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### Does the influence of peers and parents on adolescents' drunkenness differ between Roma and non-Roma adolescents in Slovakia?

Daniela Bobakova<sup>a b</sup>, Peter Kolarcik<sup>a b</sup>, Andrea Madarasova Geckova<sup>a b</sup>, Daniel Klein<sup>d</sup>, Sijmen A. Reijneveld<sup>c</sup> & Jitse P. van Dijk<sup>a c</sup>

<sup>a</sup> Graduate School Kosice Institute for Society and Health, PJ Safarik University, Kosice, Slovak Republic

<sup>b</sup> Department of Health Psychology, Institute of Public Health, PJ Safarik University, Kosice, Slovak Republic

<sup>c</sup> Department of Community & Occupational Health, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands

<sup>d</sup> Institute of Mathematics, PJ Safarik University, Kosice, Slovak Republic

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## Does the influence of peers and parents on adolescents' drunkenness differ between Roma and non-Roma adolescents in Slovakia?

Daniela Bobakova<sup>a,b\*</sup>, Peter Kolarcik<sup>a,b</sup>, Andrea Madarasova Geckova<sup>a,b</sup>, Daniel Klein<sup>d</sup>, Sijmen A. Reijneveld<sup>c</sup> and Jitse P. van Dijk<sup>a,c</sup>

<sup>a</sup>Graduate School Kosice Institute for Society and Health, PJ Safarik University, Kosice, Slovak Republic; <sup>b</sup>Department of Health Psychology, Institute of Public Health, PJ Safarik University, Kosice, Slovak Republic; <sup>c</sup>Department of Community & Occupational Health, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands; <sup>d</sup>Institute of Mathematics, PJ Safarik University, Kosice, Slovak Republic

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**Background.** Roma adolescents have been shown to use less alcohol than non-Roma adolescents. This could be due to the protective influences of peers and parents.

**Objective.** The purpose of this study was to explore differences in the levels of peer and parental influence and their effects on drunkenness between Roma and non-Roma adolescents.

**Design.** Data were obtained in Eastern Slovakia from 330 Roma (mean age = 14.50; 48.5% boys) and 722 non-Roma (mean age = 14.86; 53.2% boys) primary school pupils. We analysed data on adolescent drunkenness (being drunk at least once in the past four weeks), parental monitoring (parents knowing with whom their children are when they go out) and peer influence (best friend drinking alcohol at least once a week) using logistic regression.

**Results.** Roma adolescents self-reported more parental monitoring and less peer influence when compared with their non-Roma counterparts ( $p < 0.001$ ). Less parental monitoring contributed to the probability of drunkenness only among girls (OR/CI: 4.17/2.00–8.69). This effect of parental monitoring was not modified by ethnicity. Peer influence affected drunkenness in both boys (OR/CI: 3.34/1.91–5.85) and girls (4.84/2.55–9.19), but there was no significant interaction of ethnicity with peer influence.

**Conclusion.** While both boys and girls seem to be sensitive to peer influence, only girls appear to be sensitive to parental monitoring in regard to drunkenness. Stronger parental monitoring and weaker peer influence partially explain the lower prevalence of drunkenness among Roma adolescents, whereas the effects of these factors per level do not vary between Roma and non-Roma adolescents.

**Keywords:** Roma; ethnicity; drunkenness; adolescents; peers; parents; Slovakia

### Introduction

Ethnic minority groups frequently differ from majority populations in regard to the prevalence of alcohol use (Karlsen *et al.* 1998, Bossarte and Swahn 2008, Wang *et al.* 2009, van Tubergen and Poortman 2010). One of the largest European minority populations, especially in Central Europe, is Roma (Gypsies), whose population in

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\*Corresponding author. Email: daniela.bobakova@upjs.sk

the Slovak Republic is estimated at 430,000 (8% of the total population). Approximately 15% of school-aged children are Roma (Marcincin and Marcincinova 2009).

'Health and the Roma Community: Analysis of the Situation in Europe' is one of the few studies that provides data on alcohol consumption among Roma adults in Slovakia and six other European countries (Fundacion Secretariado Gitano 2009). This study shows that the prevalence of alcohol use during the preceding 12 months is highest among Roma in Slovakia (70%), whereas the overall percentage of Roma drinkers in these countries is 56% (Fundacion Secretariado Gitano 2009). This high prevalence of alcohol use among Roma in Slovakia seems to be in line with the alcohol consumption per capita in Slovakia being generally one of the highest in Europe (Popova *et al.* 2007).

Evidence on factors contributing to the lower occurrence of alcohol use and abuse among Roma adolescents is of major importance for public health, as the consumption of alcohol contributes considerably to mortality, and its prevalence is already high at an early age. In the period 2001–2003, every fourth male and every fifth female of working age in the Slovak Republic died due to alcohol-related causes (Rosicova *et al.* 2011). The Health Behaviour in School-aged Children (HBSC) international report on the 2005/2006 survey shows that 11% of 13-year-olds and 33% of 15-year-olds have been drunk at least twice during their lifetime (Currie *et al.* 2008). Slovak adolescents self-reported slightly higher rates of being drunk at least twice during their lifetime than the HBSC average. These reported rates were 12% among 13-year-olds in Slovakia and 35% among 15-year-olds (Currie *et al.* 2008).

Roma adolescents, at least girls, have been shown to drink less alcohol (Kanapeckiene *et al.* 2009, Kolarcik *et al.* 2010) than non-Roma adolescents in the same country, even though the general public tends to assume that they have a higher prevalence of substance use (Gourgoulianis *et al.* 2000, Koupilová *et al.* 2001, Ringold *et al.* 2005, Csépe *et al.* 2007, Kósa *et al.* 2007, Gerevich *et al.* 2010). Kanapeckiene *et al.* (2009) did not find any significant differences between Roma and non-Roma adolescents in Lithuania regarding regular alcohol use but did find a larger proportion of adolescents who have never used alcohol among Roma. Also, Kolarcik *et al.* (2010) did not find any significant differences regarding drinking between Roma and non-Roma adolescents in Slovakia, in regard to both boys and girls.

Peer pressure and parenting practices are factors associated with adolescents' substance use (Kuntsche *et al.* 2004, Eitle 2005, Mayberry *et al.* 2009, Wang *et al.* 2009). Substance use by peers is significantly associated with adolescents' substance use. The association is particularly strong regarding use by an adolescent's best friend, stronger than use within the wider cliques and crowds in which they participate (Hussong 2002). One important factor which decreases adolescents' contact with alcohol use is parental monitoring (Fors *et al.* 1999, Griffin *et al.* 2000, Beck *et al.* 2004), i.e., parents' awareness of an adolescent's activities and whereabouts (Jacobson and Crockett 2000, Smetana and Daddis 2002). Boys and older adolescents who receive less monitoring than girls and younger counterparts show a steeper trajectory in the development of alcohol misuse (Barnes *et al.* 2000).

Roma ethnicity seems to operate as a protective factor with regard to substance use (Hajioff and McKee 2000, Kolarcik *et al.* 2010). One study on Slovak adolescents (mean age 14.86) showed that only 25% of Roma boys and 16% of Roma girls

reported being drunk in the past four weeks compared with 69% of non-Roma boys and 59% of non-Roma girls (Kolarcik *et al.* 2010). One explanation for this difference may be that peer and parental influences operate differently depending on the ethnic group concerned (Wang *et al.* 2009). Wang *et al.* (2009) suggested that ethnic differences in parental monitoring and peer influence could explain ethnic differences in adolescent substance use. Evidence on the association of peer group pressure and parenting practices with drunkenness among Roma compared with non-Roma adolescents is lacking. Thus, the aim of this study was to explore differences in the levels of peer and parental influence and their effects on drunkenness between Roma and non-Roma adolescents in Slovakia.

## Methods

### *Sample and procedure*

The highest concentrations of the Roma population in Slovakia can be found in the eastern part of the country (Slusna 2010). Schooling in Slovakia is compulsory till the age of 16 and free of charge for primary school pupils, who attend school mostly in their place of residence. We contacted 22 primary schools in small towns and villages in the eastern part of Slovakia, selected from a list of schools provided by the Slovak Institute for education information and prognoses. The schools were all located near separated or segregated Roma communities. The separated type refers to a Roma population concentrated in a certain part of a town or village – either inside or on the outskirts; the segregated type refers to a settlement type that is remote from towns and villages or separated by a barrier (Filadelfiova *et al.* 2007). Criteria for school selection were: at least 30 children aged 13 years or older and currently living in Roma settlements (the segregated and separated type), the ability to offer separate rooms where interviews could be conducted and the availability of a list of children suitable for our study who could be randomly chosen and asked to participate in the interview. Out of the 15 schools which met the criteria, 14 were willing to participate. Respondents were chosen randomly after stratification by gender from the lists of pupils living in Roma settlements prepared by the schools. Interviews were conducted individually during regular class time by community workers trained for the study.

Non-Roma were selected in order to provide a representative sample of adolescents from the majority population of comparable ages as the Roma sample. For comparison, 15 randomly chosen schools in the same geographical area with no evident Roma community in the vicinity were asked to participate in the study. Two of the 11 schools willing to participate were excluded because they did not have at least one class of eighth and ninth grade that had not previously been included in a research project from our department. The questionnaires were administered during regular class time (45 minutes) by trained research assistants in the absence of teachers. The questionnaire asked the same questions as the structured interview in the Roma sample.

Schools were excluded from our sampling only when facilities were insufficient or when it was necessary to avoid mixing Roma and non-Roma adolescents in both samples. Therefore, we do not expect such exclusions to have any effect on our results.

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

The sample consisted of primary school pupils. It comprised 330 Roma aged 12.0–17.0 (mean age = 14.50; SD = 1.03; 48.5% boys) and 722 non-Roma aged 13.7–17.2 (mean age = 14.86; SD = 0.63; 53.2% boys). Differences between Roma and non-Roma were not statistically significant. The response rates were 99.7% and 95.9% for Roma and non-Roma adolescents, respectively.

### Measures

Drunkness was measured by asking respondents whether they had been drunk in the past four weeks, with possible responses *not once or twice/three times and more*. We dichotomised the answers into two categories: those who had been drunk at least once in the past four weeks and those who had not.

*Parental monitoring* was measured by asking respondents whether their parents knew with whom they are when they go out, with possible responses *always/sometimes/seldom, never/I don't go out*. The variable was dichotomised. Those whose parents always knew with whom they are when they go out were considered to be under parental monitoring. Those who reported that their parents did not always know with whom they are when they go out were considered to be not under parental monitoring. Those who did not go out (2.3%) were excluded from the analyses.

*Peer influence* was measured by asking respondents if their best friend drinks alcohol at least once a week (*yes/no*).

*Highest education of parents* as a socio-economic position indicator was measured by asking respondents about their father's and mother's highest educational degree attained; we used the highest education of the two.

*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-50) (Hays *et al.* 1989). The scale inquires about common situations that people are prone to respond to favourably (e.g., 'No matter who I'm talking to, I'm always a good listener'). The five items are then rated with a 5-point Likert scale (*definitely true, mostly true, don't know, mostly false, definitely false*). The total score is calculated only from the extreme answers of each item (scored 1 point), meaning the total score ranges from 0 to 5 points, with a higher total score indicating higher levels of socially desirable responses.

### Statistical analyses

First, descriptive statistics (prevalence rates and means) for background characteristics, levels of peer influence and parental monitoring and drunkness among Roma and non-Roma girls and boys were computed. Next, we assessed the association of parental monitoring and peer influence with adolescents' drunkness using logistic regression. Model 1 tested the effects of ethnicity on drunkness adjusted for age. Parental monitoring and peer influence were each added separately

to Model 2a and Model 2b. Model 3 was adjusted for both parental monitoring and peer influence in one step. Furthermore, we added the highest education level of parents as a socio-economic position indicator and social desirability to Model 4 and explored whether they affected the relationship between drunkenness and parental monitoring or peer influence. Since we found statistically significant gender differences regarding the association of ethnicity with the use of alcohol, the models were constructed separately for girls and boys. We also assessed the interaction of ethnicity with lack of parental monitoring and peer influence and the interaction of parental monitoring with peer influence. We tested the significance of the interactions by comparing the fit ( $-2 \log$  likelihood) of the models with and without interaction. Correlations induced by the clustering of individual information at school level were taken into consideration by using Huber-White standard errors. Analyses were performed using SPSS 16.0 for Windows and STATA.

## Results

Roma adolescents reported being drunk less frequently in comparison with their non-Roma counterparts (Table 1). Roma also reported being significantly more under parental monitoring and significantly less under the influence of their best friends compared with their non-Roma counterparts (Table 1). Differences between Roma and non-Roma were found also in highest education of parents and social desirability (Table 1).

Non-Roma ethnicity significantly contributed to the probability of drunkenness, but only among girls (Table 2, Model 1). Adding (a lack of) parental monitoring into the model decreased the effect of ethnicity on adolescents' drunkenness to a statistically insignificant level among girls (Table 2, Model 2a). Parental monitoring explained 26% of the observed association between ethnicity and drunkenness among girls. Interaction between the lack of parental monitoring and ethnicity was not significant (not shown in the tables).

Table 1. Distribution of covariates among Roma and non-Roma adolescents.

	Non-Roma ( $N = 666$ )	Roma ( $N = 330$ )	$p^*$
	$n$ (%)	$n$ (%)	
Drunk in past four weeks	139 (19.6)	41 (12.4)	<0.01
Lack of parental monitoring	459 (65.9)	143 (44.5)	<0.001
Best friend drinking	181 (26.5)	53 (16.1)	<0.001
Gender			ns
Girls	312 (46.8)	170 (51.5)	
Boys	254 (53.2)	160 (48.5)	
Highest education of parents			<0.001
Elementary	9 (1.3)	154 (47.8)	
Apprenticeship	82 (11.6)	132 (41.0)	
Secondary	338 (47.9)	28 (8.7)	
University	277 (39.2)	8 (2.5)	
Social desirability	68 (10.1)	133 (40.7)	<0.001

\*Chi-square statistic.

Table 2. Differences in the effect of parental monitoring and peer influence on drunkenness between Roma and non-Roma adolescents by gender adjusted for age, social desirability and highest education of parents.

	Model 1	Model 2a	Model 2b	Model 3	Model 4
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
<b>Girls (N = 384)</b>					
Roma ethnicity	0.47 (0.24–0.92)*	0.58 (0.29–1.17)	0.57 (0.29–1.15)	0.71 (0.34–1.48)	1.51 (0.46–4.89)
Age	1.05 (0.7–1.60)	1.05 (0.7–1.60)	0.95 (0.62–1.44)	0.98 (0.64–1.48)	1.01 (0.65–1.59)
Lack of parental monitoring		4.17 (2.00–8.69)**		3.98 (1.93–8.23)**	4.20 (2.01–8.79)**
Peer influence present			4.84 (2.55–9.19)**	4.60 (2.33–9.06)**	4.99 (2.51–9.71)**
Social desirability					0.94 (0.72–1.22)
<b>Highest education of parents</b>					
University					1
Primary					0.29 (0.07–1.32)
Apprenticeship					0.51 (0.17–1.57)
Secondary					0.69 (0.31–1.50)
Nagelkerke $R^2$	0.03	0.107	0.13	0.19	0.21
<b>Boys (N = 395)</b>					
Roma ethnicity	0.89 (0.51–1.58)	0.96 (0.54–1.70)	1.02 (0.57–1.83)	1.07 (0.60–1.93)	1.25 (0.55–2.83)
Age	1.18 (0.82–1.70)	1.2 (0.84–1.72)	1.13 (0.75–1.68)	1.14 (0.76–1.70)	1.14 (0.76–1.70)
Lack of parental monitoring		1.29 (0.74–2.25)		1.25 (0.71–2.19)	1.19 (0.67–2.10)
Peer influence present			3.34 (1.91–5.85)**	3.32 (1.89–5.83)**	3.34 (1.87–5.96)**
Social desirability					0.90 (0.68–1.18)
<b>Highest education of parents</b>					
University					1
Primary					1.19 (0.37–3.78)
Apprenticeship					1.31 (0.56–3.08)
Secondary					1.65 (0.80–3.42)
Nagelkerke $R^2$	0.006	0.009	0.08	0.08	0.09

\* $p < 0.05$ ; \*\* $p < 0.001$ .



Peer influence significantly increased the probability of adolescents' drunkenness in girls as well as in boys (Table 2, Model 2b), but the interaction of ethnicity with peer influence was not significant (not shown in the tables).

Adding (a lack of) parental monitoring together with peer influence into the model did not significantly change the results (Table 2, Model 3). Adjustment for the highest education of parents and social desirability did not affect the strength of the associations of parental monitoring and peer influence with drunkenness (Table 2, Model 4). The interaction of parental monitoring with peer influence was statistically significant in girls but not in boys. In girls, the OR was  $>1$ , i.e., the presence of peer influence and the lack of parental monitoring together made drinking more likely than did the separate factors individually. Adding the interaction to the model did not substantially affect the association between drunkenness and ethnicity. These results are not shown in the tables.

## Discussion

This study aimed to explore differences in the levels of peer and parental influence and their effects on drunkenness between Roma and non-Roma adolescents in Slovakia. The associations between drunkenness and the influence of peers and parents were controlled for the effect of socio-economic position, as measured by the highest educational level of the parents, but the influence of socio-economic position was found to be negligible. Roma adolescents reported being significantly more monitored by their parents and being significantly less influenced by their best friends than their non-Roma counterparts. Lack of parental monitoring and peer influence were associated with drunkenness in Roma as well as in non-Roma adolescents, but these factors mediated only some of the ethnic differences. Moreover, the effects of lack of parental monitoring and peer influence on drunkenness did not differ between Roma and non-Roma adolescents, considering that the interaction of both factors with ethnicity was not significant. Thus, ethnicity did not modify the effects of lack of parental monitoring and peer influence.

Our findings are in contrast to those of Wang *et al.* (2009), who found that differences in parental and peer influence fully explained ethnic differences in adolescent drunkenness. An explanation for this difference may be that social norms, values and health beliefs such as the purity of the body or fatalism among Roma differ not only from the majority population but also from other minority groups (Zeman *et al.* 2003, Vivian and Dundes 2004, Van Cleemput *et al.* 2007). Additionally, being a member of a community such as the Roma with lower rates of drunkenness may lead to a higher probability of having friends who drink less. This could reinforce the protective effect of ethnicity, as it also increases the probability of being supported by a best friend to drink less.

The differences in parental monitoring that we found between Roma and non-Roma adolescents echo the finding of Fauth *et al.* (2007), who found that higher levels of parental monitoring in a minority population living in high-poverty neighbourhoods can ultimately lead to less substance use. The same mechanism may also play a role in segregated and separated Roma communities.

Rates of unemployment, dependence on social benefits, poor housing conditions and low education are higher among Roma. This may at least partially explain the differences in risk-behaviour patterns. Low socio-economic position represented by

low education of parents partially explains the ethnic differences in drunkenness among Roma and non-Roma girls (Kolarcik *et al.* 2010). Results from the large cross-national data-set of the HBSC study showed that adolescents from low and medium affluence family backgrounds had a lower risk of regular alcohol use compared with those from high affluence families (Richter *et al.* 2009).

Our study is one of the first comparing recent drunkenness of Roma adolescents with drunkenness in the majority population of the same age. One other study (Gerevich *et al.* 2010) compared Roma adolescents with the majority population, but this concerned lifetime alcohol intoxication of an older group of adolescents in Hungary. Its findings showed significantly higher lifetime prevalence of alcohol intoxication among Roma adolescents compared with their non-Roma counterparts. Apparently, lifetime prevalence is somewhat associated with recent drunkenness, but it may be more sensitive to recall bias. In addition, it might be that Roma on average start drinking alcohol at a higher age, though we have no indications that this is indeed the case. Finally, it might be that either the drinking behaviour of Roma adolescents in Hungary largely differs from that of Roma in Slovakia, or that this applies to the majority population in these two countries. Regarding the latter, the HBSC international report on the 2005/2006 survey shows that among 13-year-olds, 12% of Slovak girls and 16% of Slovak boys have been drunk at least twice compared to 9% of Hungarian girls and 12% of Hungarian boys. This difference then disappeared in 15-year-olds (Currie *et al.* 2008). Regardless, additional research is needed on this topic.

Roma adolescents integrated or living in cities may differ from Roma adolescents living in separated or segregated settlements; thus our results cannot be generalised to the Roma population as a whole.

### ***Strengths and limitations***

The strengths of our study are that it involves a considerable sample of a hard-to-reach population of Roma adolescents and does so with a high response rate. Our sample was representative for Roma adolescents living in settlements and attending regular schools, and we were able to compare them with non-Roma adolescents living in the same geographical area. As Roma are a very heterogeneous group regarding living conditions and levels of integration, our results should be generalised with caution regarding other Roma groups.

A limitation of our study may be that data from the Roma were collected via an interview, and data from non-Roma came via self-reported questionnaires. We can assume that the data on alcohol obtained via an interview can be more affected by social desirability and fear of reprisal, because the level of privacy and anonymity is lower when compared with the administration of self-reported questionnaires (Brener *et al.* 2003). On the other hand, collecting data via an interview enabled us to cope with the illiteracy of Roma adolescents. Moreover, our findings found no influence of social desirability either on parental monitoring and peer influence or on their interaction with ethnicity.

Another potential limitation is that we may have missed some Roma adolescents due to truancy. According to the Ministry of Education, rates of unexcused absences in 2005 were about five times higher among Roma than the average (Ministry of Education Slovak Republic 2008). It seems likely that rates of drunkenness are higher

and parental monitoring is weaker among these absentees, leading to some underestimation of effects among Roma.

Asking about a 4-week recall period regarding drunkenness could lead to culturally specific celebrations or events typical only for Roma or non-Roma being included in period of data collection. The period of the data collection was chosen after consulting experts working in Roma communities and was selected such that occasions were avoided which might be characterised by a higher consumption of alcohol. Moreover, asking respondents a question on drunkenness in the past four weeks is a validated standard approach used worldwide in studies such as HBSC or European School Survey Project on Alcohol and Other Drugs (ESPAD).

### **Implications**

Our study shows that the effects of parents and peers do not differ between Roma and non-Roma adolescents, thus implying that interventions among Roma should focus on maintaining the low peer influence and strong parental monitoring. Moreover, our findings should be replicated in larger studies. These should focus on the way in which parental monitoring and peer influence affect adolescents' drunkenness among different ethnic groups, as our study shows a rather strong but not statistically significant interaction between these factors and ethnicity.

### **Conclusion**

Parental monitoring and peer influence explain some of the lower prevalence of drunkenness among Roma adolescents, but their effects do not vary between Roma and non-Roma adolescents. Interventions should focus on maintaining the low peer influence and strong parental monitoring among Roma adolescents and aim at avoiding an increase in alcohol use in Roma adults.

### **Key messages**

Roma adolescents seem to be significantly more monitored by their parents and being significantly less influenced by their best friends than their non-Roma counterparts.

Parental monitoring and peer influence both seem to affect adolescents' drunkenness but there no significant difference was found in how these two factors contribute to the drunkenness of Roma and non Roma adolescents.

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