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

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*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.].

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# Design of the study and data sources

A cross-sectional study was conducted among Roma from separated and segregated settlements in the eastern part of Slovakia and non-Roma adolescents. The aim was to compare various health outcomes and indicators of Roma adolescents with non-Roma adolescents. Data from both samples were collected from May to June 2007.

## 2.1. Samples and procedure

We collected data from two samples. The Roma sample was recruited via elementary schools in small towns and villages in the eastern part of Slovakia. The dispersion of Roma settlements in the eastern part of Slovakia is depicted in Figure 2.1. Schools included in the study had to meet the following criteria. Firstly, at least 30 children aged 13 years or older currently living in that particular Roma settlement (segregated and separated type). Next, the school was able to offer separate rooms where interviews could be conducted; and finally, the school was able to provide a list of children suitable for our study who could be randomly chosen and asked to participate in the interview. We contacted 22 elementary schools in the study area that comprised separated or segregated communities of Roma whose children potentially could attend the schools. Fifteen of these schools fulfilled our criteria. One of them was not willing to participate, but the other 14 were willing to participate in the study. From the lists prepared by the schools of pupils living in Roma settlements, we chose respondents randomly while trying to include a similar proportion of boys and girls. Respondents were interviewed individually during regular class time by community workers with ample experience in working with Roma and trained for our study. The interviews lasted from 30 to 65 minutes.

Non-Roma pupils in schools with higher proportions of pupils from Roma settlements might not be representative of all non-Roma adolescents; we therefore recruited a non-Roma sample from elementary schools in the same geographical area with no evident Roma community in the nearby surroundings. We identified 25 such schools in the Košice and Prešov regions of eastern Slovakia and contacted a random sample of 15 of them. Eleven of these schools were willing to participate, but two of these were excluded because they did not have at least one class of 8th and 9th grade students that had not been previously included in a research project from our department. The questionnaires were administered during regular class time (45 minutes) by our trained and experienced research assistants. The questionnaire asked the same questions as

the structured interview in the Roma sample.

One of the reasons for the decision to use interviews in the Roma sample instead of self-reported questionnaires, as in the non-Roma sample, was that such a technique requires less regarding respondent's literacy, as stated by Bowling (2005):

"Probably the least burdensome method is the personal, face-to-face interview because it requires only the respondent to speak the same language in which the questions are asked, and to have basic verbal and listening skills. No reading skills are required (unless written materials for the respondent are contained within the interview). A friendly, motivating interviewer can increase response and item response rates, maintain motivation with longer questionnaires, probe for responses, clarify ambiguous questions, help respondents with enlarged show cards of response choice options, use memory jogging techniques for aiding recall of events and behaviour, and control the order of the questions. Interviewers can also be trained to follow complex question routing and skipping instructions. ... The most burdensome modes are likely to be visual and written methods of self-administration, as these demand that respondents are literate in reading the language/s of the survey, that they do not have visual impairments and have the dexterity (e.g. of wrist, fingers) to complete the questions. They require respondents to tick a box on a paper questionnaire, press an electronic key, or key on a touchtone telephone handset to indicate their response: respondents are required to read or listen, recognize numbers and write/key answers accurately. Respondents also need the ability to follow routing instructions."

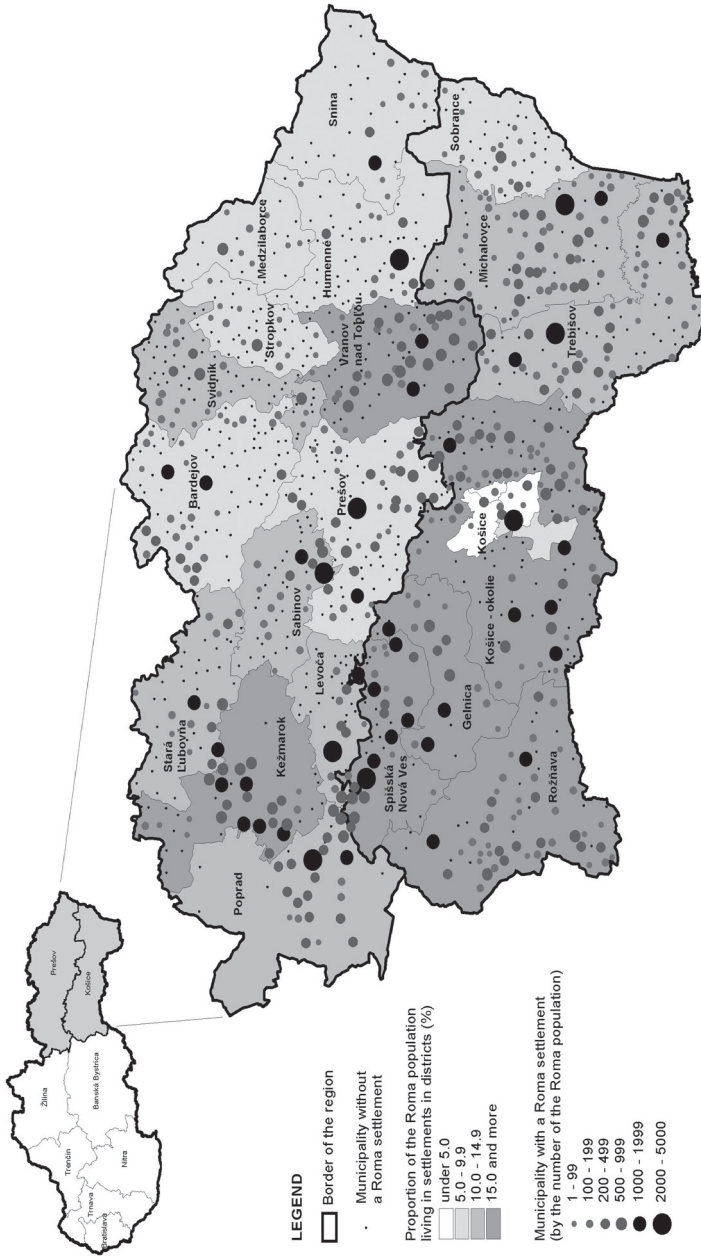
This mixed method of data collection was a compromise in the design that we chose in order to cope effectively with possible literacy problems and to be sure about a clear understanding of the questions asked among Roma (resulting in more valid responses and complete questionnaires). On the other hand, non-Roma were expected to prefer a written questionnaire. Moreover, logistically this was more attractive too. Previous research shows that the impact of the difference in design between Roma and non-Roma on the validity of comparisons made was analyzed and found to be decent in favour of acquiring data from a hard-to-reach population, and; the expected validity of both ways of datacollection was comparable and thus sufficient (Brener et al., 2003; Brittingham et al., 1998). The questionnaire was composed from many items surveying a wide range of topics (see also 2.2). As some answers might be affected by our study design, we controlled them for social desirability, which is the bias most-discussed in the debate over interview vs. self-administered questionnaires (Brener et al., 2003; Holtgraves, 2004; Tourangeau & Yan, 2007).

The study was approved by the Ethics Committee of the Faculty of Science at P.J. Safarik University in Košice in August 2005. Data were collected from 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 voluntary and anonymous, with no explicit incentives provided for participation.

The sample of Roma adolescents consisted of 330 Roma elementary pupils, all of whom live in Roma settlements in or near small towns and villages (the segregated and separated types) in eastern Slovakia. The sample comprised 160 boys (48.5%) and 170 girls (51.5%), with ages ranging from 12 to 17 years (mean age =14.50; SD=1.03). The response rate was 99.7%.

The sample of non-Roma adolescents consisted of 722 8th and 9th grade pupils, of whom 354 were boys (53.2%) and 312 girls (47.8%). Ages ranged from 14 years to 17 years, with a mean age of 14.86 (SD=0.63). The response rate was 95.9%.

Figure 2.1: Graphic representation of the municipalities in the Eastern part of Slovakia (Prešov and Košice counties) with the Roma population and size of the population in the year 2004



Source: Prepared by Katarina Rošćiová, MSc., using data from the Office of the Government Plenipotentiary for Roma Community, the Statistical Office of the Slovak Republic and from the Mapping of Roma Settlements 2004 (Rošćiová, 2004)

## 2.2. Measures

The questionnaires used in our cross-sectional study consisted of several health outcome measures and scales and items investigating background characteristics of the respondents, such as age, gender, mother's and father's highest educational attainment and mother's and father's employment status.

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

Respondents were asked if they had suffered from one of the following **health complaints** during the last month: headache, stomach ache, cold, flu, symptoms from muscles, back-pain, anxiety, coughing, fatigue, sleeplessness, stress, constipation, diarrhoea, allergy or others (von Bothmer & Fridlund, 2003). The possible answers were yes/no. The sum of health complaints was analysed.

**Healthcare utilisation** was measured with two questions with a dichotomised answer (yes/no): Have you had to see a doctor during the last month because of serious sickness? Have you been in hospital during the last year? Similarly, we asked about *Accidents and injuries* with three questions: Have you burnt yourself so badly that you had to see a doctor during the last year? Have you cut yourself by accident so badly you had to see a doctor during the last year? Have you broken a bone during the last year? (Bolland, 2003). Answers about healthcare utilisation were summed and used to produce one general variable. We similarly summed answers about accidents and injuries. Both variables were dichotomised as 0 and 1 or more, with a score of 1 indicating hospitalisation, accident or injury, respectively, during the last year.

**Children's mental health** was measured with the Strength and Difficulties Questionnaire (SDQ) (Goodman et al., 1998). This is a recently developed questionnaire for assessing mental health problems in children and adolescents. Its reliability and validity are generally satisfactory (Goodman et al., 1998; Goodman, 2001). We used the prosocial scale (5 items,  $\alpha=0.68$ ) and the total difficulties scale (TDS; 20 items,  $\alpha=0.71$ ), covering positive and negative aspects of mental health (i.e. 'strengths' and 'difficulties'), respectively. The difficulties scale covers hyperactivity symptoms, emotional symptoms, conduct problems and peer problems. The prosocial scale covers behaviours such as the willingness to share things with others, helpfulness, kindness and consideration for another's feelings. Each of the SDQ items was scored from 0 to 2, the options being not true, somewhat true, or certainly true. Higher scores on these two scales indicate higher levels of difficulties and a lack of prosocial behaviours, respectively. The cut-off points reported by Koskelainen, Sourander & Vauras (Koskelainen et al., 2001) were used to dichotomise the Difficulties Score (cut-off point 17/18) and the prosocial score (cut-off point 4/5).

**Smoking** was measured by the question: Have you ever smoked a cigarette? Respondents were asked to report their experience with smoking as follows: (1) no never; (2) yes, I have tried it; (3) yes, I used to smoke but I have quit; (4) yes, I smoke occasionally but not daily; (5) yes, I smoke every day. (Tuinstra et al., 1998). Smoking status was dichotomised into categories: never/former smoking and current smoking (cut-off point 3/4) similarly as Salonna et al. (2008).

**Drunkness** was measured by the question: Have you been drunk during the last 4 weeks? Respondents reported the frequency of being drunk with the answers: (1) no, (2) 1-2 times, (3) 3 times and more. The answers were dichotomised into two categories (cut-off point 1/2): have not been drunk, have been drunk at least once (Kalina et al., 2009).

**Experience with drug use** was measured by the question: Have you ever tried any other drugs? There were only two possible answers: yes or no.

**Physical inactivity** was measured by the question: How often do you have physical activity per week? Physical activity was defined as a sporting activity longer than 20 minutes; physical education in school was not included. Respondents were asked to quantify their frequency of physical activity as (1) never, (2) once a week, (3) at least 2-3 times a week, (4) every day. The answers were dichotomised into two categories (cut-off point 2/3): lack of physical activity and frequent physical activity, similarly as Salonna et al. (2008).

**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 being 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 using the brief Hopelessness Scale for Children (Bolland, 2003), which contains 5 items from the longer version of Kazdin et al. (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).

**Satisfaction with life** was measured with the Satisfaction with life scale developed by Diener et al. (1985) and Lewis et al. (1999). It is a 5-item measure (examples: The conditions of my life are excellent. I am satisfied with my life) with answers (values) ranging from strongly disagree (1) to strongly agree (7). A higher total score indicates higher satisfaction with life. The internal consistency of the scale was satisfactory (Cronbach's alpha: 0.86).

**Delinquent behaviour** was measured by questions on vandalism, violence and crime against property from the short version of the International Self-Reported Delinquency study II instrument (ISRD) (Zhang et al., 2000), an instrument which was developed by criminologists from 15 western countries. We included 10 items on the frequency of making threats with and using weapons, vandalism and stealing. Each item has a 5-point response scale ranging from never (1) to three and more times in the last year (5), yielding a total ranging from 10 to 50 points, with higher a score indicating higher levels of delinquent behaviour. The internal consistency of the scale was satisfactory (Cronbach's alpha: 0.79).

**Aggression** was measured with the Aggression Questionnaire (Buss & Perry, 1992). We used two subscales: physical aggression (9 items) and hostility (8 items). Physical aggression involves hurting or harming another, representing the instrumental or motor component of the behaviour. Hostility consists of feelings of ill will and injustice, representing the cognitive component of the behaviour. Respondents were asked to rate each item on a 5-point scale ranging from extremely uncharacteristic for me (1) to extremely characteristic for me (5). Total scores were computed and used for analyses. They range from 9 to 45 for the physical aggression subscale and from 8 to 40 for the hostility subscale. Higher scores indicate a higher level of aggression. The internal consistency of both subscales was satisfactory (Cronbach's alphas for both: 0.79).

**Perceived discrimination** was measured using the 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 response scale ((1) No, never, (2) Once, (3) Sometimes, (4) Often). Responses were dichotomised into: No, Never (0) and at least once (1).

**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 et al. (2003), consistency is acceptable if the MIIC is above 0.15.

### **2.3. Statistical analyses**

We mostly used similar analytic methods to answer the various questions. Generally, as a first step, we computed baseline statistics (prevalence rates, means and standard deviations) for the background characteristics and outcome variables regarding Roma and non-Roma adolescents. We tested the statistical significance of differences between them by computing chi-square tests for categorical variables and t-tests for continuous variables. Next, logistic regression analyses were used to assess whether ethnic differences in outcome variables could be explained by gender, parental education and social desirability. In the case of continuous variables, linear regression was used. Explanatory and control variables were added successively to the regression models. Consecutive inclusion of each variable of interest allowed us to assess the confounding or mediating role of the control variables.

All analyses were performed using the statistical software SPSS 14.0, 16.0 and 18.0 for Windows.



