

Knowledge about and Attitude towards Harms of Cigarette Smoking among Pregnant Women Attending the Out-Patient Antenatal Clinic at Siriraj Hospital

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Objective: The present study examined pregnant women's knowledge about and attitude to the harms of cigarette smoking.

Materials and Methods: The descriptive cross-sectional design was conducted at The Antenatal Clinic of the Out-patient Department of Obstetrics and Gynecology, Siriraj Hospital, Mahidol University. Three hundred pregnant women voluntarily answered the questionnaires. Duration of data collection was between August 18 and September 5, 2012.

Results: The mean age of women was 25.7±5.9 years. Over three-quarters of them worked outside home, 4.3% of women had ever smoked, and 1% of them continued smoking during pregnancy. Nearly all women were aware of the harms of cigarette smoking to their health and were positive to the anti-cigarette smoking campaign.

Conclusion: Pregnant women possessed high knowledge of the harms of tobacco smoking, but did not have a clear image of second hand smokers. The anti-smoking campaign particularly via the television is very useful for public awareness.

Keywords: Cigarette smoking, Pregnant women, Knowledge, Attitude

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Currently, there are more than 250 million women who are cigarette smokers worldwide⁽¹⁾. Those women who are pregnant and are cigarette smokers constitute about 10% to 30% of this population⁽²⁻⁵⁾. Cigarette smoking during pregnancy has put women and their newborns at risks of miscarriage, preterm deliveries, preeclampsia, a small baby or an under weighted baby, a higher risk of death of baby in infancy⁽⁴⁻⁹⁾, or poor development of lung of the baby^(10,11). Besides, non-cigarette smoking pregnant women might regularly inhale the cigarette smoke from smokers who are around them in public places, at their working places, or at home, which is called 'second-hand smokers'. Some women who are not cigarette smokers reported that their husbands are cigarette smokers and they can inhale the smoke from their husbands each time they smoke⁽⁹⁻¹²⁾. This can also put the women at risk of having an under weighted baby, infection of respiratory system of the baby, experiencing a still birth, or having a child with congenital malformation⁽¹³⁻¹⁵⁾. In addition,

passive smoke exposure may be one of the risk factors of having breast cancer⁽¹⁶⁾.

In Thailand, although the rate of cigarette smoking among pregnant women is not as high as those women living in other parts of world⁽²⁻⁴⁾, there was a report indicating an increasing number of cigarette smokers among Thai women⁽²⁾. Of these, some women reportedly picked up this habit because they wanted to just try it, while the others said that cigarette smoking could help them relax. In addition, this report revealed that some Thai women became involved in cigarette smoking because they felt that they had an equal status as men⁽²⁾.

So far, some studies concerning knowledge and attitude of women, especially those in pregnant women, both smokers and second-hand smokers, indicated the harms of cigarette smoking. Previous studies in other areas reported that some women knew the risks of harms of smoking to the health of their unborn children and three-quarters of them stopped smoking when they learned that they were pregnant⁽¹³⁾. Furthermore, more than 50% of women in a survey were aware of the harms of cigarette smoking⁽¹⁰⁾. However, some women did not realize what were the risks of cigarette, and how it could harm their health or their babies' health because as many as 39% of women in a survey

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did not know that it can increase risk of miscarriage⁽²⁾. Assessment of pregnant women on their knowledge and attitude to the ill-effects of cigarette smoke to their health and their newborns' health has not yet been well established in Thailand. The present study examined currently pregnant women's knowledge and attitude to the harms of cigarette smoking or the second-hand smoking and how they perceived these harmful characteristics.

Materials and Methods

Subjects

The present study was a descriptive cross sectional design to investigate currently pregnant women's attitude toward and knowledge about harms of cigarette smoking. Currently pregnant women who attended the antenatal clinic at the Out-patient Department of Siriraj Hospital, Faculty of Medicine Siriraj Hospital, Mahidol University for the first time and whose pregnancy was confirmed at this clinic were invited to participate in the study by the study nurses. Those pregnant women interested in the study were explained about the nature and objectives of the study. The pregnant women who expressed their willingness to participate in the study were asked to sign an informed consent for providing their personal information and the self-administered questionnaire of the study. The study nurses and research assistants were available for assistance or answering the questions about the questionnaire. Once the respondents completed the questionnaires, they handed in the answers to the research assistants. Thereafter, they received the full antenatal care services. Duration of data collection was between August 18 and September 5, 2012. Three hundred pregnant women voluntarily answered the questionnaires. Those pregnant women who declined to participate in the study were also provided the full routine services of the antenatal clinic.

Two hundred ninety-nine completed questionnaires were analyzed using the SPSS program version 17 to obtain the descriptive statistics such as frequency, percentages and means. The present study was approved by the Institutional Review Board [IRB], Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand.

Results

Demographic characteristics

Of the 299 currently pregnant women, the youngest age was 12 and oldest 42 with the mean age of 25.7±5.9 (Table 1). Almost three-quarters (74.2%)

of these women were young, 29-year-old or younger, and those over 30 years of age constituted 25.8%. Over half of these women (55.5%) completed high school or lower. A few of them finished the vocational school levels, and 32.8% of them had a higher education, university and beyond. One-third of the women (33.1%) were employees of the private sectors, whereas 10.4% were civil servants. Women who were engaged in manual work or low skill workers constituted 28.8% of the total pregnant women, 23.1% of them were housewives with no wages, and 2.6% were temporary unemployed. Their family income was varied, the lowest at 2,500 Baht per month, the highest at 80,000 Baht per month. The mean family income was 12,000 Baht per month.

Pattern of cigarette smoking and husbands'/partners' smoking behavior

Thirteen (4.3%) out of 299 pregnant women admitted that they had smoked cigarette, and three (1.0%) of them are still smoking cigarette during their pregnancy. Information could be gathered from only seven pregnant women of whom three women (1.0%) had smoked for one year and four (1.3%) for two years or more before this pregnancy. All of them would

Table 1. Demographic characteristics of the currently pregnant women (n = 299)

Demographic characteristics	n (%)
Age (years)	
Youngest = 12, oldest = 42, mean = 25.7±5.9	
≤19	48 (16.0)
20 to 29	174 (58.2)
30 to 39	74 (24.8)
≥40	3 (1.0)
Education	
High school or less	166 (55.5)
Vocational school	35 (11.7)
University or higher	98 (32.8)
Occupation	
House work	69 (23.1)
Trader/vendor	32 (10.7)
Hair dresser/dress maker	3 (1.0)
General laborer	51 (17.1)
Employee of private sector	99 (33.1)
Civil servant	31 (10.4)
Unemployed	14 (2.6)
Family income (Baht)	
Lowest = 2,500, highest = 80,000, mean = 12,000	
≤9,999	129 (46.9)
10,000 to 19,999	78 (28.4)
20,000 to 29,999	38 (13.8)
30,000 to 39,999	12 (4.4)
40,000 to 49,999	10 (3.6)
≥50,000	8 (2.9)

Some data are missing and not completed

Table 2. Pattern of cigarette smoking in pregnant women/partner smoker (n = 299)

Pattern of smoking	n (%)
Ever smoked	
Yes	13 (4.3)
No	286 (95.7)
Still smoking	
Yes	3 (1.0)
No	296 (99.0)
Number of months stopping cigarette smoking before being pregnant	
≤6	3 (1.0)
≥7	4 (1.3)
Duration of cigarette smoke	
One year	3 (1.0)
Two years or more	4 (1.3)
Ever thought of quitting smoking	
Yes	7 (2.3)
No	-
Husband/partner smoker	
Yes	133 (45.0)
No	166 (55.5)

Some data are missing and not complete

Table 3. Pregnant women inhaling cigarette smoke in household and at work place (n = 297)

Inhaling cigarette smoke	n (%)
At work place	
Yes	84 (28.3)
No	149 (50.2)
Did not work with others	64 (21.5)
Within household area	
Every day	17 (5.7)
4 to 5 days/week	33 (11.1)
1 to 3 days/week	59 (19.9)
Never inhaling cigarette smoke	188 (63.3)

Some data are missing and not completed

Table 4. Knowledge about cigarette harms

Category	Yes, n (%)
Cigarette comprises substance that is harmful to the body	294 (99.0)
Cigarette contains substance that can cause cancer to the body	297 (100)
Pregnant women who smoke will have ill-effect to their bodies and babies	295 (99.3)
Pregnant women who smoke may have a preterm delivery	250 (84.2)
Pregnant women who smoke may have a still birth	236 (79.5)
Pregnant women who smoke may have a small baby or underweight baby	283 (95.3)
Pregnant women who smoke may have a placental previa	242 (81.5)
Pregnant women who smoke may have a baby with asthma or low immune in the future	283 (95.3)
Pregnant women who smoke may have a baby who will develop heart disease in the future	255 (85.9)
You have learnt about the second-hand smokers	249 (83.5)
The second-hand smokers receive the same harms of cigarette smoke as the smokers	286 (96.3)
The second-hand smoking also has the effects to health of the unborn child	290 (97.6)

Some data are missing and not completed

like to stop smoking as seen on Table 2. In addition, 133 women (45.0%) stated that their husbands/partners were cigarette smokers and always smoked inside and outside the household area. Therefore, they could not avoid inhaling the cigarette smoke from their husbands'/partners'. Table 3 shows that over a quarter of pregnant women (28.3%) inhaled cigarette smoke at their work place. Moreover, 36.7% of these women were second hand smokers within their household.

Knowledge about cigarette harms and sources of its information

The majority of them had enough knowledge about harms of cigarette smoking as all currently pregnant women learnt that cigarette contains some substance that can cause cancer, and almost all of them (99.3%) understood that it also has ill-health-effects on them and their unborn children as 95.3% knew that cigarette smoking would cause small baby and asthma in the child, as shown on Table 4. In addition, they were also aware of the harms of the second-hand smoking to pregnant women (96.3%) and their children (97.6%). However, one in five women (20.5%) did not know that pregnant smokers are more likely to have a still birth, and nearly one in five of them (18.5%) had no knowledge at all about having placenta previa during delivery. Pregnant women in this survey received information about cigarette harms from many various sources. Table 5 shows the most popular source of information was television, representing 92.9% of all women, followed by the anti-cigarette smoking campaign, health magazine, newspapers, and posters in the hospital/health premises, at 67.7%, 63.4%, 59.4%, and 55.6%, respectively.

Attitudes of current pregnant women to the cigarette harms

The current pregnant women had very positive attitudes to and supported the anti-cigarette smoking around them or in public. Table 6 shows that 90.6% of the women thought that cigarette smoking was more likely to lead to poor body health, and the great number of them did not want those cigarette smokers to be around them and their children, 95.6% and 97.3%, respectively. Furthermore, they strongly supported the idea of having a smoke free environment in their working place, the hospitals, in public, and in public gardens, at 90.5%, 94%, and 89.6%, respectively. In addition, many women (90.6%) wanted to have the cigarette smoking banned in the eating places or restaurants, and 95.5% did not want their husband to smoke cigarette. They also had well learnt about the 'quit clinic' and the hotline services 1600 for quit smoking, despite only 80.8% of them supported the

notion that they were concerned about the harms of cigarette smoking.

Discussion

The present study revealed that the majority of currently pregnant women who answered the questionnaires were in the middle-low socio-demographic status. Women who were pregnant and smoked constituted 1% of the women in the present study. Currently pregnant women who had ever smoked made up 4.3% of this population. This group of pregnant women possessed high knowledge of the harms of tobacco smoke, but did not have clear image of the second-hand smokers and 45.0% of partners or husbands of these pregnant women were current cigarette smokers. The majority of pregnant women (>90%) in the present study would like a strong campaign against tobacco use and wanted their partners or husband to quit cigarette smoking. Ninety-two point nine percent of the pregnant women learnt about the harms of cigarette smoking from watching television, 67.7% from campaigns in forms of advertisement against tobacco use, and 63.4% from health magazine. Besides these, they learnt from radio programs, friends or relatives, and health personnel. Moreover, posters concerning anti-smoking campaign posted in the health premises and health personnel also have played an important role as one of the major sources of information. Over 90% of pregnant women would want to have smoke-free office and hospitals, have the price of cigarette increase, have a clinic for quitting cigarette smoking, and have a cigarette quitting hotline. Most pregnant women understood that cigarette smoke

Table 5. Sources of information about cigarette harms (n = 297)

Sources of information	Yes, n (%)
Newspapers	177 (59.6)
Radio	140 (47.1)
Television	276 (92.9)
Health magazine	189 (63.4)
Speakers on Health issues	101 (34.0)
Medical/health personnel	101 (34.0)
Posters in the hospital/health premises	165 (55.6)
Anti-cigarette smoke campaign	201 (67.7)
Friends/relatives	141 (47.5)

Some data are missing and not completed

Table 6. Attitudes of currently pregnant women to cigarette harms (n = 297)

Statements	Percent				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
You think that those who cigarette smokers are more likely to have poor health	67.7	22.9	7.4	1.7	0.3
You are concerned about the harms from cigarette smoking	50.5	30.3	17.5	0.7	1.3
You do not feel like having those who are cigarette smokers to be near you	84.5	11.1	2.4	1.0	1.0
You do not feel like having those who are cigarette smokers to be near your child	90.9	6.4	1.7	1.0	-
You want to have cigarette smoking free in your working place	71.0	19.5	7.1	1.7	0.3
You want to have cigarette smoking free in the hospitals	80.5	13.5	5.1	0.7	0.3
You want to have cigarette smoking free in public or public gardens	69.4	20.2	9.3	1.0	0.3
You want to have cigarette smoking free in eating places or restaurants	70.7	19.9	8.4	0.7	0.3
You want the cigarette price to be increased in order that people have difficulty to get it	71.4	13.8	12.1	1.7	1.0
You want your husband not to smoke	87.4	8.1	2.7	1.7	0.3
You want to have the 'quit clinic', which is effective	70.4	19.2	9.1	1.3	-
You want to have the hot-line quitting services	61.6	23.6	11.8	3.0	-

can cause lung cancer, but few knew that it can cause cancer of bronchi, larynx, and cervix, 27.9%, 43.4%, and 81.1%, respectively. The majority of pregnant women in the present study were positive to the measures on control of cigarette smoking. Most of them expressed their concerns over cigarette smoke in public places, such as restaurants and gardens. They wanted themselves and their children to be far away from those who smoked. As nearly half of the partners or husbands of these pregnant women were current cigarette smokers and over one in three pregnant women in this study still unavoidably inhaled cigarette smoke from their partners or husbands. It is suggested that campaign on anti-smoking be focused on household. It should promote a smoke-free area in household, stressing especially on pregnant women and their children. This program can be integrated as part of the subject providing to pregnant women when they come to the antenatal clinic. Besides, the partners or husbands should also be invited to participate in this program.

Conclusion

The pregnant women possessed high knowledge of the harms of tobacco smoke, but did not have clear image of second-hand smoke. The anti-smoking campaign particularly via the television is very useful for the public awareness. The role of health professionals i.e., doctors, nurses, etc. is essential for the anti-smoking campaign. To avoid the harm of second-hand smoke, the husband or partner or all family member should also be included as the target group to raise the knowledge and attitude towards harms of cigarette smoking among pregnant women.

Further studies for the knowledge and attitude towards harm of cigarette smoking in the different target population should be investigated as well as the anti-smoking campaign should be conducted for the public awareness.

What is already known on this topic?

Cigarette smoking is harmful and a health hazard to pregnant women and their fetuses, particularly low birth weight⁽⁵⁾. Risk factors inducing behavior of smoking in pregnancy are teenagers, low socio-economic status, and smoking experiences^(7,8). Infant morbidity and mortality are attributable to prenatal smoking⁽¹⁰⁾. Cigarette smoking is correlated to lung, breast, and cervical cancer, etc.⁽¹⁶⁾. Research regarding cigarette smoking in pregnancy varies in the nature of study designs and objectives. However, knowledge about and attitudes to harm of cigarette smoking

among pregnant women has been scarcely conducted especially among pregnant women in Thailand. It is observed that many studies focused on cigarette smoking behavior in working men and adolescents. In previous studies among pregnant women, the outcomes have concerned the weight and health of infants as well as maternal health.

What this study adds?

The results of cigarette smoking knowledge and attitude of the present study present high number of domestic smoking, so called “second-hand smoking”. A high number of women did not know that smoke of cigarette from the second-hand smoking can harm their health and their fetuses, as many women are in the company of their husbands when they are smoking. In addition, the number of domestic smoking in our study is high, whereas the number of pregnant women themselves as “cigarette smokers” is low. Anti-smoking campaign is very well supported by these women, preferably, the source of information should be television broadcasting and health magazine.

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Potential conflicts of interest

None.

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ความรู้และทัศนคติต่อพิษภัยของการสูบบุหรี่ในสตรีที่รับบริการฝากครรภ์ ณ โรงพยาบาลศิริราช

มานพชัย ธรรมคันโธ

วัตถุประสงค์: เพื่อศึกษาถึงความรู้และทัศนคติของสตรีตั้งครรภ์เกี่ยวกับพิษภัยของบุหรี่

วัสดุและวิธีการ: การศึกษานี้เป็นการศึกษาเชิงพรรณนา ณ จุดเวลาใดเวลาหนึ่ง เกี่ยวกับความรู้และทัศนคติด้านพิษภัยจากการสูบบุหรี่ โดยมีผู้เข้าร่วมโครงการเป็นสตรีตั้งครรภ์จำนวน 300 คน เข้าร่วมตอบแบบสอบถาม ณ หน่วยฝากครรภ์ ภาควิชาสูติศาสตร์-นรีเวชวิทยา คณะแพทยศาสตร์ศิริราชพยาบาล มหาวิทยาลัยมหิดล

ผลการศึกษา: กลุ่มอายุของสตรีตั้งครรภ์ ผู้เข้าร่วมโครงการอยู่ในช่วงอายุ 25.7±25.9 ปี มากกว่า 75% ทำงานนอกบ้าน 4.3% ของสตรีตั้งครรภ์ มีประสบการณ์ในการสูบบุหรี่ และพบว่า 1% ยังคงการสูบบุหรี่อย่างต่อเนื่อง แม้ในขณะที่ตั้งครรภ์ สตรีตั้งครรภ์มาเข้าร่วมโครงการส่วนใหญ่ ทราบถึงพิษภัยของบุหรี่ต่อสุขภาพและการตั้งครรภ์ และมีความเห็นสอดคล้องสนับสนุนการณรงค์เรื่องพิษภัยของบุหรี่

สรุป: สตรีตั้งครรภ์ซึ่งมารับบริการ ณ หน่วยฝากครรภ์ มีความรู้เรื่องพิษภัยของบุหรี่ในระดับสูง แต่ยังคงขาดความรู้ความเข้าใจเรื่องบุหรี่มือสอง การณรงค์เรื่องพิษภัยของบุหรี่ผ่านสื่อโทรทัศน์มีประโยชน์อย่างยิ่งในการสร้างการรับรู้อันตรายของบุหรี่