

University of Groningen

## Self-reported health and health risky behaviour of Roma adolescents in Slovakia

Kolarčik, Peter

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2012

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Kolarčik, P. (2012). *Self-reported health and health risky behaviour of Roma adolescents in Slovakia: a comparison with the non-Roma*. [Thesis fully internal (DIV), University of Groningen]. [s.n.].

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

# Discussion

This study was conducted to assess the health outcomes of Roma adolescents living in segregated or separated Roma settlements, i.e. in very poor living conditions. The study focused on the differences in health and health-endangering behaviour among Roma and non-Roma adolescents and on the mediating role of the parental highest educational level and discrimination, social support and hopelessness. It was carried out in a hard to reach population, leading to several methodological challenges. Our study showed quite large differences between Roma and non-Roma adolescents regarding health, well-being and health behaviours, but also in several aspects a better situation for Roma than the findings of previous research had suggested.

In this final chapter, we summarise the answers to each RQ and discuss how our findings compare to the available evidence on Roma and how these findings could be interpreted. Next, we pay extensive attention to the strengths and limitations of our approach towards this hard-to-reach group and on the implications of our findings. At the end, we provide some conclusions on Roma health and the role of SES regarding Roma health.

## 8.1 Main findings

### *Research question 1 (Chapter 3):*

*Do Roma adolescents differ in self-rated health, health complaints, accidents and injuries during the last 12 months, healthcare utilisation during the last 12 months and mental health, from non-Roma adolescents? What is the impact of parental education on this association?*

Roma adolescents reported poorer self-rated health, more accidents and injuries during the past year and more frequent use of healthcare during the past year, though fewer health complaints. Furthermore, they reported more prosocial behaviour on the SDQ than non-Roma. No differences appeared in SDQ total difficulties. Socioeconomic status decreased the association of ethnicity with health outcomes. Adjustment for social desirability had a significant effect on the differences for all outcomes, except for accidents and injuries during the past year.

### *Research question 2 (Chapter 4):*

*Do Roma adolescents differ in health-endangering behaviours (smoking, alcohol consumption, drug use, physical inactivity) from non-Roma adolescents?*

We found differences among Roma and non-Roma adolescents in health-endangering behaviours, and a significant interaction with the gender of the adolescents. Among

girls, Roma adolescents had lower rates of smoking, drunkenness and drug use than non-Roma, but higher rates of physical inactivity. Among boys, drug use was less frequent among Roma adolescents; differences for the other health-endangering behaviours were small and statistically insignificant. The effects of parental education and social desirability were small.

*Research question 3 (Chapter 5):*

*Do Roma adolescents differ in psychosocial determinants of health (social support, hopelessness, life satisfaction) from non-Roma adolescents?*

Roma adolescents reported higher social support from parents, higher life satisfaction and higher hopelessness rates. Parental education explained a part of the ethnic differences, as did social desirability. After adjustment for the aforementioned factors, differences by ethnicity remained statistically significant.

*Research question 4 (Chapter 6):*

*Do Roma adolescents differ in self-reported delinquent and aggressive behaviours from non-Roma adolescents?*

Roma adolescents reported less delinquency and physical aggression and more hostility than non-Roma. Parental education did not affect the associations in an important way. Adjustment for social desirability diminished the ethnic differences in delinquency, increased the differences in hostility and led to the disappearance of differences in physical aggression. Our findings indicate that Roma adolescents are not that much different from non-Roma in terms of antisocial behaviour.

*Research question 5 (Chapter 7):*

*What is the role of discrimination, hopelessness and social support in contribution to differences in self-rated health between Roma and non-Roma?*

Roma adolescents reported more perceived discrimination, poorer SRH, and more mother and father social support, hopelessness and social desirability. Roma ethnicity, discrimination, hopelessness and mother social support were significant predictors of poor SRH as crude and adjusted effects. Discrimination and hopelessness decreased the ethnicity effect, and social supports increased it after inclusion into the model, demonstrating their confounding role in the models.

## **8.2 Discussion of the main findings**

The main findings will be discussed within the framework of the general aims formulated in Chapter 1. Firstly, we will focus on the most important findings on Roma health and health-endangering behaviour and connect them with existing knowledge. Secondly, we will point out the role of parental highest educational attainment as an indicator of the SES of adolescents and its impact on their health. Thirdly, we will discuss the role of discrimination, hopelessness and social support as elements of the mediating path from ethnicity to adolescents' health. Next, we will evaluate social desirability in our study and its effect on health. Finally, we will deal with the strengths and limitations of the study and present implications for practice and for further research.

### **8.2.1 Roma adolescents' health and health-endangering behaviours**

The present thesis focused on health (in the broader sense of meaning) of Roma adolescents living in segregated or separated Roma settlements and implicitly coming from poor living conditions. Most of our findings on these Roma adolescents are genuinely new, evidence on this group being very scarce overall, and the scarcely available evidence generally being of poor quality. The primary methodological problems of previous studies concern their small sample sizes, unspecified sampling strategies, use of non-standardised measuring instruments, the lack of a good comparison group, etc. In contrast, our study was based on a large sample, sampled a clearly defined population, used standardised instruments, employed a comparable comparison group. Even then, comments can still be made and the methodological quality could likely be further improved; those aspects will be discussed in the section on strengths and limitations. In this paragraph, we will contrast our findings to what was already known and will provide potential explanations for the contrasting and new findings of our study.

We found that the self-reported health status of Roma adolescents is worse than that of non-Roma adolescents. This finding echoed the worse health of Roma adults reported in previous studies (Filadelfiová et al., 2007; Hajioff & McKee, 2000; Koupilova et al., 2001; Kósa et al., 2007; Parry et al., 2007; Ringold et al., 2005; Van Cleemput et al., 2007; Zeman et al., 2003). Concerning mental health, Roma adolescents did not report difficulties more frequently than their non-Roma counterparts did. This might reflect an absence of real differences in mental health or it might simply reflect a phenomenon reported by Wieggersma et al. (2011), who found that asylum-seeking youth assessed their own problems on the SDQ in a different way than their parents and teachers did. The self-report mental health showed no differences with indigenous Dutch youth, whereas the other informants indeed reported more problems.

The worse self-reported health status of Roma adolescents may reflect the worse living conditions and poor health literacy of the Roma respondents who live in segregated or separated conditions. In a WHO report on Roma health, Schaaf (2010) stated that surveys on health literacy show that the excluded Roma have less knowledge about health. Due to the low standards of living and generally low health literacy within poor Roma communities, some Roma do not seek adequate preventive care. As a result of limited access to health care and poor awareness of health, Roma suffer much more from preventable illnesses, and because of past negative experiences, Roma may also choose not to access health services anyway. A high percentage of Roma report having experienced discrimination in health facilities, and research conducted among medical providers confirms that many do hold prejudicial beliefs about Roma (Schaaf, 2010). Perceived barriers in access to health care providers have been found to explain the worse self-rated health of Roma (Jarcuska et al., submitted). Alternatively, the worse self-reported health status of Roma adolescents may be a spurious finding, a point that we will discuss in the subsection on strengths and limitations.

Self-reported health-endangering behaviour such as substance use and physical inactivity is less prevalent among Roma respondents. Roma girls in particular reported much less substance use than non-Roma girls did. This finding contradicts those of previous studies that reported higher substance use among Roma (Ringold et al., 2005). Regarding ethnic differences in substance use in general, it is important to

note that ethnic disparities in substance use do not show a consistent pattern. Ethnic minorities differed regarding their (dis)advantage in health behaviours compared with the majority population. The pattern was even more inconsistent regarding specific substances such as tobacco smoking, alcohol consumption or illicit drug use (Rodham et al., 2005). One explanation may be that the prevalence rates for substance use among ethnically distinct groups depend on social norms, values and beliefs held by group members and by the degree of assimilation with the majority's values (Karlsen et al., 1998; Ringold et al., 2005). The Roma population is an ethnic minority with its own social norms and values that remains behind the trends in substance use of its members. Several studies show that ethnic minorities tend to use substances more than majority populations; others show the opposite (Baker et al., 2006). Differences in substance use are also not stable within the non-Roma population, taking into account the level of urbanization or SES (Pitel et al., 2010). Karlsen et al. (1998) suggested that social forces such as high peer pressure and low familial influence might be more salient for substance use initiation and maintenance in non-Roma adolescents. It might explain the higher substance use prevalence among non-Roma in our study. Several studies reported a higher prevalence of substance use among majority adolescents, similarly as we found in our study that non-Roma adolescents reported higher substance use than Roma adolescents (Best et al., 2001; De Moor et al., 1989; Dotinga, 2005; Ellickson et al., 1996; Karlsen et al., 1998; Ramisetty-Mikler et al., 2004; Rodham et al., 2005; Rogers et al., 1997).

Previous studies reporting high substance use among the Roma population mostly concerned the adult population (Csépe et al., 2007; Gourgoulanis et al., 2000; Petek et al., 2006; Škarić-Jurić et al., 2007). These studies are not directly comparable with our findings, but they contributed to viewing of the Roma population as susceptible to substance use. This might be true for the adult population, but our results show that it does not hold true for young Roma. \*\*\*\* Studies on substance use among Roma pupils or children are very scarce and based on methodologically weak surveys on very small samples with limited generalisability. Additional evidence relates to personal experience or the opinions of professionals, and they should be interpreted with caution (Puporka & Zádori, 1999; Ringold et al., 2005).

The unhealthy diet and low physical activity of Roma are also frequently mentioned in the literature as a potential cause of the higher prevalence of obesity among this group, resulting in a higher prevalence of cardiovascular complications in adulthood among them (Krajcovicova-Kudlackova et al., 2004; Zsidegh et al., 2007). Our finding of low physical activity among Roma girls confirms these previous findings. The lifestyle of Roma adolescents reflects the health beliefs of the ethnic group, which might affect their attitude toward physical activities, especially among girls. Hosper et al. (2007) showed that culturally specific attitudes influence participation in physical activities among Turkish and Moroccan women, for instance. Convergence with the majority culture can improve rates of physical activity among ethnic minorities (Hosper et al., 2007). Roma are a relatively highly excluded ethnic minority from Central European societies, and better inclusion might improve their participation in physical activities. What is questionable is whether such inclusion would not increase the prevalence of other health-endangering behaviours already more prevalent among non-Roma adolescents. That pattern of approximation of health-endangering behaviours was observed by Reijneveld et al. (2012) on a sample of Dutch adult residents.

Regarding psychosocial health indicators such as social support, hopelessness

and life satisfaction, Roma adolescents reported more hopelessness but also more social support from their parents and a higher satisfaction with life. Our findings confirm those of Verkuyten (1986), Lackland (1998) and Huebner et al. (2004), all of whom showed differences in life satisfaction between ethnic groups of similar size, whereas others (Mata, 2002; Proctor et al., 2009) found only weak relationships. Moreover, we found significant ethnic differences among adolescents regarding types of social support and hopelessness. We found different levels of social support among Roma and non-Roma adolescents, confirming the findings of Klineberg et al. (2006) and Plant and Sachs-Ericsson (2004), who reported differences between several ethnic groups regarding social support. Our results suggest that the immediate family provides the most support for Roma adolescents, which is in line with the evidence of Goward et al. (2006). Among Roma adolescents, parental social support was higher, even though in most studies support from high-educated parents tends to be higher (Gecková et al., 2003; Salonna et al., 2011; Turner & Marino, 1994), and the Roma parents in the study were very low educated. The high levels of social support and life satisfaction among Roma adolescents are also a surprise, because these levels have been shown to be rather low among Roma adults (Goward et al., 2006; Peters et al., 2009; Van Cleemput et al., 2007).

Interestingly, we found a combination of higher hopelessness and higher life satisfaction among Roma adolescents, which contrasts with the finding of Proctor et al. (2009) that life satisfaction correlates positively with hope. It also contradicts the findings of Chioqueta and Stiles (2007) and Yang and Clum (1994), in which hopelessness tends to correlate negatively with psychological buffers. This may be due to Roma adolescents having a different perception of resources in their living circumstances that affect particular aspects of adolescents' well-being separately, e.g. disadvantage may not be perceived by Roma themselves to be so bad as to impact their well-being negatively. Also, Roma adolescents may be aware of their limited possibilities to change their situation, which is reflected in their higher hopelessness. Another possible explanation of higher hopelessness among Roma comes from Bolland (2003), who refers to hopelessness as a belief that is a defining characteristic of the personality of people in a disadvantaged position. Roma from settlements might be seen as representatives of people in such a situation. The finding that Roma are more hopeless but at same time they are also more satisfied with life, seems to deviate from the general picture of the causal pathway of SE differences in life satisfaction, social support and hopelessness. One would expect low life satisfaction in a situation of higher hopelessness or vice versa.

Antisocial behaviour may be considered as another type of health-endangering behaviour which may lead to injury or other trauma of the victim and the perpetrator as well. It also be seen as an outward result of negative emotions, frustration or even hopelessness. Contrary to stereotypes about Roma as criminals, we found that non-Roma adolescents reported more delinquent and physical aggressive behaviour than Roma, but that Roma reported more hostility. Less self-reported delinquency and physical aggression among Roma compared with non-Roma contradict previous findings on ethnic differences in delinquent behaviour (Barnes et al., 2002; Hawkins et al., 2000; Jordan & Freiburger, 2010) and the general opinion about Roma as delinquents or criminals, as is frequently presented in the media (Kušnierik, 2009; Project on Ethnic Relations, 2000; Terenzani-Stanková, 2009; Šúryová, 2001). The objection might be raised that respondents asked about such undesirable behaviours would probably deny them (Aebi, 2009). Our study provides data taking into account

respondent's tendency to respond in a socially acceptable way. After adjustment for social desirability, Roma do not differ so much from non-Roma in delinquent behaviour and do not differ in physical aggression, although they are more likely to report hostility. This suggests that a higher tendency for social desirability covered some reports of such behaviour and led to lower rates of reported delinquent and aggressive behaviours, which in reality might be on a similar level as among non-Roma adolescents, while on the other hand it suppressed the significant disparity in hostility. Randal et al. (1993) showed such an influence of social desirability on outcomes between culturally diverse samples.

Our findings support the hypothesis that ethnic groups differ regarding antisocial behaviours (Aebi, 2009; Barnes et al., 2002; Eichelsheim et al., 2010; Stevanovic, 2005) but in a direction opposite to that which is usually reported. Other studies reported higher delinquency among ethnic minorities compared with the majority population in the USA (Barnes et al., 2002; Hawkins et al., 2000), whereas we found delinquency to be higher among non-Roma, i.e. among the majority population. Specifically regarding Roma, they are usually assumed to be more delinquent than non-Roma as well (Brearley, 2001; Šúryová, 2001), but again our study shows the opposite. Roma being more prone to answer in a socially desirable way in surveys might explain this discrepancy. In general, the validity of self-reports may differ between the minority and the majority group (Hawkins et al., 2000). On the other hand, data collected in routine databases such as police crime statistics may be biased towards over-recording offences committed by ethnic minorities such as Roma (MacDonald, 2001). The results of our adjustments for sensitivity towards social desirability show that the first provides at least some explanation, but the latter is also likely, Roma being generally highly discriminated against (European Union Agency for Fundamental Rights, 2009). In addition, the cultural conceptualisation of antisocial behaviour may differ between Roma and non-Roma and may thus affect the level of reported antisocial behaviours.

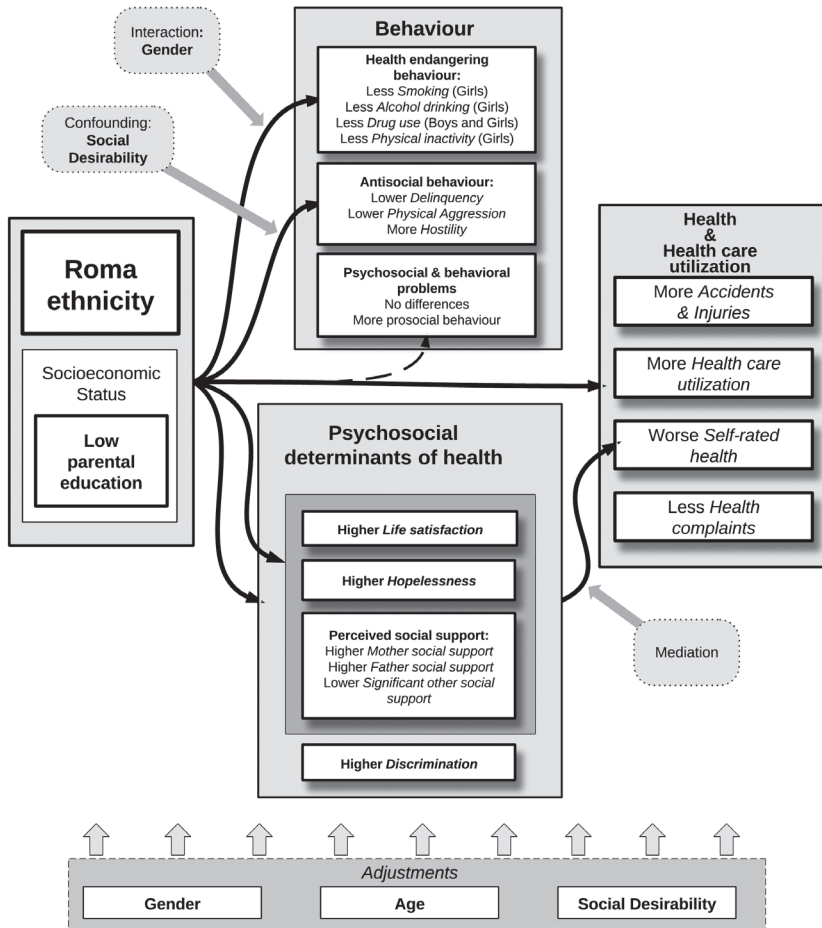
The higher hostility among Roma may reflect the negative personal experience of Roma people when in contact with non-Roma. The European Union Agency for Fundamental Rights (2009) reported Roma as the most discriminated against group surveyed by EU-MIDIS. The Hostility subscale consists of resentment and suspicion items, which might be higher among Roma, and thus they score higher on the hostility subscale (Buss & Perry, 1992).

All relations described in the previous text are depicted in the model in Figure 8.1. We would like to emphasise the contrast with what was already known. Self-rated health among Roma was found to be much poorer indeed compared with non-Roma, but health-endangering behaviours between both groups are not that different. Life satisfaction among Roma is also higher than might be expected.

### **8.2.2 The role of SES in Roma adolescents' health**

Differences in SES between Roma and non-Roma adolescents in our sample were huge, which reflects the generally poor educational level of Roma and its consequences: a high unemployment rate, poor living conditions and worse health status (European Union Agency for Fundamental Rights, 2012). These huge differences in SES between the Roma minority and the majority population lead to the question of whether Roma – non-Roma differences are simply a reflection of these SE differences. Several studies have confirmed that SES only partially explains the differences (Kolarcik et al., 2009; Skodova et al., 2010; Voko et al., 2009).

**Figure 8.1:** Model of the effects of Roma ethnicity as found within the thesis with an indication of the direction in which health or health behaviour of Roma differ from those of non-Roma.



The accumulation of disadvantages among Roma seems to start even before birth, as there is some evidence of worse birth outcomes among Roma in comparison with non-Roma (Bobak et al., 2005; Rimarova, 2010; Rosicova et al., 2011), at least when both groups are measured using non-Roma standards. Early child development is affected by poor living conditions (Monasta et al. 2008, Michos et al. 2008, Dostal et al. 2010) and a lower capacity of the family to stimulate health development efficiently. Therefore, it might be expected that disadvantage will influence subsequent life chances and health through improper skills development, education, and occupational opportunities (The Marmot Review, 2010). Pre-primary education might be a tool for tackling the cumulation of disadvantage (The Marmot Review, 2010), but participation of Roma children in pre-school and kindergarten is



lower, and particularly in Slovakia the gap between Roma and non-Roma children is huge (European Union Agency for Fundamental Rights, 2012; Salner, 2004). Thus, upon entering school, Roma children are already disadvantaged in terms of economic, but also sociocultural capital. Poor educational achievement, school attendance problems, an undue share in special needs education and low presence in secondary schools and minimal presence in higher education institutions are frequently listed as the challenges of their participation in the educational system (Salner, 2004). Only a small proportion of Roma youth in Slovakia (39%) continues in education after completion of elementary school (European Union Agency for Fundamental Rights, 2010). In a situation of generational poverty, the Roma population is trapped in a vicious circle of social reproduction of disadvantage and as its product an enormous gap in socioeconomic stratification between the population living in Roma settlements and the majority population.

Ethnic categories might overlap with socioeconomic categories, and part of the ethnic variability could therefore often be explained by socioeconomic status. According to Buka (2002), SES is not a merely a confounder of racial/ethnic disparities in health but a part of the causal pathway by which race affects health. SES, measured in our study by the highest level of education achieved by parents, notably accounted for some of the ethnic differences in health, though it did not on its own strongly relate to health. For adolescents education captures the transition from the received parents' socioeconomic position to their own socioeconomic position in adulthood, and it is also a strong determinant of future employment and income. Therefore, it captures the long-term influences of both early life circumstances on adult health as well as the influence of adult resources (for example, through employment status) on health (Commission on Social Determinants of Health, 2007). We can say that parental highest education generally played a mediating role in our study. However, because a large proportion of Roma adolescents' parents reported low educational attainment, consequently the low level of education was closely connected with the ethnicity of the respondents. This is depicted in our model, where ethnicity and parental highest education are directly linked (Figure 8.1).

The most obvious effect of parental highest education concerned self-rated health, health care use, injuries in the last 12 months and almost all psychosocial health indicators treated as outcomes. Whereas some previous studies on lifestyles in adults have shown that SES explains a part of the differences between ethnic minorities and the majority group, SES hardly contributed to the low substance use among Roma adolescents in our sample (Baker et al., 2006; Najman et al., 2006). Less endangering health behaviours among Roma adolescents may arise from Roma health beliefs about, for instance, the purity of the body. However, the causal pathway should be investigated further, because Roma health beliefs might also lead to fatalism, which could also negatively affect health behaviours (Lehti & Mattson, 2001; Petek et al., 2006; Van Cleemput et al., 2007; Zeman et al., 2003).

We found that the role of parental education in the ethnicity – psychosocial health association is consistent with the available evidence (Mata, 2002; Turner & Marino, 1994; Whitfield et al., 2003). Ethnicity was the main predictor of the outcomes, and parental education was, after ethnicity, only one of the main predictors in our study. Socioeconomic status is often seen as an important component of ethnic differences (Reijneveld, 1998), partially because research on ethnic differences tends to focus on deprived ethnic groups (Reijneveld, 2010). Parental education, as a proxy measure of socioeconomic status, mediated the ethnicity effect on outcome variables.

A similar mediation of socioeconomic status and Roma health was found by Vokó et al. (2009) and by Salonna et al. (2011) regarding health-endangering behaviour.

Other important factors that affect the health status of Roma adolescents, besides SES, might be discrimination, poor access to healthcare, health behaviour differences, cultural-linked attitudes to health (fatalism), fear of doctors, resistance to assimilation leading to non-use of various services and poor housing. This corresponds with other studies showing that the poorer health status of immigrant groups could be only partially explained by SES (Nielsen & Krasnik, 2010; Reijneveld, 1998).

### **8.2.3 The role of discrimination, hopelessness and social support in adolescents' health**

The worse self-rated health of Roma adolescents compared with their non-Roma counterparts might be partially attributed to their higher perceived discrimination and hopelessness, but these two factors do not explain all of the variation in health. When evaluating the effect of several factors relevant for self-rated health – such as discrimination, hopelessness and social support – parental education or other indicators of SES have to be taken into account, because, as our study has shown, every one of them plays an important role in the ethnicity – health relation. In addition, there might be other factors related to Roma ethnicity or their culture and habits that might affect their health but were not measured in our study and might confound these associations, as parental education did.

We found that discrimination, hopelessness and mother social support were mediators of the ethnicity effect on health. Being discriminated against leads to poorer health, and Roma are more likely to be subjected to discrimination. This might explain their poorer health in part. Discrimination and hopelessness add to the negative effect of Roma ethnicity on self-rated health. Mother social support decreased the negative impact of the ethnicity effect on self-rated health and might thus act as a potential protective factor. The mediating role of social support was reported in a study by Salonna et al. (2011). Our results confirm the evidence that perceived discrimination is related to poorer self-rated health (D'Anna et al., 2010; Schulz et al., 2006; Todorova et al., 2010; Williams et al., 2008). Our findings supported the notion that the association of ethnicity and health is not straightforward but is mediated by discrimination. The role of mother social support suggests that even tough living conditions, as represented by being a Roma and living in a Roma settlement, being discriminated against and feeling hopeless, might be compensated by a warm relationship with one's mother (Cederblad et al., 1994). The buffer effect of social support against the negative effect of perceived discrimination was reported by Ajrouch et al. (2010). What's interesting is that social support from mother seems to be a more important factor in promoting better health than support from the father.

Hopelessness appeared to be a very influential factor related to adolescents' health. The higher the hopelessness, the worse the health of the adolescent is. The connection of hopelessness with worse well-being and depression was known (Banks et al., 2008; Farquharson, 2002), and our study expands this detrimental effect of hopelessness on self-rated health among adolescents, especially Roma adolescents, in whom the level of hopelessness is much higher compared with their non-Roma counterparts. Our data also showed that the impact of hopelessness on self-rated health is bigger than the impact of perceived discrimination.

### 8.2.4 The role of social desirability in health assessment

Research on sensitive topics such as substance use might be biased by respondents' tendency to answer questions in a socially desirable way, thus confounding the results. We controlled our results regarding such a tendency. We found that the effect of social desirability is negligible among health outcomes and health-endangering behaviour outcomes. However, the role of social desirability should not be neglected when studying psychosocial health outcomes and antisocial behaviour. We found social desirability to be a confounder regarding ethnic differences in psychosocial health outcomes, confirming the findings of Van de Mortel (2008). Apparently, the assessment of sensitivity for social desirability deserves more attention in research on ethnicity and health, probably with highly discriminated groups such as Roma being particularly sensitive to it (Bardwell & Dimsdale, 2001).

Roma being more prone to answer in a socially desirable way in surveys might explain this discrepancy. In general, the validity of self-reports may differ between a minority and a majority group (Hawkins et al., 2000). On the other hand, data collected in routine databases such as police crime statistics may be biased towards an over-recording of offences committed by Roma (MacDonald, 2001). The results of our adjustments for sensitivity towards social desirability show that the first provides at least some explanation, but the latter is also likely, Roma being generally highly discriminated against (European Union Agency for Fundamental Rights, 2009). In addition, the cultural conceptualisation of antisocial behaviour may differ between Roma and non-Roma and may thus affect the level of reported antisocial behaviours.

### 8.3 Strengths and limitations of the study

We were successful in recruiting a considerable number of Roma adolescents and in achieving high response rates in both the Roma and non-Roma samples, even though the Roma population is considered to be a hard-to-reach population. A second strength of our study is that we employed only standardised scales and measures that have been used frequently in a wide range of research settings.

Besides these strengths, our study also has some limitations. A major limitation of our study may be the different method of data collection among the Roma and non-Roma samples (interviews vs. questionnaires). This difference in methods of data collection was in particular to feasibility regarding both the acceptability for the target group and the available resources.

Naturally, the first choice in a similar study would be to use the same methods of data collection in both samples. We considered this possibility in this study as well. A first option was to use questionnaires in both samples. This was not done because of possible problems with literacy and understanding of the written items among Roma. A second option was to use interviews in both samples. This option would solve the literacy and understanding issue among Roma, but it would complicate the data collection among non-Roma adolescents. While in Roma sample interviewers would lead respondents through the questions, explain them the content of the items and facilitate the respondent to answer honestly, in the non-Roma sample this approach would be perceived as awkward, maybe intrusive or inappropriate for the respondents. In addition, such a solution would increase the costs and logistical challenges.

Variation in the methods of data collection between groups to be compared

may in general threaten the validity of comparisons. Despite this, in research comparing hard-to-reach groups with other groups, the use of different methodological approaches is sometimes unavoidable; see e.g. a recent study of Crone et al. (2010) among ethnic minorities in The Netherlands .

Next, it should be realised that the use of different methods of data collection in groups to be compared may affect validity. According to Tourangeau & Yan (2007) or Brener et al. (2003) each method of data collection has some implications for the validity of the data collected. The use of an interview might decrease the level of disclosure on sensitive topics (Bowling, 2005; Tourangeau & Yan, 2007). A self-administered questionnaire may increase the level of disclosure and willingness to answer sensitive questions honestly (Tourangeau & Yan, 2007). Moreover, using questionnaires may potentially jeopardise the response rate, as it can cause an increase in the number of missing or misunderstood items and thus may impose a greater bias on the results than the compromised design, which combines slightly different but compatible ways of data collection (Bowling, 2005; Reijneveld et al., 2005). Brittingham et al. (1998) assessed the size of the difference in reported smoking behaviour between reports in self-reported items and interviewer-administered items. They found a slightly higher reported smoking behaviour in self-reported items than in interviewer-administered ones with an effect of marginal statistical significance in an adolescent subsample. It is thus likely that differences in responses caused by different data collections occurred, but Brittingham et al. (1998) conclude that differences tend to be small.

Moreover, we adjusted our analyses for social desirability to further control the potential effects of differences in the method of data collection. The literature shows that the outcomes of different methods of data collection are mostly differ due to social desirability, i.e. the degree to which a method leads the respondents to providing socially acceptable answers (Bowling, 2005; Holtgraves, 2004; Tourangeau & Yan, 2007). We employed a measure of social desirability of the respondents to adjust for this (Hays et al., 1989). We cannot exclude some remaining information bias, but we think that this will be small.

As a second limitation, we consider the fact that our study covered only a sample of adolescents who were present at the school at the time of the survey. It is possible that pupils present at school will differ from those not present regarding some characteristics. Aebi (2009) noted that students most engaged in deviant behaviours might not attend school and this might lead to an underestimation of differences. Moreover, self-reporting tends to underestimate mainly the most serious types of delinquency (Aebi, 2009).

Third, we used a single item measure of perceived discrimination, resulting in findings reflecting a general perception of discrimination, which might differ from measurement mapping experiences with specific discriminating behaviours (Madarasova Geckova et al., 2010); nevertheless, some studies have confirmed that the subjective experience of discrimination may affect health, regardless of the objectivity of such reporting (Paradies, 2006a; Paradies, 2006b). Discrimination among Roma is a topic very often discussed without objective and valid data. Our study brings the first insights and assessment of perceived discrimination among Roma adolescents compared with non-Roma adolescents.

Finally, it should be realised that our sample was representative for Roma adolescents who live in settlements and attend regular schools. This comprises the most substantial part of the Roma living in eastern Slovakia (and as such, Central Europe). Generalisation of our findings to other groups of Roma adolescents, such

as integrated Roma living in cities, should be done with caution, however, because Roma communities vary in terms of regional settlement patterns, integration levels, economic and social development (Ringold et al., 2005) and health (Filadelfiová et al., 2007).

## 8.4 Implications

In this section, we suggest implications focused on the improvement of poor health and sustaining of good health of Roma adolescents. Furthermore, we stress the importance of balancing out the negative public opinion about Roma, which may promote their health. In addition, some recommendations for future research are presented.

### 8.4.1 Implications for practice

Based on our findings, there is a need to focus on health interventions for young Roma, because their poor health is likely to lead to poor health in adulthood as well. Such interventions should be concentrated more on the groups with an increased health risk originating from low SES. A challenge regarding health promotion among Roma is to maintain the relatively low substance use among them and to promote their physical activity. Moreover, prevention of substance use should be targeted more on Roma boys, who seem to behave more riskily than Roma girls when compared with non-Roma adolescents. Our study also showed a need to address the hopelessness of Roma adolescents, which also seems to be an important risk factor for depression later in life (Panzarella et al., 2006). Finally, sustaining the levels of social support and life satisfaction among Roma adolescents deserves attention as well.

Our findings refute the public opinion that Roma are highly delinquent and aggressive (Kušnierik, 2009; Project on Ethnic Relations, 2000; Terenzani-Stanková, 2009). As such, they may contribute to a more valid view of this ethnic group among the general public and among policy makers. We also showed that Roma and non-Roma adolescents are very similar regarding the level of reported antisocial behaviours. Thus, interventions aimed at prevention of antisocial behaviour should focus on the entire population, but even then, a different approach may be needed for ethnic minorities such as Roma.

Prejudices and discrimination by the non-Roma majority are still present in our society. Discrimination is an important health-endangering factor for Roma. According to Schaaf (2010), Roma reported being discriminated against in health care facilities by health care professionals. It is important to implement non-discrimination practices in health care providers. Simultaneously, Roma people should be led to use preventive care more often and eliminate the potential fear from medical doctors shared in their subculture. It will take a long time to diminish the societal prejudices against Roma; it will require common action by all important players who create and sustain such stereotypes, especially politicians, media, the education system and education in families. Unfortunately, prejudices against Roma are deeply rooted in Slovak and other Central European societies, and improvement in this area may be expected during the next generation.

According to Dahlgren and Whitehead (1992) the concept of the “health-promoting school” is especially relevant to children and young people from

disadvantaged backgrounds. Special efforts should be made to establish health-promoting schools in the unhealthiest areas. This could include a new type of allocation of education sector funds according to need, the provision of preventive health services in schools and a strong element of education for health in the curriculum, so that it includes not only personal lifestyle factors but also environmental and social determinants of health (Dahlgren & Whitehead, 1992).

#### **8.4.2 Implications for future research**

Our study is one of the first that assesses health and health-endangering behaviour among Roma adolescents compared with their non-Roma counterparts. Its findings challenge those of previous studies, implying that they should be confirmed by similarly well-designed replication studies (Csépe et al., 2007; Kósa et al., 2007; Puporka & Zádori, 1999; Ringold et al., 2005; Škarić-Jurić et al., 2007). Future research should focus on a deeper understanding of the differences in health and health-endangering behaviours between Roma and non-Roma adolescents regarding the cultural and wider socioeconomic characteristics that may contribute to them. In such research, the subgroups of Roma adolescents that were missed by our study should also be included. Due to methodological difficulties, Roma are often neglected in general studies, and they should be included in a wider study on adolescents as a subgroup.

Our findings about high hopelessness on one hand and high family social support and life satisfaction among Roma on the other should also be confirmed in future studies. Such studies should also consider the potential mechanisms that lead to these associations among Roma adolescents that seem to differ from those among other groups. They also significantly contribute to evidence regarding both ethnic differences in psychosocial health and on the underlying pathways.

Our study was conducted using an interview for Roma adolescents, in order to prevent problems with literacy that might occur among them, and questionnaires for non-Roma. This different approach might bias our results, although we tried to compensate for it with an adjustment for social desirability. Further research should be designed in a way that leads to optimal validity, in particular regarding how information is obtained. Such an optimal design should reflect the research questions and the specific characteristics of the selected Roma sample. It is likely that such research on Roma will again require compromised solutions. Nevertheless, future research should also focus on obtaining subjective data from adolescents and from other informants, such as parents, teachers, teachers' assistants or terrain workers. Along with such data, obtaining medical health indicators would also be welcomed. Future research on Roma health might be framed in a longitudinal design following Roma and non-Roma from adolescence to early adulthood and including some kind of qualitative assessments. A qualitative methodology could be used for specific topics such as perceived discrimination, health problems and problems with accessing health care.

To decrease barriers of reporting on sensitive issues and to minimise bias we advise several measures that might be used in future studies:

1. Excluding teachers or other personnel from the room used in data collection, and to collect data by trained interviewers who have been instructed to pay attention to issues of privacy etc.,

2. Making the effort to share information with interviewers and other research team members about the project, the importance of the collected information, as well as to explain the purposes of data usage and the importance of the validity of the collected data,
3. Piloting the questionnaire followed with asking the respondents about any difficulties with questions or responses with the aim of avoiding problems in response, especially on sensitive issues,
4. Including social desirability to assess the tendency of respondents to report in a socially desirable way and adjusting statistic analysis for this.

This survey was conducted mostly in a rural setting. It might be worth considering whether a survey in an urban setting would yield different results. For example, rates of delinquency were found to be generally higher in urban settings (Salagaev, 2004). The background and research setting of a future study should be reconsidered before generalisation of the results and conclusions to other settings. Similarly, our findings should be replicated elsewhere, also outside of the classical Roma settlements, as Roma communities have been shown to vary in terms of regional settlement patterns, integration levels, economic and social development (Ringold et al., 2005) and health (Filadelfiová et al., 2007; Vaňo & Mészáros, 2004).

## 8.5 Conclusion

Roma people have for a long time been neglected in serious research, mostly because of methodological difficulties in conducting research among this specific ethnic minority. Our study was designed to obtain comparable data on health from Roma and non-Roma adolescents, thus showing that valid research among Roma is possible. We found poor health status among Roma adolescents. We also found that Roma adolescents perceive themselves to be discriminated against and that perceived discrimination affects their health. Our society should reconsider its prejudices against and stereotypes about the Roma minority and should begin to eliminate the barriers that interfere with their health. Our data captured the health situation of Roma adolescents, which is a baseline for their health later in adulthood. We can say that if no interventions are carried out, the health situation of Roma people will deteriorate even further.

We found that Roma adolescents are not fully in an adverse position regarding health and health-related behaviour. Compared with their non-Roma counterparts they reported lower rates of substance use, especially among girls. In addition, antisocial behaviour was also less prevalent among Roma adolescents. Such positive news has not been reported in other studies. We propose to base future interventions on these findings and support a healthier lifestyle for a new generation of Roma adolescents and subsequently adults as well.

### ***What we learned about Roma adolescents***

Roma adolescents differ from their majority peers regarding health, but not so much regarding health-related behaviour. Moreover, there are social determinants in which they are doing better. Cohabitation of Roma population with the majority was not easy in the past. Turbulent societal changes in the last decades have increased the

problems of this minority, which in combination with a set of ineffective measures applied by society has challenged tolerance of both groups, stimulated social tension and supported prejudice about this minority. We learned that in contrast to the fact that considerable numbers of Roma adolescents live in very poor living conditions, they still attend school and are beloved, happy, do not smoke or drink alcohol and are not violent. Undesirable changes in their lives might be expected (Hajioff & McKee, 2000; Hujová et al., 2011; Zeman et al., 2003), but might be at least partially avoidable when effective strategies or interventions are applied.

A very recent study by Babinska et al. (submitted) covering the young and middle-aged group showed a higher accumulation of clinical CVD risk factors in Roma compared with the majority population. However, these differences between Roma and the majority population were not so dramatic in comparison with differences found in older age groups in other studies.

We learned that Roma adolescents felt a sense of hopelessness more frequently, but that they feel beloved and happy in comparison with their peers -- and we should try to maintain such sources of protection. Furthermore, we learned that already in adolescence hopelessness as well as discrimination contributes to the explanation of gaps in health between Roma and non-Roma. Additionally, maternal social support is a protective factor with regard to retaining good health. Finally, we learned that higher hostility is a natural consequence of perceived discrimination and hopelessness.



