans-theoretical behavioral change, including the important role of the knowledge, in progression of smokers towards reducing exposure to ETS or quitting smoking. This is through the five stages of the behavioral cycle from pre-contemplation to contemplation and action phase.<sup>[27]</sup> Moreover, published literature has demonstrated that knowledge about the effect of smoking on the health of the mother and fetus is a strong motive for giving up smoking<sup>[28]</sup> and avoiding exposure to ETS.<sup>[23]</sup> The intervention to reduce the harmful effects of ETS on pregnant women can be done through a two-level approach: Avoidance of exposure to ETS and elimination of tobacco smoking during pregnancy on one hand and an improved level of awareness of the community, the aim of which is to decrease the prevalence of fathers who smoke on the other.<sup>[29]</sup> By being educated about the harmful effects of exposure to ETS, the pregnant woman can move away from smokers (especially at home) or ask them to stop and reduce her exposure and thus minimize the potential harm to her fetus.

Good information and knowledge of pregnant women of the adverse effects of tobacco use in general and on pregnancies and fetuses specifically is needed. This would pave the way toward designing an extensive tobacco control program which includes pregnant and new mothers, raising the awareness of this section of the population,



on the possible effects of active tobacco use or of ETS on expectant mothers and their offspring. Thus, it may be helpful for the obstetrician and/or the attending nurses to counsel the pregnant women on tobacco smoke in order to reduce exposure to ETS. Future studies could assess the usefulness of this during pregnancy and its effects on the outcomes.

Our study assessed the knowledge of pregnant women about the harmful effects of exposure to ETS and included a relatively large sample compared to similar previous studies cited in the recent published literature. However, one of the limitations of our study is that we did not include the perception of the studied women. Another limitation is that the study was conducted in one center only and although the hospital serves one of the largest pools of the city of Riyadh, it may not reflect the awareness of all postnatal women in the city of Riyadh or in the Kingdom of SA.

Pregnant women should be counseled by their obstetricians and in their antenatal follow-up program to reduce their exposure to ETS by avoiding smokers or asking them to stop. This would help in improving fetal outcomes. Future studies may aim to quantify the usefulness of counseling during prenatal visits and assess exposure and practice.

## CONCLUSION

This study notified that pregnant women in our sample had limited knowledge of the specific effects of ETS on fetal health. This deficiency needs to be addressed by improving the health awareness and education of women with special emphasis on the effects of tobacco use and ETS on the mother and fetal health.

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## REFERENCES

1. Tobacco WHO Factsheet. Tobacco 2011 WHO, 2011. Available from: <http://www.who.int/mediacentre/factsheets/fs339/en/index.html>. [Last accessed on 2012 Mar 11].
2. WHO Report. WHO Report on the Global Tobacco Epidemic 2011, 2011. Available from: [http://www.who.int/publications/2011/9789240687813\\_eng.pdf](http://www.who.int/publications/2011/9789240687813_eng.pdf). [Last accessed on 2012 Mar 10].
3. Corrao MA, Guindon GE, Cokkinides V, Sharma N. Building the evidence base for global tobacco control. *Bull World Health Organ* 2000;78:884-90.
4. Warren CW, Lea V, Lee J, Jones NR, Asma S, McKenna M. Change in tobacco use among 13-15 year olds between 1999 and 2008: Findings

- from the Global Youth Tobacco Survey. *Glob Health Promot* 2009;16:38-90.
5. EMRO Summary. Regional Summary for the EMR, 2011. Available from: [http://www.globalink.org/tccp/EMR\\_summary.pdf](http://www.globalink.org/tccp/EMR_summary.pdf). [Last accessed on 2012 Mar 13].
6. Bassiony MM. Smoking in Saudi Arabia. *Saudi Med J* 2009;30:876-81.
7. Karcaaltincaba D, Kandemir O, Yalvac S, Güven ES, Yildirim BA, Haberal A. Cigarette smoking and pregnancy: Results of a survey at a Turkish women's hospital in 1,020 patients. *J Obstet Gynaecol* 2009;29:480-6.
8. Chaaya M, Jabbour S, El-Roueiheb Z, Chemaitelly H. Knowledge, attitudes, and practices of argileh (water pipe or hubble-bubble) and cigarette smoking among pregnant women in Lebanon. *Addict Behav* 2004;29:1821-31.
9. Najdawi F, Faouri M. Maternal smoking and breastfeeding. *East Mediterr Health J* 1999;5:450-6.
10. Rashid M, Rashid H. Passive maternal smoking and pregnancy outcome in a Saudi population. *Saudi Med J* 2003;24:248-53.
11. Mirahmadizadeh A, Nakhaee N. Prevalence of waterpipe smoking among rural pregnant women in Southern Iran. *Med Princ Pract* 2008;17:435-9.
12. Hammoud AO, Bujold E, Sorokin Y, Schild C, Krapp M, Baumann P. Smoking in pregnancy revisited: Findings from a large population-based study. *Am J Obstet Gynecol* 2005;192:1856-62.
13. Salmasi G, Grady R, Jones J, McDonald SD, Knowledge Synthesis Group. Environmental tobacco smoke exposure and perinatal outcomes: A systematic review and meta-analyses. *Acta Obstet Gynecol Scand* 2010;89:423-41.
14. Leonardi-Bee J, Britton J, Venn A. Secondhand smoke and adverse fetal outcomes in nonsmoking pregnant women: A meta-analysis. *Pediatrics* 2011;127:734-41.
15. Abu-Baker NN, Haddad L, Savage C. The influence of secondhand smoke exposure on birth outcomes in Jordan. *Int J Environ Res Public Health* 2010;7:616-34.
16. Leonardi-Bee J, Smyth A, Britton J, Coleman T. Environmental tobacco smoke and fetal health: Systematic review and meta-analysis. *Arch Dis Child Fetal Neonatal Ed* 2008;93:F351-61.
17. Hammond D, Fong GT, McNeill A, Borland R, Cummings KM. Effectiveness of cigarette warning labels in informing smokers about the risks of smoking: Findings from the International Tobacco Control (ITC) Four Country Survey. *Tob Control* 2006;15 Suppl 3:iii19-25.
18. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta, GA: C.f.D C.a.P.US Department of Health and Human Services, Office on Smoking and Health: 2006, 2006. Available from: <http://www.surgeongeneral.gov/library/secondhandsmoke/report/index.html>. [Last accessed on 2012 Mar 10].
19. Bhanji S, Andrades M, Taj F, Khuwaja AK. Factors related to knowledge and perception of women about smoking: A cross sectional study from a developing country. *BMC Womens Health* 2011;11:16.
20. Griffiths AN, Woolley JL, Avasarala S, Roy M, Wiener JJ. Survey of antenatal women's knowledge of maternal and fetal risks of tobacco smoking and acceptability of nicotine replacement products in pregnancy. *J Obstet Gynaecol* 2005;25:432-4.
21. Roth LK, Taylor HS. Risks of smoking to reproductive health: Assessment of women's knowledge. *Am J Obstet Gynecol* 2001;184:934-9.
22. Al-Bedah AM, Qureshi NA, Al-Guhaimani HI, Basahi JA. The Global Youth Tobacco Survey-2007. Comparison with the Global Youth Tobacco Survey 2001-2002 in Saudi Arabia. *Saudi Med J* 2010;31:1036-43.
23. Loke AY, Lam TH, Pan SC, Li SY, Gao XJ, Song YY. Exposure to and actions against passive smoking in non-smoking pregnant women in Guangzhou, China. *Acta Obstet Gynecol Scand* 2000;79:947-52.
24. Al-Haddad NM, Hamadeh RR, Bahram SA. Public knowledge and attitudes towards passive smoking. *Saudi Med J* 2005;26:2004-6.
25. Lund KE, Helgason AR. Environmental tobacco smoke in Norwegian homes, 1995 and 2001: Changes in children's exposure

- and parents attitudes and health risk awareness. *Eur J Public Health* 2005;15:123-7.
26. Gilligan C, Sanson-Fisher RW, D'Este C, Eades S, Wenitong M. Knowledge and attitudes regarding smoking during pregnancy among Aboriginal and Torres Strait Islander women. *Med J Aust* 2009;190:557-61.
  27. Prochaska JO, Redding CA, Evers KE. The transtheoretical model and stages of change. In: Glanz K, Lewis FM, Rimer BK, editors. *Health Behavior and Health Education-Theory, Research, and Practice*. San Francisco, CA: Jossey-Bass; 1997. p. 60-84.
  28. Samet JM, Yoon SY, editors. *Women and the Tobacco Epidemic: Challenges for the 21st century* [monograph on the Internet]. Canada, World Health Organization; 2001. Last accessed on 20 December 2012. [http://whqlibdoc.who.int/hq/2001/WHO\\_NMH\\_TFI\\_01.1.pdf](http://whqlibdoc.who.int/hq/2001/WHO_NMH_TFI_01.1.pdf) Last accessed on 2012 Dec 20.
  29. Coleman T. Reducing harm from tobacco smoke exposure during pregnancy. *Birth Defects Res C Embryo Today* 2008;84:73-9.

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