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## Smoking During Gravidity From The Perspective of Women

### Palenie tytoniu podczas ciąży z perspektywy kobiet

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#### ABSTRACT

**Background:** We investigated opinion of respondents (women) on smoking during pregnancy, knowledge of women about negative effects of active and passive smoking, prevalence and intensity of smoking before and during gravidity, information source.

**File and methods:** Researched sample consisted of 240 respondents deliberately selected. We used questionnaire method. Results were statistically processed.

**Results:** We found that awareness of women on negative effects is good. 78 women smoked before pregnancy and 15% out of them continued smoking even during pregnancy. Women source information mostly from mass media. Representation of midwives in information provision is alarmingly low (3%).

**Conclusion:** We propose to strengthen the educational impact of midwives in primary health care and we stress the importance of legislative support of educational activities of midwives.

**Key words:** midwifery, nicotine, health repercussions

#### STRESZCZENIE

**Wstęp:** Oceniono opinię respondentek (kobiet) na temat palenia tytoniu podczas ciąży, a także wiedzę kobiet o negatywnych skutkach palenia czynnego i biernego. Oceniono również występowanie i nasilenie palenia tytoniu przed i podczas ciąży.

**Materiał i metody:** Badaniem objęto 240 respondentek. Wykorzystano kwestionariusz ankiety. Uzyskane wyniki poddano analizie statystycznej.

**Wyniki:** Stwierdzono, że świadomość kobiet na temat negatywnych efektów palenia tytoniu w ciąży jest dobra. Okazało się, że 78 badanych kobiet paliło papierosy przed zajściem w ciążę, a 15% z nich kontynuowało palenie papierosów podczas ciąży. Informacje na temat szkodliwości palenia papierosów w ciąży badane kobiety czerpały najczęściej z mediów. Udział położnych w przekazywaniu informacji na ten temat był niepokojąco niski (3%).

**Wniosek:** Sugerowane jest wzmocnienie edukacyjnego wpływu położnych w podstawowej opiece zdrowotnej oraz podkreślenie znaczenia wsparcia legislacyjnego działań edukacyjnych położnych.

**Słowa kluczowe:** położnictwo, nikotynizm, skutki zdrowotne

#### Introduction

The problem of smoking affects people worldwide. It is a problem not only historical, but also global. Although smoking is hazardous to health, tobacco use is tolerated, legalized addiction. Nicotinism damages health at any

age, but the most notable in adolescence and in fertile age [1]. The least known are toxic effects of smoking on the female organism and the fetus during pregnancy. Smoking of pregnant woman affects negatively the development and health of the fetus, namely directly

by trans-placental transmission of chemical substances, especially nicotine, as well as indirectly by unfavorable changes in physiological functions of expecting mother, especially by reduced supply of oxygen to the placenta and the possibility of fetus hypoxia [2].

### Smoking and gravidity

Nicotinism is clearly the most common addiction in pregnant women. Exact figures are not available but roughly one fifth of pregnant women smoke during pregnancy and breastfeeding. Up to one third of pregnant women who smoke, deny smoking. It is caused by the low social tolerance of smoking during pregnancy [3]. Nicotine belongs to the most common exogenous harmful factors in pregnancy. Effects of smoking, whether active or passive, are evident throughout the pregnancy, and the fetus as an involuntary passive consumer is exposed to greater risks than the mother.

Negative impact on pregnant woman has, of course, also passive smoking. Staying pregnant in smoky spaces increases also the risk of atopic eczema generation and allergy development in early childhood. Complications caused by toxic components of tobacco smoke are evident in each trimester of pregnancy. In the first trimester there is an increased risk of miscarriages and inborn defects, later there is the threat of preterm labor, premature separation of the placenta and fetus retardation. Several studies have shown that pregnant woman's smoking increases the risk of miscarriage up to 28 %, as well as preterm labor [4]. Increased is also the risk of separation of placenta, bleeding during pregnancy and premature rupture of membranes, preterm labor, death of the fetus.

Nicotine negatively affects the metabolism and nutritional status of the pregnant woman, reduces the absorption of protein and vitamins [5, 6]. Weight gain during pregnancy is lower. All these factors are involved in low birth weight of infants. The average weight in smoker's children is lower by 200 to 250 grams than in nonsmokers [7, 8]. As reported by Wald and Hackshaw [9], in average one cigarette a day reduces birth weight of the newborn around by 12 grams.

In pregnant smokers in approximately 30% occurs of the damage of the fetus. Nicotine causes vasoconstriction in the placenta, temporary lack of oxygen, which, depending on the amount of smoked cigarettes results in chronic hypoxia. The result is a lower birth weight to the development of intrauterine growth retardation - **fetal tobacco syndrome**. Mother's smoking may result in child's increased heart rate and blood pressure. Tobacco smoke causes disorder of lung structures development [10]. To the pathologic structure is related also increased incidence of SIDS – sudden infant death syndrome. Perinatal mortality is 1.2 times higher [11]. Children of

smokers notably often die of sudden death syndrome! They suffer more often of asthma and respiratory infections. Congenital defects are accredited to the toxic effects of nicotine. More often occurs reductive limb anomalies, congenital anomalies of the urinary tract and clefts of lips and palate. Smokers often breastfeed less, that increases the growth deficit of children [12, 13]. After labor we see children with disorders of postnatal adaptation. The consequences of the toxic effect of nicotine in the newborn reflect in tachycardia, disorders of peripheral perfusion, nutritional intake, irritability, tremor and increased reaction to sound stimuli [14]. Sudden reduction of the nicotine level in child's blood after birth may cause abstinent syndrome (pallor, increased irritability, trembling limbs, tachypnea, cyanosis paroxysm or bradycardia) [15, 16].

Children of smokers may suffer in further development of mild brain dysfunction, somatic growth retardation, concentration disorder and worse grades at school [17, 18].

### Material and methods

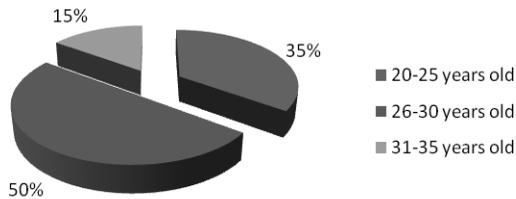
Empiric study was executed in women after labor in different age groups. The survey sample consisted of 240 respondents.

The target of the empirical research was to identify the level of knowledge of mothers about the negative effects of active and passive smoking and the attitude of women towards smoking during pregnancy and beyond.

The survey was executed by the method of multi-question anonymous questionnaire. In addition to identification data it contained open, closed and semi-opened questions including demographic indicators. Respondents were asked to choose among several options, or add comment if needed. Questionnaires were distributed in Slovak language in healthcare facilities in postpartum wards in Trnava region. The administered was personally in Trnava in postpartum wards and indirectly in postpartum wards outside Trnava in the months of July to December 2011. Information about labor was gained from clinical documentation.

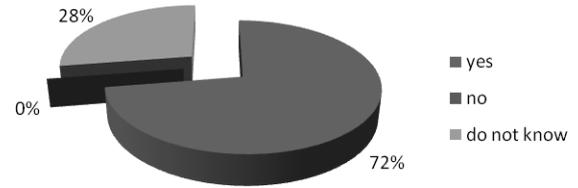
To process the issues of the survey, we used the method of theoretical analysis and synthesis. Information gained in questionnaire was processed by method of one-dimension descriptive statistics. To process and record data was used table editor Microsoft® Office Word 2003 part of Microsoft Office Professional Edition 2003 product. Since all the data from the questionnaire are nominal (categorical), the responses to each question are characterized by their absolute frequency and relative frequency (%). The survey results were evaluated in absolute numbers, percentages, processed into tables and shown in charts.

**Results**



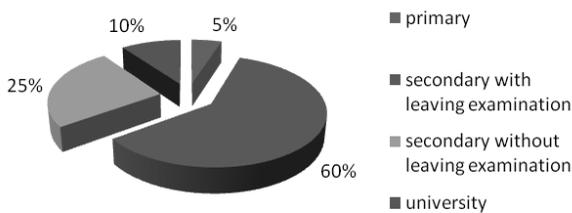
**Fig. 1. Age distribution of respondents**

50% (120) women were in age group of 26 – 30 years old, age 20-25 years old was stated by 84 (35%) women. Age group of 31-35 years old stated 35 (15%) women.



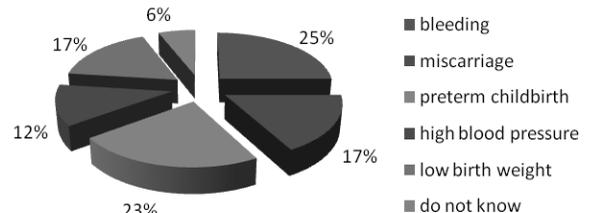
**Fig. 4. Impact of smoking on gravidity**

174 (72.5%) women responded that smoking has impact on gravidity and 27.5% (66) women were unable to tell. None of the women chose the option the smoking has no impact on gravidity.



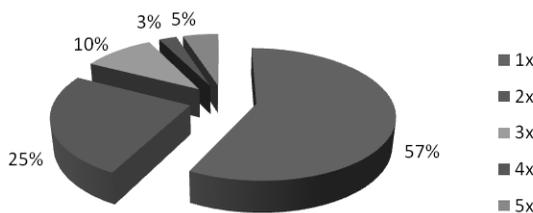
**Fig. 2. Education of respondents**

Most women – 144 (60%) had secondary education with school leaving examination and 25% (60) woman had secondary education without school leaving examination, least respondents – 12 (5%) had primary education. 24 (10%) respondents had university degree.



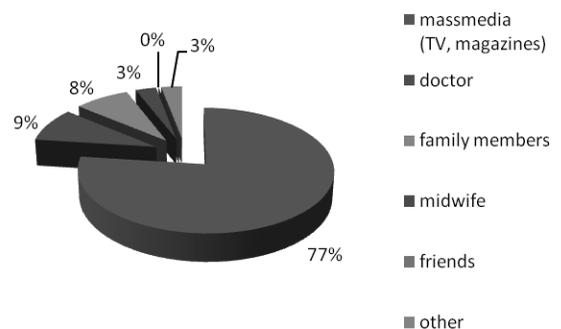
**Fig. 5. Complications of smoking in gravidity**

To this item replied only respondents who think smoking has an impact on gravidity. The most common complication caused by smoking during pregnancy was reported bleeding (42 women, 25%) and preterm childbirth (40 women, 23%). Low birth weight of the child was reported by 30 (17%) women and the same number had also miscarriage. 12 respondents (6%) did not report any complication.



**Fig. 3. Number of labors**

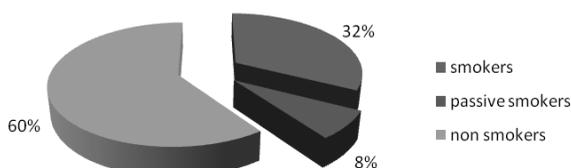
The survey participated 138 (57.5%) new mothers. 60 (25%) women delivered second time, 24 (10%) women gave birth third time, fourth time delivered 6 (2.5%) women and 12 (5%) women gave birth to the fifth child.



**Fig. 6. Information source**

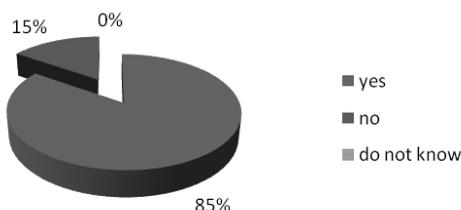
Information from mass media, TV, magazines was sourced by 77% (185) women. 9% (22) women were instructed by

doctor. 3% (7) respondents got information from midwife. 8% (19) women stated family members as the information source. Other source was stated by 3% (7) respondents. As other source were stated by respondents – books and internet. Friends as a information source was not mentioned by any woman.



**Fig. 7. Smoking before gravidity**

Before pregnancy smoked regularly or occasionally 78 (32%) women. Number of cigarettes smoked daily was reported in the range of 5-15 pieces. 18 women are passive smokers. It is positive that even 144 (60%) of respondents are non-smokers.



**Fig. 8. Resigning on smoking**

Out of the 78 women who smoked before pregnancy, the detection of pregnancy was the reason to stop smoking for 85% (66 respondents). 15% (12) of respondents smoked also during pregnancy. The reason for the inability to stop smoking was “weak will” as they stated.

## Discussion

Health and child development are inseparably tied to the health of the mother, to her nutrition and reproductive care she receives. The results showed that general knowledge about the negative effects of smoking was recognized by the greater part of the women surveyed. Questioned on the most common complications caused by smoking during pregnancy they determined the correct options, i.e. miscarriage, premature birth, low birth weight. Nevertheless, in many cases, pregnant women are unaware of the risks of smoking and therefore there are smokers among pregnant women. According to the results obtained 15% (12) of women smoked during

pregnancy. In the presented survey of Bašková et al., either during the pregnancy 7.2 % Romani women and 1.9 % of Slovak nationality women do not change their smoking habits [19].

Huttová states that in almost half of women who smoked continued to smoke even during pregnancy. This problem also applies to more than half a million young pregnant women [20, 21]. From this point of view the prevention is very important. In the prevention of tobacco addiction is also necessary to prevent the occurrence and spread of the phenomenon and its negative effects. Reinforcement and support of positive conditions of the system as a whole is considered for an optimal strategy, which is not easy. Human behavior is not only product of logically consistent rational program and therefore the stereotype of providing information and instructing on the correct acting, that is considered the basic prevention method, often fails. In Slovakia, according to Heretik et al. survey which is presented by EPIAF smoking men (38.6%) still dominate to “only” 21.1% of smoking women [22]. Although women are aware of the negative effects of smoking on mother and child, most of them do not consider the information sufficient. The most (77%) women sourced information from mass media, from doctor (9%) and from family members (8%). Midwife as a source of information was stated only by 3% women. It is necessary to focus interventions of midwifery to improve the health-education provided by midwives, to point out to girls and expecting mothers the high risk of smoking and their great responsibility for their children’s health in the pre-conceptual care.

We propose to strengthen the educational activities of midwives in primary health care and legislatively support educational activities of midwives. Closely follow in practice the bill on the protection of non-smokers [23]. Responsibility for the prevention of smoking and nicotism has the whole society, the initiative should be taken particularly by midwives and all health care professionals, to influence the behavior of women by setting themselves for example.

## Conclusion

**Smoking** represents significant risk to the pregnancy and the state of the newborn. Despite the fact even gravidity is not sufficient reason for women to quit smoking.

Support and maintenance of reproductive health is an extremely important task for the future. It is a major challenge for midwifery and nursing. If we can stop or limit smoking during pregnancy, we can prevent all the negative effects of smoking on the fetus and newborn child.

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