

Nativity and infant mortality in Roma children in the Prešov region

Urodzenia i umieralność dzieci romskich w regionie Presova

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Abstract

Background: Due to the lack of exact data on natality and infant mortality rates of the Roma living in Slovakia we aim to look closer into these parameters, analyze them and in this respect compare two ethnic groups: Roma and non-Roma Slovak children.

Material and methods: In the time period from 1997 to 2011, we collected data in selected parameters (birth rate, infant mortality rate, the number of newborns with low birth weight, the number of children abandoned by their mothers after birth) in the Prešov region, and we evaluated them.

Findings: A declining natality rate was observed in non-Roma children, as opposed to an upward trend in Roma children. In 1997, every fourth child was born to a Roma woman; in 2011, it was every third child. A declining infant mortality rate was observed in all groups studied. In the Roma children, the decline in the infant mortality rate was the biggest, yet the mere infant mortality rate, in this group of children, was the highest – in 1997 and in 2011 approximately 3-times higher than in the children born to non-Roma mothers.

Conclusion: In our study, the infant mortality rate of Roma children is on decline, yet still it is high when compared to the non-Roma population. This may be caused by low interest of the Roma in providing health care to their children and their low responsibility or their inability to take responsibility for health and health care education of their children.

Key words: the Roma, Roma children, natality, infant mortality, Prešov region.

Streszczenie

Cel pracy: Z powodu braku danych na temat liczby urodzeń i umieralności niemowląt Romów mieszkających na Słowacji celem pracy jest zebranie tych danych, ich analiza i przeprowadzenie pod tym względem porównania między dwoma grupami etnicznymi, tj. grupą Romów i Słowaków nie-Romów

Materiał i metody: W okresie lat 1997 do 2011 zebrano dane co do wybranych parametrów (liczba urodzin, wskaźnik umieralności niemowląt, liczba noworodków z niską urodzeniową masą ciała, liczba noworodków porzuconych przez matki po urodzeniu) na terenie regionu Prešov i porównano je statystycznie.

Wyniki: Zaobserwowano spadającą liczbę urodzin w grupie nie-Romów, w odróżnieniu od trendu wzrostowego urodzin dzieci romskich. W 1997 roku co czwarte dziecko było urodzone przez matkę romską; w 2011 roku było to co trzecie dziecko. Wskaźnik umieralności niemowląt spadał we wszystkich badanych grupach. Spadek umieralności niemowląt romskich był największy, jednak i tak pozostawał najwyższy – w 1997 i w 2011 roku był około 3 razy wyższy niż wskaźnik umieralności dzieci nie-Romów.

Wnioski: Nasze badania wykazują, że wskaźnik umieralności dzieci romskich spada, jednak nadal jest wysoki w porównaniu z wskaźnikiem w populacji nie-Romów. Może to być spowodowane niskim zainteresowaniem Romów w zabezpieczeniu opieki zdrowotnej swoim dzieciom i ich niską odpowiedzialnością albo niezdolnością do odpowiedzialności za zdrowie i edukację zdrowotną ich dzieci.

Słowa kluczowe: Romowie, romskie dzieci, współczynnik urodzeń, umieralność niemowląt, region Presova

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Introduction

Anthropology-wise, the original homeland of the Roma is central and northern India [1]; this is supported by a genetic analysis of a control group of the Roma living in Slovakia [2]. The oldest mention of the Roma's presence in Slovakia comes from the Spišská Nová Ves Region and dates back to 1322. On a worldwide scale, Slovakia belongs among countries with the highest Roma population [1]. Census 2011 population statistics say that 105 500 inhabitants claim Roma nationality; however, a qualified estimate is 450,000–500,000 inhabitants of Roma nationality. As of Dec 31, 2010, in the Prešov region were 809,443 inhabitants, out of this number the Roma were 14.5% (117,363 inhabitants); 186 328 children and adolescents; out of this number the Roma were 27.8% (50,450 inhabitants) (Qualified estimate by the Prešov District Council).

The reproductive behavior of the Roma is different from that of the non-Roma population; it results from historical, cultural and social-economic factors. Such discrepancies are still present due to relative segregation of the majority of the Roma living in Slovakia. With regard to the level of integration, we speak of the integrated Roma, partially integrated Roma, and non-integrated Roma. According to the estimate provided by the Government Office, approximately a half of the Roma living in Slovakia can be labeled as partially integrated, 30% as segregated, and as little as 20% is fully integrated into the society [3]. It can be stated that the less integrated into the majority society the Roma are, the more diverse their manners are (including their behavior to others in and outside their ethnic group, and their attitude to health care) – i. e. it corresponds with the habits they brought from the country of origin, and it is sustained by constant inappropriateness of the setting they live in, their insufficient education and a high level of unemployment rate.

Post-1989 change of the political system has brought about greater emphasis on acquiring the responsibility for one's own state of health – the patient should adopt the role of „active subject” in the physician/nurse–patient interaction. Revoking obligatory medical check-ups, low responsibility of the Roma for their own well-being and their children's well-being, insufficient education, poor economic situation, alcohol and cigarette abuse, relatively high genetic load [4–6] are factors having a share in their health deterioration as well as in infant mortality.

We have much less information on the reproductive behavior of the Roma than on their number and age structure [3]. Demographically speaking, the Roma population is young, with a progressive

type of age structure – a high ratio of children and a low ratio of the elderly [7]. The Roma population is younger with a strong ratio of children. The youngest population is found in the segregated Roma. The prognosis of the development of the number of Roma children aged 0–14, in the period till 2025, does not envisage significant increase in the number of the Roma children [3]; hence, it can be assumed that the reproductive behavior of the Roma will change.

The mortality rate of the Roma is higher than that of the non-Roma population, irrespective of the age group [7]. The factor considerably influencing shorter than average life expectancy in the Roma is an unfavorable trend of natality and infant mortality. For this reason, the primary objective of the research is to analyze the data on natality and infant mortality in the Prešov region and compare the mortality rate in the first year of life in two ethnic groups: non-Roma and Roma.

Material and methods

The Prešov region is a region stagnating mainly in the socio-economic sphere. In this region, the number of socially poor inhabitants and the number of children in danger because of the setting they live in is growing. The Prešov region has the highest number of the Roma living in segregated settlements [5].

Between 1997 and 2011, we collected and evaluated the selected parameters in the Roma living in the Prešov region. We have made use of official statements of local experts in pediatrics and obstetrics accounting for the standards of the Slovak Republic Ministry of Health Care; these had been submitted to central authorities and international organizations of EU or WHO. Our evaluation considered the following:

- the natality rate in the following subgroups: „the overall natality rate” (the overall number of children born alive), „the natality rate in the Roma”, „the natality rate of the non-Roma”;
- the infant mortality (IM) rate in the following subgroups: „the overall IM rate” (the overall number of children born alive), „the IM rate of the Roma”, „the IM rate of the non-Roma”;
- the number of children with low birth weight (LBW) – less than 2500 g (this parameter was evaluated between 1997 and 2010) in the groups of Roma and non-Roma children;
- the number of children abandoned by their mothers after birth (this parameter was evaluated between 2003 and 2011)

The data were gained in the following regions and districts: Prešov, Poprad, Sabinov, Kežmarok, Stará L'ubovňa, Levoča, Bardejov, Vranov

nad Topľou, Humenné, Svidník, Snina, Stropkov, Medzilaborce. There are no hospitals in Stropkov and Medzilaborce.

Results

Figure 1 shows the data on the natality rate in the Prešov region between 1997 and 2011. A decrease in the natality rate was noticed in all studied groups of children born alive – Roma and

non-Roma. However, the natality rate of Roma children was slightly increasing, which is reflected in Table 1. In 1997, out of all born children, 24.06% were Roma children, while in 2011, 32.81% were Roma children. In comparison with other Slovak regions, the Prešov region has a steady increase in the natality rate. The research results indicate that in 2011, in terms of the natality rate, the Roma made almost one third.

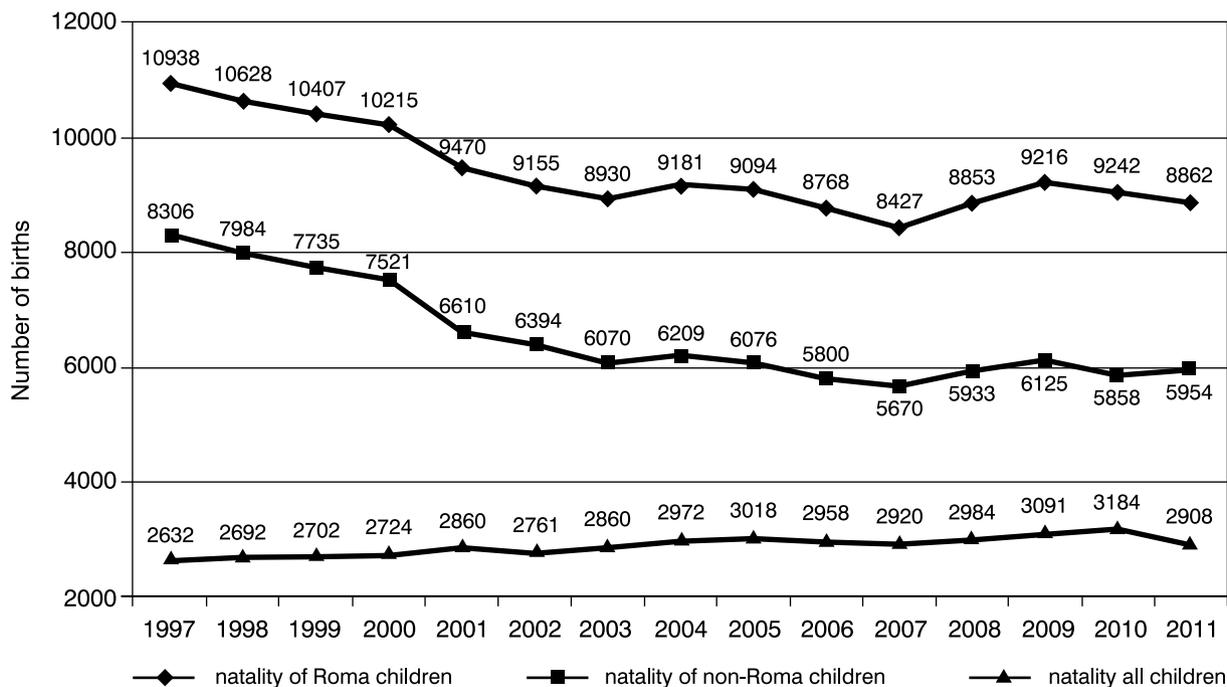


Figure 1. The natality rate in the Prešov region between 1997 and 2011

Rycina 1. Liczba urodzeń w regionie Presov w latach 1997–2011

Table 1. The percentage of Roma children born in the Prešov region between 1997–2011

Tabela 1. Odsetek dzieci romskich urodzonych w regionie Presov w latach 1997–2011

Year	Roma children	The percentage of Roma children
1997	2632	24,06
1998	2692	25,33
1999	2702	25,96
2000	2724	26,67
2001	2860	30,20
2002	2761	30,16
2003	2860	32,03
2004	2972	32,37
2005	3018	33,19
2006	2958	33,74
2007	2920	34,65
2008	2994	33,82
2009	3091	33,54
2010	3184	35,21
2011	2908	32,81

The research results indicate a decrease in the IM rate in all studied groups, in the time period between 1997 and 2011 (Figure 2). The most noticeable decrease was in the Roma children group; how-

ever the mere IM rate was highest in this group (Table 2), as opposed to the non-Roma children group, during the whole studied period – both in 1997 and in 2011 – app. three times higher.

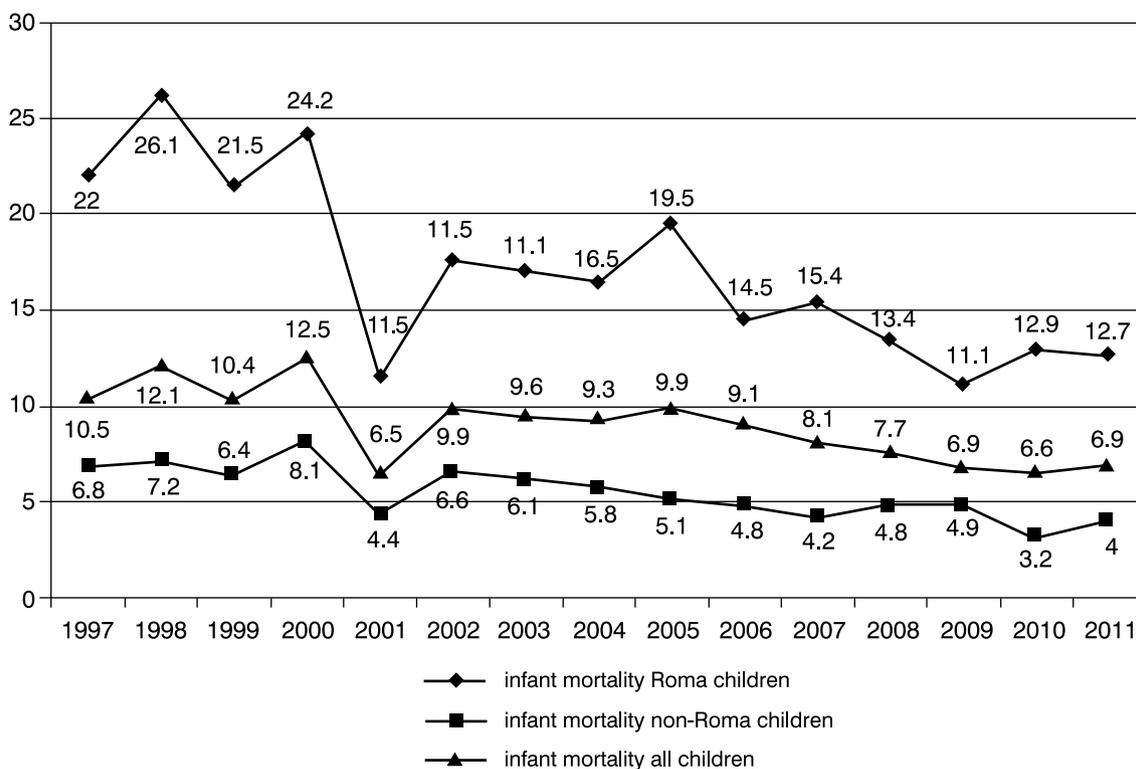


Figure 2. The IM rate (‰) in the Prešov region between 1997 and 2011
Rycina 2. Wskaźnik umieralności (‰) w regionie Presov w latach 1997–2011

Table 2. The IM rate (‰) in the Prešov region between 1997 and 2011
Tabela 2. Wskaźnik umieralności (‰) w regionie Presov w latach 1997–2011

Year	The IM rate of the Roma in ‰	The IM rate of the non-Roma in ‰	Difference
1997	22	6.8	15.2
1998	26.1	7.2	18.9
1999	21.5	6.4	15.1
2000	24.2	8.1	16.1
2001	11.5	4.4	7.1
2002	17.7	6.6	11.1
2003	17.1	6.1	11.0
2004	16.5	5.8	10.7
2005	19.5	5.1	14.4
2006	14.5	4.8	9.7
2007	15.4	4.2	11.2
2008	13.4	4.8	8.6
2009	11.1	4.9	6.2
2010	12.9	3.2	9.7
2011	12.7	4.0	8.7

Between 1997 and 2010, 11,167 infants with low birth rate (LBW) were born, which makes the mean value of 8.48%. In the given period, the num-

ber of children born with LBW is slightly increasing (Table 3).

Table 3. The percentage of full-term newborns with LBW born in the Prešov region between 1997 and 2010
Tabela 3. Odsetek dzieci donoszonych z niską masą ciała w regionie Presov w latach 1997–2010

Year	Full-term newborns with LBW		Year	Full-term newborns with LBW	
	LBW	%		LBW	%
1997	768	7.02	2004	828	9.01
1998	784	7.3	2005	830	9.12
1999	829	7.96	2006	807	9.21
2000	813	7.93	2007	766	9.08
2001	788	8.32	2008	829	9.36
2002	764	8.34	2009	821	8.91
2003	729	8.16	2010	811	8.96

Out of the significant causes of a high IM rate is LBW; its occurrence is as much as 59%. Between 1997 and 2010, that was the mean value of 14.32% in Roma infants, as contrasted with that of 5.97% in non-Roma infants. In the studied time period,

a decrease in the number of infants born with LBW was observed in the Roma (especially after 2004, the difference between 1997 and 2010 is 2.7%), while an increase was observed in the non-Roma (the difference between 1997 and 2010 is 2.62%) (Table 3a).

Table 3a. The percentage of infants with LBW in two ethnic groups (Roma and non-Roma) in the Prešov region between 1997 and 2010

Tabela 3a. Odsetek niemowląt z niską masą ciała w grupie etnicznej Romów i nie-Romów w regionie Presov w latach 1997–2010

Year	Roma children			Non-Roma children			In total
	total	LWB	%	total	LWB	%	
1997	2632	403	15.3	8306	365	4.39	10,938
1998	2642	411	15.7	7984	373	4.67	10,626
1999	2702	428	15.8	7705	401	5.2	10,407
2000	2724	414	15.2	7521	399	5.3	10,245
2001	2860	422	14.7	6610	366	5.53	9,470
2002	2761	408	14.6	6392	356	5.56	9,153
2003	2860	444	15.4	6070	285	4.69	8,930
2004	2972	402	13.5	6209	426	6.86	9,181
2005	3018	406	13.4	6076	424	6.97	9,094
2006	2958	404	13.6	5800	403	6.94	8,758
2007	2920	388	13.3	5507	378	6.86	8,427
2008	2994	425	14.2	5859	404	6.89	8,853
2009	3116	410	13.2	6097	411	6.74	9,213
2010	3184	400	12.6	5858	411	7.01	9,042
Total / (mean)	40343	5765	14.32 (mean)	91994	5402	5.97 (mean)	132,337

Another assessed factor was the number of newborns abandoned by their mothers soon after the birth at J. A. Reiman University Hospital and Polyclinic in Prešov. This is observed solely in children born to Roma mothers (Table 4). The highest number of newborns abandoned by their mothers: 365 newborns (44.8% out of all Roma newborns, and 14.4% out of all newborns) in 2005; the lowest

number: 119 newborns (15.1% out of all Roma newborns, and 4.5% out of all newborns) was observed in 2011. The abandonment of a newborn decreased by more than one half after 2006; this may be directly linked with the passing of Act 471/2005 (valid as of 1.11.2005), which determines that if a parent abandons a newborn while in hospital care, they are not subject to allowances (Table 4) [8].

Table 4. The number of children abandoned by their mother after birth at J.A. Reiman UHP between 2003 and 2011

Tabela 4. Liczba dzieci porzuconych przez matki po urodzeniu w Poliklinice J.A. Reimana w latach 2003–2011

Year	No of newborns	No of abandoned children	% of abandoned children	No of newborn RCH	No of abandoned RCH / %	No of newborn Non-RCH	% of abandoned non-RCH
2003	2658	220	8,3	781	218 / 27,9	1877	2 / 0,1
2004	2552	281	11	791	281 / 35,5	1761	0 / 0
2005	2581	365	14,1	813	365 / 44,8	1768	0 / 0
2006	2522	143	5,7	815	142 / 17,4	1707	1 / 0,05
2007	2425	152	4,9	821	152 / 18,5	1604	0 / 0
2008	2516	178	7	866	177 / 20,4	1650	1 / 0,06
2009	2726	131	4,8	827	131 / 15,8	1899	0 / 0
2010	2548	135	5,3	866	134 / 15,5	1682	1 / 0,06
2011	2648	119	4,5	786	119 / 15,1	1862	0 / 0

Legend: RCH – Roma children, non-RCH – non-Roma children

Discussion

Natality and mortality rates are basic parameters defining a so-called natural population growth per 1000 inhabitants [9]. Based on the Census 2001 Statistics, the Prešov region has the highest number of population (789,968, 100%) and the highest number of the Roma (31653; 4.0%). Current data on the number and demography of the Roma are, as it were, rather imprecise, and resemble more a guess than factual information; this may be attributable to the fact that, for different reasons, a great number of the Roma do not claim Roma nationality [11]. Vaňo (2004, our translation) asserts, „the juxtaposition of the inhabitants of Slovakia claiming a Roma nationality with the number of the Roma filed in some ethnically-based records shows 4-time difference between „ethnic” data and „nationality” data (p. 25). Last precise data on the number of the Roma in Slovakia come from the Census 1970 Statistics and Census 1980 Statistics, which provide ethnically-based information, hence a finer picture of the number and structure of the Roma population in the given period. Currently, the natality rate

of the Roma has slowed down, though it is still relatively high. Consistent with this trend, the Slovak Republic Statistical Office prognosis is such that till 2015 the number of the Roma will exceed the number of 450,000 (8.7% out of all population) [3]. The analysis of the gained data on the natality rate in the Prešov region between 1997 and 2011 indicates decreasing natality, yet only in the group of non-Roma Slovak children (in 1997 – 8306 children born alive, in 2011 – 5954 children born alive). In contrast, the natality rate of the Roma is on the increase – in 2011, 276 children more than in 1997. Hence, it can be stated that the increase of the natality rate in the Roma is lesser than the decrease of the natality rate in the non-Roma (the decrease is by 2352 children in the studied period). Since the percentage of Roma women’s birth giving is on the increase, it is only natural that the percentage of Roma children is increasing, too; our research indicates that Roma children make 1/4 to 1/3 of children born alive. Roma women are typically very sexually active during the whole fertility period [1]. The increase in Roma women’s birth giving rate is

obvious also in our study, and is justified by the following fact – in the Slovak Republic, the ratio of children per a non-Roma woman is 1.2 while that per a Roma woman is 2.7 children [3].

In 1967, in Czechoslovakia, the IM rate of Roma children was slightly more than two times higher (50,3‰) than that of the whole population; yet a significant difference was spotted between Czech and Slovak Republics – the Slovak Republic having more unfavorable results (CR – 34,4‰, SR – 55,9‰). In 1985, the IM rate decreased – 23.9 in the Czech Republic (12.4 in the whole Czech population); 34.8 in the Slovak Republic (16.3 in the whole Slovak population) [6]. It follows that in both parts of former Czechoslovakia, the decrease can be observed; however, in comparison with the whole population the IM rate is still approximately two times higher. The higher IM rate of infants aged up to 1 year in Slovakia may as well be attributable to the higher number of the Roma living in Slovakia, which has always been the case, even at present. The data from the post-Czechoslovakia-

split period are, from the most part, locally-based data on the IM rate of Roma children (A) and/or these data are only deduced (B).

(A) The town of Rimavska Sobota is a district with a very high ratio of the Roma population. The survey shows that between 1980 and 1989 the IM rate decreased four times in Roma, two times in non-Roma children (Table 5). The survey on the IM rate conducted in „Roma settlements” between 1996 and 2004 shows that the IM rate is 2.5 times higher than that of the whole Slovak population [6].

Our research has brought similar results. During the 15-year period, in the Prešov region, the overall IM rate as well as the IM rate in both control groups decreased. The most significant decrease was noticed in Roma children (in 1997, 22 deaths per 1000 children born alive; in 2011 – 12.7 deaths). Even so, in the whole studied period, the IM rate of Roma children is very high – app. three times higher than that of non-Roma children.

Table 5. The IM rate (‰) of the Roma living in the town of Rimavska Sobota between 1985 and 1989 [6]
Tabela 5. Wskaźnik umieralności (‰) dzieci romskich zamieszkałych w mieście Rimavska Sobota w latach 1985–1989 [6]

Population	1980–1984	1985–1989	1990–1994	1995–1989
Roma children	52,5	36,5	28,8	12,2
Non-Roma children	22,9	20,7	11,0	10,5
Difference	29,6	15,8	17,8	1,7

In Hungary, the IM rate of the Roma has significantly decreased – since 1970. While in 1970 the IM rate was 38 in the whole population, 118 in Roma children, in 1990, the IM rate of the whole population was 17 per 1000 children born alive, that of the Roma population was 21 [12]. The IM rate data in Moldavia (2005–2006) indicate almost two times higher IM rate of Roma children (29 deaths in the non-Roma population, 17 in the Roma population) [13].

(B) Consistent with the US Global Health Policy data, in 2011, the overall IM rate was 6.59 deaths, which places the Slovak Republic on the 161st position out of 207 observed countries, which is absolutely not a flattering position [14]. The analysis of the overall IM rate between 1996 and 2000 unveils that in the 1/3 of Slovak regions, the IM rate oscillated between 2 and 6 deaths per 1000 infants born alive (the regions concerned are in the western part of Slovakia), while the overall IM rate

of Eastern Slovakia regions was more than 10 deaths per 1000 children born alive [15]. Geographically speaking, the Roma inhabit mainly the eastern part of Slovakia and the Southern part of Central Slovakia – mainly in these regions, the whole IM rate is the highest; it can thus be assumed that it is due to the deaths of Roma infants.

Considering the European space, currently the Roma populate mostly Eastern Bloc countries – along Slovakia it is Romania, Bulgaria, Hungary, and the Czech Republic. In these countries, the IM rate is as follows: Bulgaria – 16.68, Romania – 11.02, Slovakia – 6.59, Hungary – 5.31, and the Czech Republic – 3.73 [14]. Our inference is that also these rates are predominantly attributable to the number of deaths of Roma children. Table 6 provides the IM rate in the Prešov region in comparison with the Slovak Republic, Czech Republic, European Union and World [16].

Table 6. The IM rate (‰) Prešov region, Slovak Republic, Czech Republic, European Union and World between 2001 and 2010 [16]

Tabela 6. Wskaźnik umieralności niemowląt (‰) w regionie Presov, w Republice Czeskiej, w Unii Europejskiej i na świecie w latach 2001–2010 [16]

	2001–2006	2007	2008	2009	2010
Prešov region	6,5–9,9	8,1	7,7	6,9	6,6
Prešov region (the Roma)	11,5–19,5	15,4	13,4	11,1	12,87
Prešov region (the Non-Roma)	4,4–6,6	4,2	4,8	4,9	3,24
Slovak Republic	6,2–7,9	6,97	6,8	6,84	6,59
Czech Republic	3,3–4,1	3,83	3,6	3,79	3,73
European Union	4,3–5,9	5,84	5,7	5,72	5,61
World	<3–150>	42,6	40,8	44,13	41,61

In 2004, a survey was conducted in 79 Slovak districts. The findings are that among decisive factors causing IM is a low level of intellectual capacity and the unemployment of parents (the income was not confirmed to be a determining agent in IM). The most important factor was being a Roma and living in a Roma settlement [17].

A higher IM rate of the Roma is the outcome of the interaction of several factors. The biggest role is played by higher incidence of pre-term deliveries of infants with LBW and shorter length, i. e. anthropometric parameters identified by several research studies. The pioneers in this field of research were Bernasovský and Bernasovská in 1980's [18]. Newborns' lower birth weight and shorter length were observed also in later studies in Slovakia [19] or in the Czech Republic [20, 21]. In the Prešov region, between 1997 and 2010, the mean number of Roma children born with LBW was 14.32%, which is almost 2.5 times more than non-Roma children born with LBW.

Unfavorable anthropometric parameters of Roma newborns as well as shorter pregnancy length of Roma women are attributable to a young age of Roma women during delivery and inadequate diet during their pregnancy. Roma women begin to be sexually active at a young age, hence become mothers at a young age – the ratio of children born to 12–14 year-old mothers is 0.3 infants born alive per 1000 women, the majority being Roma women [3]. With the increasing age of Roma mothers-to-be, the birth weight also slightly increases [22]. A significant factor observed in Czech Roma women was cigarette abuse ($p^*0.001$); Roma women took pregnancy vitamins less often and

they had lower concentration of folic acid, beta-carotene, retinol, alpha-Tocopherol [20]. In Roma women were observed significantly lower levels of Vitamin C; in contrast, the levels were higher in the navel blood of their children, which seems to be a compensation phenomenon by means of which a fetus deals with the oxidative stress. Low levels of ascorbic acid in pregnant Roma women seem to relate to improper diet and smoking: app. 78% of Roma women smoked, as opposed to 31% of Czech non-Roma women [23]. Anecdotal evidence shows a lower frequency of medical check-ups of Roma women during pregnancy in comparison with Slovak non-Roma women, which is mostly due to the unfavorable relationship of the Roma to health care providers [6].

An everlasting problem is more and more frequent mating among relatives, which is reflected in rather high values of inbreeding coefficient (the level of the mating of blood relatives) [24] and higher incidence of congenital developmental defects (CDDs) in Roma children [1,6]. Infant mortality is caused by CDDs in 35%. CDDs cause an infant's death more often in non-Roma children (40.5%), mainly in full-term newborns (54%). In Roma children, CDDs cause death in 36.7%, more often in full-term newborns (41.7%). Also in the group of infants with LBW, CDDs cause death more often in non-Roma infants (27.7%), as opposed to Roma infants (27.6%). In non-Roma infants with LBW, an infant's death is often caused by RDS, VAS (35.8%), in Roma infants by infection (19.2%). In full-term Roma newborns, an infant's death is caused by infection (23.51%), SIDS (13.4%), and aspiration (14.2%) [25].

Another retaining factor is low intellectual capacity, especially in the segregated Roma, a low standard of personal and community hygiene, a low standard of living conditions and bad economic situation. All these factors cause that Roma women are not able to take sufficient care of a child with serious chronic condition (including CDDs). For quite a long time it has been observed that Roma women find difficult to provide their sick child with basic care like mucus suction, application of drops, oral medication administration, fever treatment, etc. This inability to provide care and to nurse can lead to a child's hospitalization even in cases when they could be taken care of at home, or in cases when their condition is so serious that the treatment is very problematic. A persistent issue of the Prešov region is a high number of infants' death at home; between 2004 and 2010, the total of 92 infants (in the post-natal period) died at home. Out of them, more than 85% were Roma infants whose parents do not seek professionals' help in time; hence infants die from the shortage of medical care [25].

A further assessed area was the percentage of newborns abandoned by their mothers (who ran away from the hospital) during the puerperium; the observed period was that between 2003 and 2011. This pathological phenomenon is typical of Roma mothers (1719 abandoned Roma newborns as opposed to 5 abandoned non-Roma newborns). The causes are diverse – from the fear of losing a husband/partner through the inability to conform to the hospital setting and routine to the inability to adopt the responsibility for the child's well-being; this is so despite the fact that family and children are highly valued by the Roma.

Conclusion

The IM of Roma children is on the decline not only in Slovakia but also in the neighboring countries. However, the rate is still high in comparison with the IM rate of the overall population of that particular country. A significant factor causing this is the Roma's low interest in providing health care to their children, their low responsibility and/or inability to be responsible for the well-being and health education of their children.

Legend:

IM	– infant mortality
LBW	– low birth weight
CDDs	– congenital developmental defects
RCH	– Roma children
Non-RCH	– non-Roma children
SR	– Slovak Republic
EÚ	– European Union

Bibliography

1. E. Ginter et al: Health status of Romanies (Gypsies) in the Slovak Republic and in the neighbouring countries. In: Bratislavské Lekárske Listy. ISSN 1336-0345, 2001, vol. 102, no. 10, p. 479-484.
2. E. Petrejčíková et al.: Y-haplogroup frequencies in the Slovak Romany population. In: Anthropological Science. ISSN 0918-7960, 2009, vol. 117, no. 2, p. 89-94.
3. B. Vaňo: Rómske deti z pohľadu demografie. In: Rómske deti v slovenskom školstve. Bratislava, Slovak Governance Institute: ADIN, 2004. s. 25-32. ISBN 80-89041-81-7. [online]. [citované 12.2.2012]. Dostupné na: <http://www.governance.sk/assets/files/romske-deti_v-sk-skolstve-www.pdf>.
4. A. Břešňová – K. Rimárová: Súvislosti sociálneho prostredia a fajčenia rómskych detí vo vybraných lokalitách Košického kraja. In: Globalizácia a kvalita života a zdravia. Zborník príspevkov V. vedecko-odbornej konferencie s medzinárodnou účasťou. EQUILIBRIA, 2009, s. 17-23, ISBN 978-80-89284-66-5.
5. J. Koval', D. Pochová, A. Čuríková: Zdravie detí ohrozené vplyvom prostredia. In: Globalizácia a kvalita života a zdravia. Zborník príspevkov V. vedecko-odbornej konferencie s medzinárodnou účasťou. EQUILIBRIA, 2009, s. 146-153, ISBN 978-80-89284-66-5.
6. B. Šprocha: Úmrtnosť rómskej populácie na Slovensku. In: Demografie. ISSN 0011-8265, 2008, vol. 50, no. 4, p. 276-287.
7. K. Kalibová: Gypsies in the Czech Republic and the Slovak Republic: Geographic and demographic characteristics. In: GeoJournal. ISSN 0343-2521, 1993, vol. 30, no. 3, p. 255-258.
8. Zákon NR SR č. 471/2005 z 23. septembra 2005 o príspevku pri narodení dieťaťa, o príspevku rodičom, ktorý m sa súčasne narodili tri deti alebo viac detí alebo ktorý m sa v priebehu dvoch rokov opakovanne narodili dvojčatá.
9. P. Šimurka, S. Dlucholucky : Neonatológia. In: M. Šašinka, T. Šagat, L. Kovács a kol. Pediatria. 2. vyd. Bratislava: HERBA, 2007, ISBN 978-80-89171-49-1, s. 167-228.
10. Štatistický úrad SR. Sčítanie ľudu, domov a bytov v roku 2001. [online]. [citované 20.4.2012]. Dostupné na: <<http://portal.statistics.sk/showdoc.do?docid=6366>>.
11. K. Rimárová, A. OstróOSTRÓ, J. Koval': Základné diferencie v zdravotných determinantoch medzi rómskou a nerómskou populáciou – vy sledky EU MEHO projektu – WP 10. In: Životné podmienky a zdravie. Zborník vedeckých prác. ÚVZ SR, 2009, s. 252-257, ISBN 978-80-7159-173-3.
12. L. Puporka, Z. Zádori: The health status of Romas in Hungary. Budapest: The World Bank. 64 p. ISBN 963-03-9297-0. [online]. [citované 25.4.2012]. Dostupné na: <<http://site-resources.worldbank.org/INTROMA/Resources/multi0page.pdf>>.
13. S. Cace et al.: Roma in the republic of Moldova. Chisinau: UNDP, 2007, 120 p. ISBN 978-9975-80-097-6. [online]. [citované 20.3.2012]. Dostupné na: <http://www.undp.md/publications/roma%20_report/Roma%20in%20the%20Republic%20of%20Moldova.pdf>.
14. U. S Global Health Policy: Infant Mortality Rate. [online]. [citované 21.4.2012]. Dostupné na: <<http://www.global-healthfacts.org/data/topic/map.aspx?ind=91>>.
15. E. Ginter et al.: Health status of the Slovakia population at its entry to the European Union. In: Bratislavské Lekárske Listy. ISSN 1336-0345, 2005, vol. 106, no. 2, p. 45-54.
16. The World FactBook. 2011. Infant mortality. [online]. [citované 20.4.2011]. Dostupné na: <<https://www.cia.gov/library/publications/the-world-factbook>>.

17. K. Rosicova et al.: Regional socioeconomic indicators and ethnicity as predictors of regional infant mortality rate in Slovakia. In: International journal of public health. ISSN 1661-8556, 2011, vol. 56, no. 5, p. 523-531.
18. K. Bernasovská et al.: Weights and lengths of East Slovakia Romany newborns being carried for full period of pregnancy. In: Československá Gynekologie, ISSN 0374-6852, 1975, vol. 40, p. 595-598.
19. K. Rimárová: Rómske zdravie – komparatívna štúdia rodičiek a novorodencov vzhľadom na etnikum. In: Životné podmienky a zdravie. Zborník vedeckých prác. ÚVZ SR, 2007, s. 123-126, ISBN 978-80-7159-166-5.
20. J. Rambouskova et al.: Health behaviors, nutritional status, and anthropometric parameters of Roma and non-Roma mothers and their infants in the Czech Republic. In: Journal of nutrition education and behavior. ISSN 1499-4046, 2009, vol. 41, no. 1, p. 58-64.
21. M. Bobak et al.: Unfavourable birth outcomes of the Roma women in the Czech Republic and the potential explanations: a population-based study. In: BMC Public Health. ISSN 1471-2458, 2005, vol. 10, no. 5, p. 106.
22. I. Bernasovsky et al.: Pozorovanie niektorých biologických parametrov u rómskych detí. In: Československá Hygiena. ISSN 0009-0573, 1981, vol. 26, p. 263-268.
23. J. Dejmek et al.: Vitamin C, E and A levels in maternal and fetal blood for Czech and Gypsy ethnic groups in the Czech Republic. In: International journal for vitamin and nutrition research. ISSN 0300-9831, 2002, vol. 72, no. 3, p. 183-190.
24. V. Ferák, D. Siváková, Z. Siegelová: Slovenskí Rómovia – populácia s najvyšším koeficientom inbrídingu v Európe. In: Bratislavské lekárske listy. ISSN 1336-0345, 1987, vol. 87, p. 168-175.
25. J. Koval', D. Pochová: Zlé životné podmienky a zdravie detí. In: Pediatria. Reviewed, Postgraduate Scientific Medical Journal. ISSN 1336- 863X, 2011, roč. 6, supl. 1, s. 24-30.

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