



Prevalence of Smoking among Pregnant Women

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Abstract

Introduction: It is estimated that smoking is the cause of the premature death of about 6 million people worldwide, each year. Although smoking rates among pregnant women in the Western world have fallen in recent years, smoking remains the leading cause of neonatal deaths, premature births and low birth weight.

Aim: The aim of the study was to assess the prevalence of active and passive smoking among pregnant women.

Material and methods: A cross-sectional study was conducted among pregnant women receiving antenatal care at the Poviát Health Care Complex in Piotrków Trybunalski in 2018. The research tool was a questionnaire. The study design received a positive opinion of the Bioethics Committee at the Medical University of Lodz RNN/386/17/EC of December 19, 2017 and the consent of the head of this unit.

Results: 600 pregnant women participated in the study, the response rate was 45.2%. 47% of respondents have ever smoked, 52% have never smoked, 20% of women smoked tobacco during pregnancy, 15.2% of women quit smoking when they got pregnant, 15% reduced the number of cigarettes, and 5% continued smoking. Over 35% of respondents were exposed to secondhand smoke, most often at home. Passive exposure to tobacco smoke was significantly associated with factors such as respondent smoking status, education, employment, living with a smoking partner and monthly income per family member.

Conclusions: Smoking by pregnant women as well as exposure to secondhand smoke is still a significant problem. Women at high risk of returning to smoking before or during pregnancy can be identified as requiring more support for stopping smoking. Knowledge of smoking patterns among women before conception, during pregnancy and after birth can help improve smoking cessation interventions.

Key words: maternal smoking, secondhand smoke, pregnancy, socioeconomic status

Introduction

Smoking is the inhalation of tobacco smoke in the mouth, and usually of the lungs, as well [1]. It is estimated that smoking is the cause of the premature death of about 6 million people worldwide, each year [2]. „Premature death caused by smoking” is defined as death from a smoking-related illness in a person who would otherwise have died later due to another cause. On average, these premature deaths cause 10 lost years of life [3]. Smoking affects every element involved in the reproductive process. This statement confirms a systematic review of the scientific literature on the impact of cigarette smoking and smoke constituents on various stages of reproduction [4]. It was found that „all stages of the reproductive process are the target for toxic cigarette smoke” [5]. An American study published by Centers for Disease Control and Prevention found that although smoking rates among pregnant women in the Western world have decreased in recent years, smoking remains the leading cause of neonatal deaths, premature births and low birth weight [6]. Researchers have found that smoking was associated with:

- 5-8% of premature births,
- 13-19% of low birth weight cases (with normal pregnancy duration),
- 5-7% of deaths related to prematurity,
- 23-34% of deaths due to sudden infant death syndrome (cot death).

Smoking is a major risk factor for low birth weight and small for gestational age (SGA) [7]. Studies in Sweden have shown that children born by women who smoked during pregnancy are on average 162-226 grams lighter than children born by non-smoking mothers. In Spanish studies, the difference was 216 grams [8]. Other studies have found that smoking during pregnancy can lead to slower fetal head growth and smaller head circumference after birth [61-63]. The results of the West Midlands study showed that „children born by women who smoke during pregnancy are approximately 40% more likely to die in the first four weeks of life than children born to non-smokers” [9]. It is estimated that more than

a quarter of sudden infant deaths (cot death) is caused by smoking during pregnancy and exposure to secondhand smoke, especially at home [10]. The risk of cot death is three times higher in infants whose mothers smoke both during and after pregnancy. One possible explanation is that nicotine and its derivatives found in tobacco smoke easily reach the fetal cerebrospinal fluid, causing damage to the lining (the layer forming the protective barrier and the filtration system separating the brain from the cerebrospinal fluid) [11]. Smoking by the mother negatively affects the offspring from infancy to childhood and even adulthood. Babies and children of parents who smoke are twice as likely to suffer from a severe respiratory infection as non-smokers. Smoking during pregnancy may also increase the risk of asthma and wheezing in young children [12].

Results

A cross-sectional study was conducted among 600 pregnant women receiving antenatal care at the Poviát Health Care Center in Piotrków Trybunalski in 2018 – the participation rate was 45.2%. The detailed characteristics of the subjects are given in Table 1. It was observed that 47% of the subjects ever smoked and 52% never smoked. Nearly 20% of women smoked tobacco during pregnancy (Table 2), 15.2% of women quit when they became pregnant, 15% of smokers reduced the number of cigarettes, 5% continued smoking. Smokers have made an average of 1.5 attempts to stop smoking in the last 12 months and 1 attempt during pregnancy (Table 3). The average age of onset of smoking was 16.5 ± 2.3 years. The average number of cigarettes smoked per day before pregnancy was 13.6 ± 5.9 and during pregnancy 10.9 ± 5.6 (Table 4). 63.8% of respondents smoked their first cigarette within 30 minutes of waking up. 95% of pregnant women were asked by the doctor if they had smoked tobacco in the last 12 months, 97.5% of smokers were advised to quit smoking completely, and 2.6% to reduce the number of cigarettes. 87.4% of pregnant smokers said they want to quit smoking. Women who smoked have made more than one (1.5 on average) attempt to stop smoking in the last

12 months, and one attempt since pregnancy. The results of the study showed that significant barriers to stop smoking during pregnancy were: over 35 years of age, unemployment, smoking by a partner, low monthly income per family member, lack of awareness of the negative impact of smoking on adult and fetal health and passive exposure to tobacco smoke. In the multifactorial model, it was found that the risk of smoking was ever higher in women with primary and secondary education compared to women with higher education (OR = 2.59, 95% CI: 1.16-6.23, respectively; $p < 0.05$ and OR = 3.75; 95% CI: 1.73-8.14; $p < 0.001$). The risk of smoking was also significantly higher in the group of unemployed compared to the employed OR = 14.22, 95% CI: 3.73-54.26, $p < 0.001$). In addition, not being in a formal relationship was associated with the risk of ever smoking OR = 3.06; 95% CI: 1.72-5.46; $p < 0.001$ (married vs. single, widow, divorced). No concern about the harmful effects of smoking on maternal and fetal health was also significantly associated with ever smoking OR = 2.94, respectively; 95% CI: 1.84-4.71 $p < 0.001$ and 1.89; 95% CI: 1.20-2.99 $p < 0.01$. The risk was also higher for women in the first trimester of pregnancy compared to respondents in the third trimester and among those who did not have children vs. already having children. Exposure to secondhand smoke has been correlated with ever smoking and has been associated with hours of exposure to tobacco smoke, OR from 2.27, $p < 0.01$ for exposure not exceeding one hour per day to 20.63 $p < 0.001$ for exposure between 5 and 8 hours per day. The odds ratio (OR) and 95% confidence intervals (CI) for continuing smoking in pregnancy showed that respondents aged 35-44 are much more likely to continue smoking despite pregnancy than women aged 19-25 (OR = 2.67, 95% CI: 1.06-6.32, $p < 0.05$). The unemployed were characterized by a significantly higher risk of continuing smoking during pregnancy compared to employees (OR = 2.05, 95% CI: 1.14-3.67, $p < 0.05$). Singles, widows, divorced also had a higher risk of continuing smoking compared to married women (OR = 2.32, 95% CI: 1.34-4.03, $p < 0.01$). A statistically significant relationship was found between continuing smoking during pregnancy and smoking by a partner compared to non-smokers (OR = 1.89, 95% CI:

1.27-6.25, $p < 0.001$) (Table 6). Women declaring a very low monthly income per family member (PLN 700 / month) had a five-fold higher risk of continuing smoking compared to pregnant women with incomes exceeding PLN 2000 / month (OR = 5.33, 95% CI: 4.12-43.14), $p < 0.001$). Women who were not concerned about the harmfulness of smoking for their and the fetus's health were significantly more likely to continue smoking during pregnancy compared to the group expressing concern OR = 6.76, 95% CI, respectively: 3.53-12.93, $p < 0.001$ and OR = 8.93, 95% CI: 4.45-17.90, $p < 0.001$. Having children was associated with an increased risk of continuing smoking compared to not having children OR = 6.34, 95% CI: 3.74-10.77, $p < 0.001$. In addition, a relationship between total daily exposure to secondhand smoke (vs no exposure) and continued smoking during pregnancy (OR = 9.88, 95% CI: 5.60-17.43, $p < 0.05$) was observed. In the group of neonates of smoking mothers, the birth weight of newborns was 3193.7 ± 578.1 g and was significantly lower than the body weight of newborns of non-smoking mothers 3402.0 ± 458.8 g ($p < 0.05$). The birth weight of newborns of mothers passively exposed to smoking was also statistically significantly lower than those born by non-smoking women 3209.6 ± 400.1 g vs. 3402.0 ± 458.8 g ($p < 0.05$). Similarly, in the group of newborns born by women who smoke, body length was significantly smaller than that of newborns of mothers from non-smoking women 53.7 ± 3.8 vs. 56.3 ± 2.6 cm ($p < 0.001$). The head circumference of newborns born by smoking women was significantly smaller than that of newborns born by non-smoking women 33.1 ± 2.3 vs. 34.6 ± 1.5 cm ($p < 0.001$). Among newborns born by women who smoked, the chest circumference was significantly smaller than those of newborns who were born by non-smoking mothers 32.0 ± 2.4 vs. 33.4 ± 2.1 ($p < 0.01$).

Table 1. Characteristics of the study population (n = 600)

Characteristic		N	%
Age in years			
	min-max	19-41	
	average	26	
	median	5,6	
	<19	10	1,7
	20-24	120	20,0
	25-29	243	40,5
	30-34	159	26,5
	35-39	65	10,8
40-44	3	0,5	
45+	0	0,0	
Week of pregnancy at the time of the study		\bar{x} 31,5; median 35,0 SD 9,5	
Trimester of pregnancy			
	I trimester	32	2,0
	II trimester	128	15,9
	III trimester	440	82,1
Education			
	Basic	129	21,5
	Professional	153	25,5
	Average	231	38,5
	Higher	87	14,5
Currently pregnancy			
	1	270	45,0
	2	210	35,0
	3	85	14,2
	4	20	3,3
	5	10	1,7
	6	5	0,8
Delivery			
	one delivery	270	45,0
	many deliveries	330	55,0
Number of deliveries			

	0	270	45,0
	1	245	40,8
	2	60	10,0
	3	15	2,5
	4	5	0,8
	5	5	0,8
Employment			
	employed	465	77,5
	unemployed	35	5,8
	other	90	15,0
	no answer	10	1,7
Type of work			
	physical work (predominance of physical effort)	180	38,7
	intellectual work (predominance of mental effort)	285	61,3
Marital status			
	married	474	79,0
	single	117	19,5
	widow / divorced	9	1,5
Living with a partner			
	Yes	562	93,7
	No	38	6,3
Subjective income assessment „makes ends meet”			
	with great difficulty	0	0,0
	with difficulty	25	4,2
	with some difficulty	248	41,3
	fairly easy	206	34,3
	easily	88	14,7
	very easy	33	5,5
Monthly Income			
	up to PLN 500	20	3,3
	over 500 to 700 PLN	49	8,2
	over 700 to 1000 PLN	213	35,5
	over 1000 to 1500 PLN	188	31,3
	over PLN 1500 to 2000	86	14,3
	over PLN 2000 to PLN 2500	17	2,8
	over 2500 PLN	27	4,5
Subjective assessment of healthy state			

	very good	245	40,8
	good	275	45,8
	neither good nor bad	70	11,7
	bad	5	0,8
	very bad	5	0,8
Family help and support			
	at all	30	5,0
	sometimes	110	18,3
	often	85	14,2
	always	375	62,5

Table 2. Smoking status of pregnant women (N = 600)

Answer	N	%
I have never smoked or smoked less than 100 cigarettes in all life	316	52,8
I stopped smoking before I found out I was pregnant and I haven't smoked yet	74	12,2
I stopped smoking after I got pregnant and I still don't smoke	91	15,0
I smoke cigarettes regularly, but I reduced their number after I got pregnant	90	15,0
I smoke cigarettes regularly, but I reduced their number after I got pregnant	29	5,0

Table 3. Characteristics of regular smokers (N = 119)

Answer	N	%
Time from waking up to reaching for a cigarette within 5 minutes	33	27,7
After 6-30 minutes	43	36,1
After half an hour to an hour	41	34,5
You can persist without smoking for up to an hour	2	1,7
Number of highly addicted to nicotine		63,8
Intentions regarding smoking „I don't want to stop smoking”	5	4,2
„I think I should stop smoking but I really don't want to”	10	8,4
„I want to stop smoking but I haven't thought about when I could do it”	11	9,2
„I REALLY want to stop smoking but I don't know when I'll do it”	5	4,2
„I want to stop smoking and hope to do so soon”	4	3,4
„I REALLY want to stop smoking and I'm going to do it in 3 months”	4	3,4
„I REALLY want to stop smoking and I'm going to do it in a month”	80	67,2
I want to stop smoking		87,4
Number of attempts to stop smoking in the last 12 months (82 women / 68.9% / attempted to stop smoking)	Average 1,4	±SD 0,5
Number of attempts to stop smoking since learning about pregnancy (82 women / 68.9% / attempted to stop smoking)	Average 1,1	±SD 0,3
Age of onset of smoking	16,5	2,3

Table 4. Pregnant declarations regarding smoking (N = 284)

Answer	Average	±SD
During the 3 months before you got pregnant, how many cigarettes did you smoke each day? (average) (n subjects = 284)	13,6	5,9
How many cigarettes do you smoke today? (average) (n subjects = 119)	10,9	5,6

Table 5. Odds Ratios (OR) and 95% Confidence Intervals (CI) for ever smoking in the study group (N = 600) depending on selected characteristics

Characteristic	N	Ever smoking N = 284 (47,2%)		Univariate logistic regression		Multivariate logistic regression a	
		n	%	OR	95%CI	OR	95%CI
Age (years)							
19-24	130 (21,7)	84	64,6	2,77***	1,51-5,08	1,68	0,70-4,00
25-29	243 (40,5)	105	43,2	1,16	0,67-2,00	1,13	0,50-2,57
30-34	159 (26,5)	68	42,8	1,13	0,63-2,03	1,91	0,82-4,45
35-44	68 (11,3)	27	39,7	1,00	reference	1,00	reference
Education							
basic	129 (21,5)	45	34,9	2,21*	1,16-4,20	1,31	0,73-3,53
professional	153 (25,5)	84	54,9	5,01***	2,70-9,32	2,59*	1,16-6,23
secondary	231 (38,5)	138	59,7	6,11***	3,37-11,06	3,75***	1,73-8,14
higher	87 (14,5)	17	19,5	1,00	reference	1,00	reference
Employment							
Employed	465 (78,8)	188	40,4	1,00	reference	1,00	reference
Unemployed (seeking and not working)	35 (5,9)	32	91,4	15,71***	4,72-52,35	14,22***	3,73-54,26
Other (does not work because of caring for a child or other family member)	90 (15,2)	62	68,9	3,26***	2,01-5,30	3,01***	1,51-6,01
Marital status							
married	474 (79,0)	199	42,0	1,00	reference	1,00	reference
single, widow, divorced	126 (21,0)	85	68,0	2,86***	1,89-4,34	3,06***	1,72-5,46
Partner smokes							
Yes	253 (42,2)	128	50,6	1,25	0,91-1,74		

No	347 (57,8)	156	45,0	1,00	reference	
Other people (parents or friends) smoke						
Yes	563 (93,8)	272	48,3	1,95	0,96-3,96	
No	37 (6,2)	12	32,4	1,00	reference	
Household income assessment						
very high	33 (5,5)	15	45,5	1,00	reference	
high	88 (14,7)	52	59,1	1,73	0,77-3,89	
average	206 (34,3)	76	36,9	0,70	0,33-1,47	
low	248 (41,3)	125	50,4	1,22	0,59-2,53	
very low	25 (4,2)	16	64,0	2,13	0,73-6,21	
Income						
very low <700 PLN	69 (11,5)	41	59,4	1,46	0,68-3,14	
low, above 700 to 1000 PLN	213 (35,5)	111	52,1	1,09	0,57-2,09	
average, above 1000 to 1500 PLN	188 (31,3)	77	41,0	0,69	0,36-1,34	
high, above PLN 1500 to PLN 2000	86 (14,3)	33	38,4	0,62	0,30-1,30	
very high > PLN 2000	44 (7,3)	22	50,0	1,00	reference	
Subjective health assessment						
Very good	245 (40,8)	117	47,8	1,00	reference	
Good	275 (45,8)	123	44,7	0,89	0,63-1,25	
Neither good nor bad	70 (11,7)	38	54,8	1,30	0,76-2,22	
Bad or very bad	10 (1,7)	6	60,0	1,64	0,45-5,98	
Concern about the harmful effects of smoking						
Yes	355 (59,2)	56	15,7	1,00	reference	reference
No	245 (40,8)	63	25,7	1,75***	1,26-2,46	1,84-4,71

Concern about the harmful effects of smoking on the fetus							
Yes	293 (48,8)	40	13,5	1,00	reference	1,00	reference
No	307 (51,2)	79	25,7	1,65**	1,20-2,89	1,89**	1,20-2,99
Trimester							
I trimester	32 (2,0)	21	65,6	2,26**	1,25-5,65	6,93***	2,57-18,71
II trimester	128 (45,9)	79	61,7	2,24***	1,50-3,36	2,37**	1,38-4,09
III trimester	440 (82,1)	184	41,8	1,00	reference	1,00	reference
Having children							
Yes	270 (45,0)	145	53,7	1,59**	1,15-2,21	4,03**	2,46-6,61
No	330 (55,0)	139	42,1	1,00	reference	1,00	reference
ETS hour/day							
0	336 (56,0)	111	38,0	1,00	reference	1,00	reference
<1h	57 (9,5)	28	49,1	1,96*	1,11-3,45	2,27*	1,07-4,81
1-5 h	113 (18,8)	70	62,0	3,30***	2,12-5,14	3,21***	1,82-5,66
5-8 h	40 (6,7)	36	90,0	18,24***	6,30-52,79	20,63***	6,79-62,70
>8h	54 (9,0)	39	72,2	5,27***	2,78-9,99	3,01***	1,35-6,70
Passive smoking >1 hour/day#							
No	393 (65,5)	139	35,4	1,00	reference		
Yes	207 (34,5)	145	70,0	4,27***	2,97-6,15		

a Model including all statistically significant variables in one-factor analysis. Passive smoking (ETS - environmental tobacco smoke.) ***

p ≤ 0.001. ** p ≤ 0.01. * p ≤ 0.05.

Variable not included in multifactorial regression due to overlapping information with the ETS variable number of hours per Day

Table 6. Odds Ratios (OR) and 95% Confidence Intervals (CI) for continuing smoking during pregnancy in the study group (n = 284) depending on selected characteristics

Characteristic	N (n=284)	Continuing smoking during pregnancy N=119 (41,9%)		Univariate logistic regression		Multivariate logistic regression a	
		n	%	OR	95% CI	OR	95% CI
Age (years)							
19-24	84 (29,6)	36	42,9	1,00	reference	1,00	reference
25-29	105 (37,0)	36	34,3	0,69	0,38-1,28		
30-34	68 (23,9)	29	42,6	0,99	0,48-2,05		
35-44	27 (9,5)	18	66,7	2,67*	1,06-6,32		
Education							
basic	45 (15,8)	16	35,6	2,98	0,73-16,12		
professional	84 (29,6)	52	61,9	4,23	0,87-10,14		
secondary	138 (48,6)	49	35,5	2,95	0,63-5,34		
higher	17 (6,0)	2	11,8	1,00	reference	1,00	reference
Employment							
Employed	188 (66,7)	70	37,2	1,00	reference	1,00	reference

Unemployed (seeking and not working)	32 (11,3)	13	40,6	2,05*	1,14-3,67		
Other (does not work because of caring for a child or other family member)	62 (22,0)	34	54,8	1,15	0,53-2,49		
Marital status							
married	199 (70,1)	95	47,7	1,00	reference	1,00	reference
single, widow, divorced	85 (29,9)	24	20,2	2,32**	1,34-4,03		
Partner smokes							
Yes	128 (45,1)	72	56,2	1,89**	1,23-3,25		
No	156 (54,9)	47	30,1	1,00	reference	1,00	reference
Other people (parents, friends) smoke							
Yes	272 (95,8)	115	42,3	1,46	0,43-5,01		
No	12 (4,2)	4	33,3	1,00	reference		
Household income assessment							
very high	15 (3,3)	5	33,3	1,00	reference		
high	52 (18,3)	9	17,3	0,42	0,11-1,53		
average	76 (26,8)	35	46,1	1,71	0,53-5,50		
low	125 (44,0)	59	47,2	1,79	0,57-5,56		

very low	16 (5,6)	11	68,7	2,40	0,97-16,81	
Income						
very low <700 PLN	41 (14,4)	32	78,1	5,33***	4,12-43,14	
low, above 700 to 1000 PLN	111 (39,1)	47	42,3	3,86	0,87-16,72	
average, above 1000 to 1500 PLN	77 (27,1)	23	29,9	2,70	0,72-10,07	
high, above PLN 1500 to PLN 2000	33 (11,6)	14	42,4	4,67	0,94-19,05	
very high > PLN 2000	22 (7,7)	3	13,6	1,00	reference	1,00 reference
Subjective health assessment						
Very good	117 (41,2)	54	46,1	3,28	0,48-26,15	
Good	123 (43,3)	50	40,6	3,12	0,38-12,54	
Neither good nor bad	38 (13,4)	14	36,8	2,92	0,31-27,22	
Bad or very bad	6 (2,1)	1	16,7	1,00	reference	
Concern about the harmful effects of smoking						
Yes	221 (77,8)	71	32,1	1,00	reference	1,00 reference
No	63 (22,2)	48	76,2	6,76***	3,53-12,93	
Concern about the harmful effects of smoking on the fetus						

Yes	223 (78,5)	70	31,4	1,00	reference	1,00	reference
No	61 (21,5)	49	80,3	8,93***	4,45-17,90		
Trimester							
I trimester	21 (7,4)	6	28,6	1,00	reference		
II trimester	79 (27,8)	29	36,7	1,45	0,50-4,14		
III trimester	184 (64,8)	84	45,6	2,10	0,78-5,68		
Having children							
Yes	145 (51,1)	31	21,4	1,00	reference	1,00	reference
No	139 (48,9)	88	63,3	6,34***	3,74-10,77		
ETS hour/day							
0	111 (39,1)	13	11,7	1,00	reference	1,00	reference
<1h	28 (9,9)	10	35,7	4,19**	1,59-11,04		
1-5 h	70 (24,6)	41	58,6	6,66***	5,01-22,64		
5-8 h	36 (12,7)	30	83,3	9,79***	13,08-63,12		
>8 h	39 (13,7)	25	64,1	8,33***	5,59-32,41		
Passive smoking > 1 hour/day#							

No	139 (48,9)	23	16,5	1.00	reference	1.00	reference
Yes	145 (51,1)	96	66,2	9,88***	5,60-17,43		

Passive Smoking (ETS - environmental tobacco smoke). *** p ≤ 0.001. ** p ≤ 0.01. * p ≤ 0.05.

Variable not included in multifactorial regression due to overlapping information with the ETS variable number of hours per day

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Discussion

In a study carried out by Wojtyła et al. as part of the Polish Pregnancy Monitoring System (Pol-PrAMS), over 18% of women smoked cigarettes in the last three months preceding pregnancy, and 81.9% of women declared that they did not smoke during this period. The percentage of women who smoked at least one cigarette in the last trimester was 7.7%. The percentage of women who smoked after delivery was 3.6%. The percentage of non-smoking women was 93.2%, 92.3% and 96.4%, respectively. Most women smoked cigarettes in the period before pregnancy [13]. In the study conducted by Wierzejska et al. the percentage of smoking pregnant women was 11.6% [14]. In the studies of women from Lodz and Opoczno, the percentage of pregnant smokers was 22% [15]. In a study conducted in 2007 in the Lodz region, the percentage of pregnant smokers ranged from 25 to 30% depending on the trimester. It was shown that smoking rates in Poland were much higher among single persons (60%) compared to married women (30%); persons with primary or secondary education (70%) compared to people with secondary education (45%) [16]. Balwicki et al. (2017) showed that significant barriers to quitting smoking during pregnancy included marital status, being unemployed, smoking by Barents and living with other smokers in the household [17]. Factors facilitating smoking cessation during pregnancy included: a higher level of mothers' education, secondary education among partners and having at least one more child. Some of the barriers, such as living with other smokers, have also been identified in other studies [18]. In the study of Flemming et al. (2015) it was also found that smokers in a difficult situation encounter greater barriers in quitting smoking compared to other women [19]. In a study by Fitzpatrick et al. about half of women who were permanent smokers temporarily quit smoking or quit smoking after delivery lived with a partner who smoked, compared with 37.8% of women who quit smoking because of pregnancy and 13.5% women who did not smoke. Similarly, 22.1% of permanent smokers and 17.9% of those who smoked after delivery lived with the person who smoked, compa-

red with 8.8% of women who quit smoking because of pregnancy. Smokers more often lived during pregnancy with a partner who smoked (OR 3.32, 95% CI: 2.34-4.72) or another person who smoked (OR 2.34, 95% CI: 1.38-3.97). Temporary quitting because of pregnancy was more likely than permanent quitting among women aged 25-29, single and single-child. Adjusted to these variables, they probably lived more often with the partner who smoked (OR 2.64, 95% CI: 1.74-3.99) [20].

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