

ORIGINAL PAPER

EXTRAMURAL BIRTHS IN THE CONTEXT OF REPRODUCTIVE HEALTH IN
SOCIALY DEPRIVED AND EXCLUDED POPULATIONSMária Šupínová¹, Beáta Frčová¹, Valéria Benyúsová², Peter Bielik³¹Faculty of Health in Banská Bystrica, Slovak Medical University in Bratislava, Slovakia²Department of Obstetrics and Gynecology, General Hospital Rimavská Sobota, Slovakia³Department of Obstetrics and Gynecology, General Hospital Lučenec, Slovakia

Received April 2, 2014

Accepted July 4, 2014

Abstract

In many developed countries, a home birth is still an alternative to a birth in a health facility. In Slovakia, extramural births tend to be associated with underprivileged and marginalized groups of the population. The large ethnic group of Romani people is one such group. *Aim:* The aim of this retrospective study was to examine extramural births in Rimavská Sobota, a small town in Southern Slovakia, in the context of the overall sexual and reproductive health of Romani. *Methods:* During the study period between 2009 and 2013, there were 48 registered births in the town outside a health facility. The results of the retrospective study were analyzed in terms of absolute and relative frequency. Relationship between the variables was investigated by the Pearson correlation coefficient and by the chi-square test. The strength of relationship was measured by Cramér's V coefficient. *Results:* Forty-four (91.7%) out of 48 extramural births involved Romani mothers, and 68.7% of them took counselling sessions irregularly or never. The mean age of mothers was 26.3 years, and 91.7% of them had no formal education. A strong indirect statistical relationship between counselling sessions and extramural births was demonstrated, as well as between the mother's age and an extramural birth. *Conclusion:* The findings suggest that awareness among socially deprived population groups of the risks and possible complications involved in giving birth outside a health facility is inadequate. The authors see a solution in the effective implementation of sexual and reproductive health education of young Romani women and a more comprehensive preparation on their part for childbirth.

Key words: childbirth, extramural, mother, prenatal clinic, home environment, Romani people.

Introduction

Home births are common in many countries. In the United States, their numbers increased by 20% between 2004 and 2008. In some European countries, a certain number of women give birth at home too. The reasons for this are a traditional practice, the comfort of the home environment and the close presence of the family. In the Slovak Republic, home births are not legally protected (Čech, 2006).

Assistance with births and post-natal care are provided in health facilities in Slovakia. Nevertheless, numerous cases of extramural births still occur. Their number, however, has not been statistically recorded. Empirical observation suggests that they are generally associated with socially deprived population groups, represented by the Romani ethnic group. In Slovakia, there are regions

in which the Romani population is more densely concentrated than in others, and it is scarcely a coincidence that the fertility rate in these regions is also much higher than in others. The first births of Romani women begin at the very beginning of their reproductive period, and they continue giving birth regularly until the menopause. The number of Romani children born outside marriage is significantly higher than in the majority population. The causes for these significant differences are to be found in living conditions and long-term habits, multiplied by the high degree of segregation experienced by the Romani population. According to the Health Statistics Yearbook of the Slovak Republic (Zdravotnícka ročenka, 2011), there were 60, 813 registered births in the Slovak Republic in 2011. To be more specific, there were 7, 787 births in the Bratislava region, far fewer than in the places with the highest density of Romani people – 10 368 births in Prešov and 10 019 births in Košice. The total fertility rate in Slovakia is 1.275. For people

Corresponding author: Mária Šupínová, Faculty of Health in Banská Bystrica, Slovak Medical University in Bratislava, Slovakia, Sládkovičova 21, Banská Bystrica, Slovakia, e-mail: maria.supinova@szu.sk

with very low standards of living, like Romani people, it rises to 4.529 (Vaňo, Meszáros, 2004; Šupínová, 2011). According to data acquired from the Slovak birth screening center in Banská Bystrica, of all births in the Rimavská Sobota region in 2009, Romani accounted for 50.1% to 60.0%.

According to Vaňo and Meszáros (2004), the least favorable situation is that of infant mortality, where the difference between Romani and non-Romani is most significant. The Romani infant mortality rate is approximately 1.8 times higher than the average rate in Slovakia.

Compared to other countries in Europe, Slovakia is lagging behind in terms of newborn mortality statistics. Over the last decade, Slovakia has reported an infant mortality rate twice that of the Czech Republic. This is due to the higher infant mortality in those lower social groups known for a young age of primigravidae, a lower awareness of preventive measures, a lower level of sexual and reproductive education and a lesser knowledge of child care. (National Program..., Národný program, 2008). Another indicator of the unfavorable status of reproductive health in the Romani ethnic group is the high number of extramural births.

Extramural births can be caused, among other factors, by the absence of expectant mothers at counselling sessions. The future mother does not know when her baby is due and therefore does not know when to expect the first signs of her labor. There are cases when a woman, upon arrival at the hospital, cannot say how long she has been pregnant, and therefore the obstetrician does not know whether to expect the birth of a full-term baby or a pre-term one. In practice, there have been cases of extremely premature births in an ambulance during the transport of the mother to hospital, and even in an elevator when heading to the hospital. Doctors are against the principle of home births, owing to the possibility of sudden complications (Lees et al., 2002). According to Trča (2004), when giving birth at home, complications occur more often than in hospitals. Even the labor of a healthy woman after a normal pregnancy may become risky.

Childbirth in the high-risk environment of a Romani household poses high risks for both mother and child. The newborn baby is exposed to infection as well as improper management of labor and potential birth trauma. Furthermore, the birth of a premature newborn baby is life-threatening. The incidence of infections in neonates born outside the hospital is high. As a preventive measure, anti-hepatitis B immunoglobulin is administered to all such cases in hospital.

Furthermore, mothers may experience sudden bleeding or infection (Gregora, 2005; Hájek, 2004). In order to prevent home births, the efforts of health workers in the education of Romani women need to be increased, with a particular emphasis on the necessity of taking counselling sessions and on learning the risks connected with an extramural childbirth for the newborn baby and its mother.

According to the Statistical Office of the Slovak Republic, there were 84 837 inhabitants in the Rimavská Sobota district in the year 2012. The proportion of Romani, according to the population census, was 4.2%. Unofficial estimates, however, suggest up to 8% (Stav obyvateľstva, 2012). In the same year, the region had 1 026 registered births in total.

Aim

The aim of this retrospective study was to analyze extramural births in the Rimavská Sobota district for the period 2009–2013.

Scientific questions

1. Are extramural births more common in younger or older women?
2. Are extramural births more common in multiparae?
3. Are extramural births more common among women who did not attend counselling sessions?
4. Are extramural births more common in women with a lower educational level?
5. Do extramural births tend to be rather premature births or are they usually around the due date?
6. Does the incidence of extramural births relate closely to the mother's ethnicity?

Methods

Design

To find entry data, the retrospective study method was used.

Sample

The study group was made up of women who gave extramural birth in the Rimavská Sobota district in the period 2009–2013. To include subjects in the study group, we did not recognize whether they had their permanent or temporary address in the district. The Rimavská Sobota district was chosen deliberately due to the high proportion of Romani people in its population, compared to other districts of the Banská Bystrica region.

Data collection

Data on extramural births were collected from the records of the Department of Gynecology and

Obstetrics at the General Hospital in Rimavská Sobota.

Birth records and medical records of mothers who gave birth outside the hospital and were admitted to the department afterwards were analyzed. The focus was on their age, origin, education, marital status, and the order of the extramural birth in the overall number of their births, attendance at counselling sessions, the due date, the place of birth, complications in the mother, complications in the newborn, and the death of the child, where applicable.

Data analysis

The results of the retrospective study were analyzed in terms of absolute and relative frequency.

Interdependence between the variables was based on the Pearson correlation coefficient and the chi-square test. The strength of relationship was measured by Cramér's V coefficient.

Results

Study group characteristics

Out of 48 respondents – mothers who gave birth outside hospital – 23 (48%) were single and living with a partner, while 18 (37.5%) were married. Six of them were single without a partner (12.5%). One was a widow. As many as 44 (91.7%) of them were of Romani origin. In 42 women (93.3%), extramural birth occurred once; three women gave birth outside hospital repeatedly.

Table 1 Overview of extramural births by the age and education of the respondents

Age	Primary education	%	Secondary education	%	Tertiary education	%	Total	%
≤25 years	25	55.55	0	0	0	0	25	55.56
25–35 years	12	26.66	3	6.66	1	2.22	16	35.56
35–45 years	4	8.88	0	0	0	0	4	8.88
Total	41	91.09	3	6.66	1	2.22	45	100.00

Table 2 Dependence between the age of women and extramural births

Age	n	N	p	V	C
≤ 25 years	25	26			
25–35 years	16	17			
35–45 years	4	5			
Total	45	48			
Relationship between the age of women and EBs			0.048	0.132	0.131
n = the number of women; N = the number of extramural births (EBs); p = chi-square test; C = Pearson correlation coefficient, V = Cramér's V coefficient					

The mean age of women was 26.3 years (range, 17–43 years). Table 1 shows an overview of extramural births by the age and educational level of respondents. The highest number of births outside hospital was reported in the 25 to 35 age group with primary education. A total of 41 (91.09%) women had primary education. One woman had graduated from the university. There are 1.068 extramural births for one respondent with primary education. There is 1 extramural birth for one respondent with higher than primary education. The relationship between the age of the respondents and extramural births was examined by the chi-square test (p) at a significance

level of 0.05 and the Pearson correlation coefficient (C). The strength of this relationship was measured by Cramér's V coefficient. The results confirmed a weak correlation between the age of the respondents and extramural births (Table 2). The tests were influenced by disproportion in the education subgroups; the number of respondents with primary education was 11 times higher than the number of respondents with higher than primary education. The absolute frequency showed that a majority of the women giving birth were without any formal education.

Table 3 shows an overview of births outside hospital in the Rimavská Sobota district in the period 2009–2013. The proportion of extramural births was 0.89%.

Table 3 Overview of extramural births in the Rimavská Sobota district in 2009–2013

Year	Number of births by year	Number of extramural births by year	
	N	N	%
2009	1112	10	0.89
2010	1104	10	0.89
2011	1026	12	1.16
2012	1074	5	0.46
2013	1078	11	1.02
Total	5394	48	0.89

The highest number of extramural births was in 2011, the lowest in 2012. A total of 39 births (81.3%) were full-term, while 9 births (18.7%) were premature.

The results showed that multiparae gave birth outside hospital more often. Most frequently, the cases of extramural births occurred as their third, fourth and sixth birth (Table 4).

Table 5 Attending counselling sessions and EBs

Taking counselling sessions	N	%	Mean age	The number of EB	The number of EBs/ 1 woman	Correlation coefficient (r)
Never	19	42.22	28.37	21	1.10	
Irregularly	14	31.11	26.67	15	1.07	
Regularly	12	26.67	24.07	12	1	
Total	45	100	26.32	48	1.06	0.99

EB = extramural births

We investigated this correlation considering the number of extramural births per respondent. The results indicate that the oldest mothers did not take counselling sessions at all. In this group, there were 1.10 extramural births per woman. Thus, extramural births in this group are most common.

In the subgroup of respondents who took counselling sessions sometimes, the number of extramural births per mother dropped and their mean age was lower. In the group of those respondents who attended counselling sessions regularly, the number of extramural births per mother was the lowest and so was their mean age. The number of extramural births in these subgroups dropped by an average of 4.9%.

There is a strong correlation between attending counselling sessions and the number of extramural births per respondent ($r = 0.99$). The number of extramural births depends on the frequency of visits to prenatal counselling sessions.

Table 4 Order of extramural births of all births of one mother

Order of birth	N	%
First birth	2	4.17
Second birth	4	8.33
Third birth	10	20.84
Fourth birth	9	18.75
Fifth birth	6	12.50
Sixth birth	9	18.75
Seventh birth	3	6.25
Eight birth	3	6.25
Ninth birth	1	2.08
Tenth birth	1	2.08
Total	48	100

Most mothers who gave birth outside hospital did not attend counselling sessions. However, there was a considerable number of mothers who attended counselling sessions irregularly. The exact number of sessions they attended was not stated.

Table 5 gives an overview of the number of respondents, their mean age, the number of births and the attendance at counselling sessions.

Table 6 Place of extramural births

Place of birth	N	%
At home	18	37.50
On the way to hospital	27	56.25
Other places	3	6.25
Total	48	100

Most extramural births took place on the way to the hospital or at home. Among other places for an extramural birth, a bus stop was mentioned (Table 6). No severe complications occurred in two of the women. Mothers tended to bleed more. Complications occurred in 5 newborn babies. They were related to preterm birth and low birth weight.

Discussion

In the Rimavská Sobota district, as well as throughout the Banská Bystrica region, a large number of Romani people live. The lack of worldly

knowledge among Romani women and the low level of responsibility in their sexual lives affect both the overall fertility rate in the Banská Bystrica region and the incidence of extramural births. Šupínová (2011) studied the incidence of extramural births in the Banská Bystrica and Prešov regions. From a sample of 454 Romani women respondents, the author discovered that on average, every seventh Romani child is born outside hospital in the Banská Bystrica region, and every twelfth in the Prešov region. Overall, every eighth Romani child is born out of hospital in both regions. In the Rimavská Sobota district, 48 out of the total number of 5,394 births were extramural (0.89%) (Table 3). According to Dobiáš, (2007), extramural births occur more often in multiparae. This is consistent with findings in the present study (Table 4).

The results showed that most women, with an average age of 26.3 years, gave birth outside hospital. There was only a weak statistical relationship between the respondent's age and an extramural birth (Tables 1 and 2). As many as 91.7% of the women were of Romani origin. Among the cases of extramural births, there were also three mothers who had given birth to two children outside hospital. These mothers did not have sufficient knowledge about the stages of labor and could not recognize the signs of beginning labor. For this reason, an extramural birth may be repeated by the same woman. As an argument for not going to the hospital for childbirth, these women often state that they have children at home and cannot rely on their partners to take care of them. This is often also given as a reason for Romani women leaving the hospital shortly after giving birth. Dianišková (2004) states that 40% of Romani women absconded from the hospital. She considers it alarming that a high proportion of pregnant Romani women do not attend counselling sessions at all, or only rarely. Once again, this is consistent with results of the present retrospective study. Most of the mothers giving birth outside hospital attended counselling sessions irregularly or never (Table 4).

A strong correlation was demonstrated between taking counselling sessions and extramural births (Table 5). The statistical analysis showed that women tended to treat counselling sessions frivolously or were not sufficiently well educated to understand the importance of prenatal visits.

It is accordingly difficult to ensure the healthy development of the fetus or to oversee the normal course of pregnancy and childbirth. The present study confirms the claims of several surveys as well as direct observation of the behavior of Romani

mothers. In her survey conducted in 2011 in the Banská Bystrica and Prešov regions, Šupínová (2011) reported that of the total number of 454 respondents, up to 35% of women attended counselling sessions irregularly or never.

According to this study, most extramural births occurred either at home or on the way to the hospital (Table 6). A bus stop was cited as another venue for giving birth by one multipara in her medical records. The birth happened very suddenly or she underestimated the first stage of labor.

After analyzing the results, the assumption that birth outside hospital must be premature (in other words unexpected) was not confirmed. Most extramural births were births around the due date. Complications noted in the women were minimal. Among these, heavier bleeding – which was treated later in hospital – was mentioned. Complications in children occurred only in cases of preterm delivery. They needed follow-up care in a neonatal intensive care unit. No death of a newborn baby after an extramural birth was reported.

Conclusion

It is widely known that the health status of socially deprived and excluded groups, represented mostly by the Romani minority, is worse than that of the majority population in Slovakia (Popper et al., 2009). The main cause seems to be the long-term poor social and economic conditions in which they live, their low level of education and their unhealthy lifestyle. The sexual health and reproductive behavior of Romani people, compared to those of the majority population, follow a different pattern (Bolífková, 2002). The aim of surveys carried out in order to explore and analyze the sexual and reproductive health of Romani is to prepare material containing obtained data which will help to create an overview of the sexual and reproductive health of the Romani ethnic group at the level of empirical facts.

The intention was to examine the incidence of extramural births in Rimavská Sobota over the five-year study period of 2009–2013. The survey shows that most births were recorded in young Romani women who were single and without formal education. The vast majority of them did not attend counselling sessions at all, or only irregularly. The findings suggest that the awareness of socially deprived population groups about the risk of complications when giving birth outside a registered health facility is inadequate.

For this reason, the following recommendations should be put into practice:

1. Nurses in primary care and Romani assistants working directly in Romani settlements should provide Romani girls and women with adequate health education, preparing them for childbirth and explaining birth stages and possible complications. The advisability of giving birth in hospital should be stressed and underlined at all times.
2. If, despite all this, a birth takes place at home, the principles of hygiene and first aid to the newborn baby should be emphasized. The fastest possible transport of the mother and child to a health facility should be arranged in this case.
3. The importance of counselling sessions should be emphasized.
4. Extramural birth reports should be introduced at a national level.

Ethical aspects and conflict of interest

The authors are not aware of any conflict of interest involved in the survey. Its execution was preceded by seeking, and being granted, an approval from the hospital management. The protection of every respondent's personal data was adhered to strictly, and other ethical aspects of the research were respected as well.

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