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Kolarčik, Peter

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# Does discrimination affect the self-rated health of Roma adolescents in Slovakia?

P. Kolarcik, A. Madarasova Geckova, S.A. Reijneveld, J.P. van Dijk

*Submitted*

## Abstract

**Objectives:** According to the EU-MIDIS report on discrimination, Roma are the most discriminated against group in Europe. Research suggests that experiencing discrimination may itself be detrimental to health. The aim of this paper is to investigate whether discrimination, hopelessness and social support contribute to differences in self-rated health (SRH) between Roma and non-Roma.

**Design:** We conducted a cross-sectional study among Roma from separated and segregated settlements in the eastern part of Slovakia (N=330; mean age=14.50; interview) and non-Roma adolescents (N=722; mean age=14.86; questionnaire); only non-missing data were used for analyses (n=759). The effect of ethnicity, perceived discrimination, hopelessness and mother and father social support on SRH was analysed as crude and adjusted for age, gender, parental education and social desirability.

**Results:** 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. Adjustment for discrimination and hopelessness decreased the size of the ethnic differences, while adjustment for social support increased them.

**Conclusion:** Our study is one of the first on discrimination and health among Roma adolescents. Our findings may be interpreted as that perceived discrimination and hopelessness mediate a part of the association between Roma ethnicity and poor SRH. Mother social support seems to be somewhat protective regarding poor SRH among Roma.

**Keywords:** *Roma, adolescents, discrimination, self-rated health, hopelessness, social support, social desirability, mediation, confounding*

## Introduction

According to the EU-MIDIS report on discrimination, Roma are the most discriminated against group in Europe, and this may still be an underestimation, as under-reporting of discrimination is generally high among Roma (European Union Agency for Fundamental Rights, 2009). Stereotypes about and prejudices against Roma highly influence their status in society and lead to open and covert discrimination by the majority population. Physical attacks by right-wing extremists occur regularly and occasionally result in the death of the victim. Discrimination against Roma also occurs in institutions (Fundación Secretariado Gitano, 2009). A high percentage of Roma reports being discriminated against in health facilities, and research conducted among medical providers confirms that many of them hold prejudicial beliefs about Roma. The most frequently reported manifestations of discrimination include: general practitioners refusing to register Roma clients on their rosters, emergency services not responding to calls from Roma communities, health services refusing to treat them, as well as verbal abuse, denial of access to medical records and segregation into maternity wards of inferior quality (Schaaf, 2010).

Roma are a rather large minority in many Central European countries and generally report poorer health than the majority population. Estimates on their numbers vary; e.g. for Slovakia, they vary from 89,920 (1.7%) to 750,000, with 380,000 (7.2%) probably being the best estimate (2001 census) (Filadelfiová et al., 2007; Koupilova et al., 2001). Roma adolescents have been shown to perceive their health as poorer than non-Roma adolescents (Kolarcik et al., 2009), but the mechanisms explaining this finding have not yet been established. One explanation is that their poorer perceived health is simply due to their socioeconomic deprivation and discrimination (Bartosovic & Hegyi, 2010; Kolarcik et al., 2009; Reijneveld, 2010; Schaaf, 2010).

Research suggests that experiencing discrimination is itself detrimental to health (Richardson & Norris, 2010). This concerns not just exposure but in particular some types of responses to the exposure seem which seem to have health consequences (Richardson & Norris, 2010). The association between discrimination and health may occur through the mechanisms of stress responses and health behaviours. The perception of discrimination is related to increased physiological stress responses, more negative psychological stress responses and increased participation in unhealthy behaviours (Pascoe & Richman, 2009). The negative association between discrimination and health was shown in several studies (D'Anna et al., 2010; Schulz et al., 2006; Todorova et al., 2010; Williams et al., 2008).

The poor health of Roma might also be due to factors other than discrimination, such as their on average lower socioeconomic status (SES) compared to the general population (Filadelfiová et al., 2007). People with low SES in general perceive their health as poorer, and this association has been shown to be mediated by a number of psychosocial factors such as social support, depression, hopelessness and life satisfaction (Huurre et al., 2003; Link & Phelan, 1995; Panzarella et al., 2006; Proctor et al., 2009; Roxburgh, 2009; Stansfeld et al., 1998). Given the mostly low SES of Roma, this offers a rather likely explanation for their poor health as well.

In contrast to low SES, social support has a positive relation to health, but it is unknown how this association operates in Roma (Klineberg et al., 2006). Among both adults and adolescents, social support – i.e. resources provided by other people, such as various social networks and relationships (Klineberg et al., 2006; Zimet et al.,

1988) – is associated with positive health outcomes and the avoidance of risk-taking behaviour (Klineberg et al., 2006). Klineberg et al. (2006) report ethnic differences in social support, with associations between social support and health characteristics being similar across different ethnic groups (Whitfield et al., 2003). Evidence on Roma is completely lacking, but social structures among them are generally strong (Goward et al., 2006).

Another factor affecting the health of Roma might be hopelessness. In general, disadvantaged people are more likely to perceive themselves as hopeless to change their situation and to improve their quality of life and well-being (Farquharson, 2002). Such beliefs have a negative effect on health. Hopelessness correlates positively with depression, predicts suicidal ideation and attempts and psychopathology in general, and is negatively correlated with self-esteem and social skills (Kashani et al., 1989; Kazdin et al., 1986). Hudson, Banks et al. (Banks et al., 2008) found that increased levels of hope were strongly related to reporting fewer depressive symptoms when respondents reported discrimination than among those with lower levels of hope. All in all, perceived discrimination obviously acts as a health-risk factor, and its negative effect might be buffered by a potential health-protective factor such as social support or magnified by the negative health effect of hopelessness.

When a sensitive topic is surveyed, and perceived discrimination might be considered as such a topic, results may be confounded by a respondent's tendency to answer in a socially desirable way (van deMortel, 2008). Social desirability reflects the tendency on behalf of the subjects to deny socially undesirable traits and to claim socially desirable ones, and the tendency to say things which place the speaker in a favourable light (Nederhof, 1985). Bardwell and Dimsdale (2001) have summarised several studies that reported ethnic differences in response bias. Therefore, such bias should be considered when assessing psychosocial variables by self-report.

As evidence on the role of discrimination, hopelessness and social support in regard to health is completely lacking for Roma, the aim of this paper was to investigate how discrimination, hopelessness and social support contribute to differences in self-rated health between Roma and non-Roma.

## Methods

### *Sample and procedure*

We obtained information on perceived discrimination, self-rated health, hopelessness, parental social support, social desirability and demographic characteristics among Roma and non-Roma adolescents. The Roma sample was recruited via elementary schools in small towns and villages in the eastern part of Slovakia which met the following criteria: the number of children aged 13 years or older living in Roma settlements (segregated and separated type) was at least 30; the school was able to provide 3 or 4 separate rooms where interviews could be conducted without disruption; and the school made an internal list of children suitable for our study, who could then be randomly chosen and asked to participate in the interview. We contacted 22 elementary schools in municipalities in the study area that had separated or segregated communities of Roma whose children could potentially attend the schools. Out of these, 15 met our criteria, though one was not willing to participate.

From the lists of pupils living in Roma settlements prepared by the remaining 14 schools, we randomly chose respondents while trying to include a similar proportion of boys and girls. Respondents were interviewed individually during regular class time by community workers who had ample experience in working with Roma and were trained for our study. One hour was scheduled for each interview; they lasted between 30 and 65 minutes.

Because non-Roma pupils in schools with higher proportions of pupils from Roma settlements might not be representative of all non-Roma adolescents, we decided to recruit a non-Roma sample from elementary schools in the same geographical area without an evident Roma community in the neighbourhood. We identified 25 such schools in the Košice and Prešov regions of eastern Slovakia and contacted a random sample of 15 of them. Of these, 11 schools were willing to participate, but two were excluded because they did not have at least one class of 8<sup>th</sup> and 9<sup>th</sup> grade that had not been previously included in a research project of our department. The questionnaires were administered during regular class time (45 minutes) by our research assistants, who had training and experience. The questionnaire asked the same questions as the structured interview in the Roma sample.

The study was approved by the Ethics Committee of the Faculty of Science at Safarik University. Data were collected in May-June 2007. Parents were informed of the study via the school administration and could opt out if they disagreed. Participation in the study was fully voluntary and anonymous, with no explicit incentives provided for participation.

The sample of Roma adolescents consisted of 330 Roma elementary school pupils, all living in Roma settlements (the segregated and separated types) in the eastern part of Slovakia, in or near small towns and villages (response: 99.7%). It comprised 160 boys (48.5%) and 170 girls (51.5%), with ages ranging from 12 to 17 years (mean 14.50; SD=1.03). The sample of non-Roma adolescents consisted of 722 elementary school pupils attending the 8<sup>th</sup> and 9<sup>th</sup> grades (response 95.9%). It comprised 354 boys (53.2%) and 312 (46.8%) girls. Ages ranged from 14 to 17 years (mean 14.86; SD=0.63).

## Measures

Questionnaires covered *demographic* (age, gender) and *socioeconomic characteristics* (father's and mother's highest completed education; four levels of education were distinguished: elementary education, apprenticeship, secondary education (with leaving certificate) and university education), one item assessing *self-rated health*, and scales for *social desirability*, *perceived social support* from mother and father, *hopelessness* and one item for *perceived discrimination*. All scales and items were translated from the English original to Slovak by means of a forward-backward procedure (Beaton et al., 2000; Guillemin et al., 1993).

*Perceived discrimination* was measured using an item adopted from the ISRD questionnaire (Zhang et al., 2000): "Have people ever treated you badly because of your religion or the language you speak, or the colour of your skin?" with a four-point scale ((1) No, never, (2) Once, (3) Sometimes, (4) Often). Responses were dichotomised into: No, Never (0) and at least once (1).

*Self-rated health* (SRH) was measured with one item from the SF-36 questionnaire (Ware & Sherbourne, 1992). Respondents were asked to assess their health (In

general, would you say your health is:) as (1) excellent, (2) very good, (3) good, (4) fairly good or (5) bad. The last three responses were merged into one category according to the dichotomisation used by Geckova, van Dijk, Zezula, Tuinstra, Groothoff and Post (2004), because the standard dichotomisation resulted in unbalanced categories. The use of a different cut-off led to very similar results. This measure is widely used in health studies as an indicator of general health status, because it is a good predictor of mortality and morbidity (Matthews et al., 1999; Sadava et al., 2000).

*Perceived social support* from the mother, father and significant others was measured using adapted items from the 'Spouse/partner perceived social support' subscale (Turner & Marino, 1994) and the 'Significant others' subscale items of the Multidimensional Scale of Perceived Social Support (Blumenthal et al., 1987; Zimet et al., 1988). Items focused on aspects like closeness with the respondent, availability for chatting with the respondent, expressing worth to the respondent, feeling relaxed when together, being available when needed and confidence in the respondent. Mother's and father's social support subscales had 6 items, each with the following response categories (values): fully agree (4), agree (3), disagree (2), fully disagree (1). The significant other's social support subscale had 4 items, with answers ranging from very strongly disagree (1) to very strongly agree (7). A higher total score indicates a higher level of perceived social support from the person concerned. The internal consistencies of the scales were satisfactory: mother (Cronbach's alpha: 0.83), father (0.91), significant others (0.73).

*Hopelessness* was measured by the brief Hopelessness Scale for Children (Bolland, 2003), which contains 5 items from the longer version of Kazdin et al. (1983). The items were: "All I see ahead of me are bad things, not good things; There's no use in really trying to get something I want because I probably won't get it; I might as well give up because I can't make things better for myself; I don't have good luck now and there's no reason to think I will when I get older; I never get what I want, so it's dumb to want anything." Answers were dichotomous (values): agree (1), disagree (0), with a higher total score indicating a higher level of hopelessness. The internal consistency of the scale was satisfactory (Cronbach's alpha: 0.70).

*Social desirability* is the tendency of respondents to reply in a manner that will be viewed favourably by others. Higher social desirability thus can affect the validity of results. It was measured using the Social Desirability Response Set (SDRS-5) (Hays et al., 1989). The scale inquires about common situations in which people are prone to respond favourably (e.g.: "No matter who I'm talking to, I'm always a good listener"). The five items are then rated with a five-point Likert scale (definitely true, mostly true, don't know, mostly false, definitely false). The total score is counted only from the extreme answers of each item (scored 1 point), with a higher total score indicating a higher level of socially desirable responses. Cronbach's  $\alpha$  for the current sample was 0.53, but the mean inter-item correlation (MIIC) was 0.19. According to Clark & Watson (1995) and Parker, Taylor, & Bagby (2003), consistency is acceptable if the MIIC is above 0.15.

### *Statistical analysis*

From the total number of 1052 respondents we have excluded respondents who had missing answers for at least one of the assessed variables (ethnicity, age, gender,

mother and father social support, hopelessness, discrimination, social desirability). First, we described the samples. Then, the association of ethnicity with (poor) SRH and the way in which discrimination, hopelessness, social support, SES (highest parental education) and social desirability affected this association was assessed using logistic regression (Table 2). As a first step, the crude associations of ethnicity, discrimination, hopelessness, social support and confounding variables (age, gender, parental education, social desirability) with SRH were assessed (Model 1). Next, we adjusted each single crude effect of the independent variables on SRH for age, gender, parental education and social desirability (Model 2). Third, we assessed the effect of ethnicity after consecutively adding discrimination (Model 3), hopelessness (Model 4) and mother's and father's social support (Model 5). A Sobel test was used to assess the mediating effect of discrimination, hopelessness and social supports. All analyses were performed using the statistical software SPSS 16.0 for Windows and the Sobel test was calculated via [www.danielsoper.com](http://www.danielsoper.com).

## Results

The final sample is made up of 759 adolescents, of which non-Roma N=459 (60.5%; 234 boys=51.0% and 225 girls=49.0%) and Roma N=300 (39.5%; 147 boys=49.0%, 153 and girls=51.0%). Basic descriptive statistics of the sample are presented and compared in Table 7.1.

Roma adolescents reported more perceived discrimination, poorer SRH as well as more mother's and father's social support, more hopelessness and more social desirability (Table 7.1). Roma came from families with parents mostly with elementary education, which reflects the poor educational level among this minority and their lower socioeconomic status.

Logistic regression showed that Roma ethnicity was a significant predictor of poor SRH, crude and also after adjustment for potential confounders. Statistically significant crude associations with SRH were also found for discrimination, hopelessness and mother's social support (Table 7.2).

The combined effect of ethnicity, discrimination and confounders assessed in Model 3 led to a decrease in the ethnicity effect on SRH of about one-third. A similar decrease in the ethnicity effect was observed after inclusion of hopelessness into the model (Model 4). The introduction of mother's and father's social support into the model increased the OR of the ethnicity effect (Model 5). Changes in the ethnicity effect on SRH after inclusion of the explaining variables suggest their mediating role. Discrimination, hopelessness and mother's social support all mediated, as shown by the Sobel test (SB 4.39\*\*\*; 5.43\*\*\* and -2.40\*, respectively).

**Table 7.1:** Sociodemographic characteristics, self-rated health, discrimination, social supports, hopelessness and sensitivity for social desirability of the Roma and non-Roma samples (numbers, percentages, and p-values for differences between the two groups)

<i>Categorical variables</i>	<b>Roma (N=300)</b>		<b>Non-Roma (N=459)</b>		<b>p value</b>
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	
<b>Gender</b>					not significant <sup>a</sup>
Boys	147	49.0	234	51.0	
<b>Father's educational level</b>					p<0.001 <sup>a</sup>
Elementary	154	51.3	8	1.7	
Apprenticeship	112	37.3	86	18.7	
Secondary	20	6.7	22	47.9	
University	7	2.3	136	29.6	
<b>Mother's educational level</b>					p<0.001 <sup>a</sup>
Elementary	215	71.7	19	4.1	
Apprenticeship	58	19.3	68	14.4	
Secondary	16	5.3	222	48.4	
University	2	0.7	143	31.2	
<b>Parents' highest educational level</b>					p<0.001 <sup>a</sup>
Elementary	137	45.7	5	1.1	
Apprenticeship	127	42.3	47	10.2	
Secondary	28	9.3	217	47.3	
University	8	2.7	190	41.4	
<b>Poor self-rated health</b>	152	50.7	102	22.2	p<0.001 <sup>a</sup>
<b>Discrimination</b>	93	31.0	42	9.2	p<0.001 <sup>a</sup>
<i>Continual variables</i>					
	<b>Mean (SD)</b>		<b>Mean (SD)</b>		
<b>Age</b>	14.5 (SD 1.0)		14.8 (SD 0.6)		p<0.001 <sup>b</sup>
<b>Social Desirability</b>	2.2 (SD 1.3)		1.0 (SD 1.1)		p<0.001 <sup>c</sup>
<b>Hopelessness</b>	1.2 (SD 1.3)		0.7 (SD 1.2)		p<0.001 <sup>c</sup>
<b>Mother's social support</b>	21.2 (SD 2.6)		20.3 (SD 3.2)		p<0.001 <sup>c</sup>
<b>Father's social support</b>	20.8 (SD 3.2)		18.9 (SD 4.4)		p<0.001 <sup>c</sup>

<sup>a</sup> Chi-square tests; <sup>b</sup> Student's t-test; <sup>c</sup> Mann-Whitney U-test  
SD-standard deviation



**Table 7.2:** The effects of ethnicity on self-rated health of Roma and non-Roma adolescents adjusted for age, gender, parental education attainments and social desirability and controlled for discrimination, hopelessness and social supports of the Roma and non-Roma samples in five models.

	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)	Model 4 OR (95% CI)	Model 5 OR (95% CI)
<b>Roma vs. non-Roma</b>	3.41 ( 2.49 – 4.67) ***	2.70 (1.58 – 4.60) ***	2.43 (1.41 – 4.17) ***	2.28 (1.32 – 3.91) **	2.66 (1.52 – 4.66) ***
<b>Age in years</b>	0.80 (0.66 – 0.97) *	0.92 (0.75 – 1.12)	0.91 (0.75 – 1.11)	0.91 (0.74 – 1.11)	0.89 (0.73 – 1.09)
<b>Gender (Male vs. Female)</b>	0.67 (0.50 – 0.91) *	0.66 (0.48 – 0.90) **	0.67 (0.49 – 0.93) *	0.66 (0.47 – 0.91) *	0.68 (0.49 – 0.94) *
<b>Parental education</b>					
Elementary	1 ***	1	1	1	1
Apprenticeship	0.71 (0.46 – 1.11)	0.87 (0.55 – 1.39)	0.85 (0.53 – 1.36)	0.92 (0.57 – 1.48)	0.90 (0.56 – 1.46)
Secondary	0.31 (0.20 – 0.47)	0.59 (0.32 – 1.08)	0.60 (0.33 – 1.11)	0.64 (0.35 – 1.17)	0.65 (0.35 – 1.19)
Univeristy	0.23 (0.14 – 0.37)	0.47 (0.24 – 0.91)	0.49 (0.25 – 0.95)	0.53 (0.27 – 1.03)	0.56 (0.29 – 1.11)
<b>Social desirability</b>	1.10 (0.98 – 1.23)	0.84 (0.73 – 0.96) *	0.85 (0.74 – 0.98)	0.85 (0.73 – 0.98)	0.89 (0.77 – 1.03)
<b>Discrimination</b>	2.66 (1.82 – 3.88) ***	1.73 (1.15 – 2.61) **	1.73 (1.15 – 2.61)	1.66 (1.10 – 2.51)	1.59 (1.05 – 2.42) *
<b>Hopelessness</b>	1.36 (1.21 – 1.52) ***	1.26 (1.12 – 1.42) ***		1.25 (1.10 – 1.41)	1.21 (1.07 – 1.37) **
<b>Mother’s social support</b>	0.93 (0.88 – 0.97) **	0.90 (0.85 – 0.95) ***			0.93 (0.87 – 0.99) *
<b>Father’s social support</b>	0.97 (0.93 – 1.00)	0.93 (0.90 – 0.97) ***			0.96 (0.92 – 1.01)
<b>Change of OR for Roma ethnicity after adjustment</b>	---	29.4%	16.0%	10.6%	-30.3%

Model 1: Crude effect of each variable separately on self-rated health

Model 2: Effect of each variable separately on self-rated health adjusted for age, gender, parental education and social desirability

Model 3: Adjusted Ethnicity effect controlled for discrimination

Model 4: Adjusted Ethnicity effect controlled for discrimination and hopelessness

Model 5: Adjusted Ethnicity effect controlled for discrimination, hopelessness and mother’s and father’s social support

\*\*\*p<0.001, \*\* p<0.01, \* p<0.05

## Discussion

Our aim was to assess how discrimination, hopelessness and social support were associated with differences in SRH among Roma and non-Roma. Our results indicate that the assessed variables, except father's social support, are significantly related to poor SRH. Roma ethnicity, hopelessness and higher perceived discrimination were the main predictors of poor SRH even after controlling for possible confounders. Roma ethnicity, higher hopelessness and perceived discrimination predict worse SRH, and higher mother's social support relates to better SRH among the respondents. Parental education and social desirability are possible confounders of the assessed associations. Further analysis revealed that discrimination, hopelessness and mother's social support were mediators of the ethnicity effect on health. Discrimination and hopelessness supported the negative effect of Roma ethnicity on SRH. Mother's social support decreased the negative impact of the ethnicity effect on SRH and might thus act as a potential protective factor.

Our results support previous findings that perceived discrimination is associated with poorer SRH (D'Anna et al., 2010; Schulz et al., 2006; Todorova et al., 2010; Williams et al., 2008). But from the simple association of discrimination with health we have also shown a more detailed picture of the role of discrimination in ethnicity vs. the health association path with potential confounding and other mediating variables. The mediating role of social support was reported by Salonna et al. (Salonna et al., 2011)

Being Roma in our sample implies worse self-reported health, but this health is even worse when the Roma respondent reported being discriminated against. Similarly, hopelessness aggravated worse health even further. On the other hand, mother's social support can compensate for the negative effect of ethnicity on health mediated by discrimination and hopelessness. The role of mother's social support suggests that even the difficult living conditions represented by being Roma, living in a Roma settlement, being discriminated against and feeling hopeless, might be compensated for by a warm relationship with the 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 mother's social support seems to be a more important factor than father's social support in promoting better health.

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 is already known (Banks et al., 2008; Farquharson, 2002), and our study expands on the detrimental effect of hopelessness on SRH among adolescents, especially Roma adolescents, in whom the level of hopelessness is much higher compared with non-Roma counterparts. Our data also showed that the impact of hopelessness on SRH is bigger than the impact of perceived discrimination.

The worse SRH of Roma adolescents compared with their non-Roma counterparts might be partially attributed to their perceived discrimination and higher hopelessness, but these two factors do not explain the entire variability of their health. Another very important factor which affects their health status might be the low education attainment of Roma parents and low SES widely prevalent among Roma living in settlements (Kolarcik et al., 2009). When evaluating the effect of several factors relevant for SRH, like 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. Also, there might be other factors related to Roma ethnicity, or their culture and habits, which might impact their health and which were not measured in our study and might confound associations, as parental education did.

### *Strengths and limitations*

Our study was conducted on a Roma sample, which is a hard-to-reach population. We succeeded in recruiting a considerable number of Roma adolescents. In addition, we achieved a relatively high response rates in both samples. Due to the selection of participants with non-missing variables, the sample size was reduced, but the size was still large enough to perform all analyses with no impact on validity.

Besides these strengths, our study also has some limitations. We used only a single item measure of perceived discrimination, resulting in findings that reflecting a general perception of discrimination, which might differ from a measurement mapping experiences with specific discrimination (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). Finally, we used a different approach to collect data from Roma than from non-Roma adolescents. This could have led to higher levels of social desirability among Roma, as disclosure may be lower in an interview (Bowling, 2005). Fortunately, we were able to adjust for this, but we cannot exclude some remaining information bias.

Discrimination among Roma is a frequently discussed topic without objective and valid data. Our study brings fresh insights and an assessment of perceived discrimination among Roma adolescents compared with non-Roma adolescents.

### *Implications*

Since we found the worse health among Roma adolescents in comparison with the majority population might be partially explained by higher exposure to perceived discrimination and hopelessness, interventions aiming to counteract such discrimination are justified. One place to start could be balancing the negative image of Roma in media with a positive one and with education of the non-Roma population about the Roma with intention of replacing various stereotypes and superstitions. Roma adolescents also reported having strong parental support with a protective effect on their self-rated health. This should be maintained and developed in cultural frameworks of this ethnic minority group.

Roma may avoid health services because they have experienced or heard about discrimination in health care settings. A few negative interactions can have a ripple effect in the community, as experiences are told and retold to others (Schaaf, 2010). Roma community health assistants seem to be an appropriate intervention operating within cultural frameworks and capable of counteracting prejudices between the Roma and non-Roma populations. Unfortunately, this intervention is applied on an irregular basis and in a very small proportion. Only 0.6 Roma health mediators per 10,000 Roma are employed in Slovakia (Open Society Institute, 2011). A sustainable solution to the problem of community workers is crucial for better health of the Roma.

## **Conclusion**

Roma ethnicity, perceived discrimination and hopelessness were the main predictors of poor self-rated health even after controlling for parental education and social desirability. As anticipated, perceived discrimination, like hopelessness, is a contributing factor for poor self-rated health. Parental social support also contributes to the effect on SRH, but in the opposite direction than discrimination and hopelessness, and thus protects against worse SRH. Perceived discrimination, hopelessness and mother's social support are mediators of the ethnicity-health association. Our study presents one of the first findings about discrimination and health among Roma adolescents and explores potential protective and risk factors in such an association, providing important clues to improving their health.

