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J Interpers Violence published online 6 November 2014

DOI: 10.1177/0886260514556103

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Journal of Interpersonal Violence

1–17

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DOI: 10.1177/0886260514556103

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Abstract

Rates of aggression and delinquency are assumed to be higher among Roma and other minorities, but sound evidence of this is lacking. Our aim was to assess delinquent and aggressive behavior among Roma and non-Roma adolescents and the effects on ethnic differences of parental education and social desirability. We conducted a cross-sectional study among Roma from separated and segregated settlements in the eastern part of Slovakia ($N = 330$; $M_{\text{age}} = 14.50$; interview) and non-Roma adolescents ($N = 722$; $M_{\text{age}} = 14.86$; questionnaire). The effect of ethnicity on antisocial behaviors was analyzed using linear regression (crude) and adjusted for gender, parental education, and social desirability. Adjustment for social desirability diminished the ethnic differences in delinquency ($B = 1.08$; 95% confidence interval [CI] = [2.12, -0.04]), led to an increase in the differences in hostility

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($B = 2.43$; 95% CI = [0.87, 3.99]), and led to the disappearance of differences in physical aggression ($B = 0.45$; 95% CI = [1.14, 2.07]). Parental education did not affect the associations in an important way. Our findings indicate that Roma are not that much different from non-Roma, in terms of antisocial behavior, which contradicts the general perception of Roma. Our findings should be confirmed in other settings.

Keywords

Roma/Gypsy, ethnicity, adolescents, delinquency, aggression, social desirability

Introduction

Juvenile delinquency and aggression constitute a major public health problem due to their impact on the health of both the perpetrators and the victims (Herrenkohl et al., 2000; Krug, Mercy, Dahlberg, & Zwi, 2002; Reingle, Maldonado-Molina, Jennings, & Komro, 2012; Vermeiren, 2003). Regarding the perpetrators, consequences of delinquency and aggression are associated with illness, particularly psychological disorders (e.g., depression), disability, and death later in adulthood (Ruchkin, Kuposov, Vermeiren, & Schwab-Stone, 2003; Shepherd, Shepherd, Newcombe, & Farrington, 2009). Delinquency and aggression have clearly negative consequences for the victims' health and well-being and for society as a whole (Junger, Feder, & Côté, 2007; Krug et al., 2002). The public health impact of delinquency and aggression is likely to increase as prevalence rates have risen since the 1990s in many countries, including Slovakia (McQuoid, 1996; Salagaev, 2004; Šúryová, 2001). Assessment of delinquent behavior and aggression is important for a better understanding of possible mechanisms for their reduction with a further effect on health implications in the population.

Delinquency and aggression are core elements of adolescent antisocial behavior, which mostly seems to develop on two trajectories. The adolescent limited type usually begins in early adolescence, peaks in middle adolescence, and drops significantly with approaching adulthood. The life-course persistent type begins earlier, in childhood, and the people concerned are engaged in antisocial behavior at every stage of life (Moffitt, 1993; Powell, Perreira, & Harris, 2010). Both types of antisocial behavior burden public health, with the heaviest burden being due to the life-course persistent type (Ruchkin et al., 2003; Vermeiren, 2003).

Several theories have been proposed to explain this behavior in terms of both innate factors (i.e., biological explanations) and learned factors, which explain such behavior as a result of social interactions. For example, the

social learning theory pointed out that antisocial behavior might be learned through reinforcement of direct experiences and imitation of aggressive models observed in the environment (Anderson & Kras, 2005; Mercado-Crespo & Mbah, 2013; Nabi & Clark, 2008). The theory of de-individuation suggests that antisocial behaviors are more frequent with increasing anonymity of the individual—for example, in big cities or in crowds (Hughes & Louw, 2013; Kugihara, 2001; Reimann & Zimbardo, 2011; Silke, 2003). A third theory with relevance to the potential aggression and delinquency of Roma is the relative deprivation theory that explains antisocial behavior or aggression as a consequence of the perception that the individual is deprived of his or her rights (relative to others). The resulting frustrations lead to aggression (Finkel & Rule, 1986). In this view, antisocial behavior is not triggered only by social interactions. Probably the most widely used contemporary theoretical framework to explain antisocial, delinquent behavior is based on symbolic interactionism and its combination with labeling mechanisms. Lee, Menard, and Bouffard (2014) introduced the labeling dimension into symbolic interactionism and found support for such enhancement of symbolic interactionism. In their study, they found that the reduced effect of delinquent peers association on delinquency is mediated by the effect of labeling the relationship between prior delinquency and later family attachments. This suggests an amplifying causal loop between labeling, delinquent peers association, and delinquency. Official deviant labeling during adolescence may have major consequences for the further life course, pushing or leading youths on a pathway of blocked structured opportunities and delinquency in young adulthood (Bernburg, Krohn, & Rivera, 2006). Labeling theory focuses on how reactions to deviance may amplify subsequent deviance (K. Kim, 2012).

Delinquency and aggression are often perceived to be more prevalent among racial or ethnic minorities (Barnes, Welte, & Hoffman, 2002; Hawkins, Laub, Lauritsen, & Cothorn, 2000; Jordan & Freiburger, 2010). Most research on aggression and delinquency of minority groups was done in United States on African Americans, Hispanics, or Native Americans (Peterson & Krivo, 2005). Roma have a similar position in the society as African Americans, Hispanics, and Native Americans in the United States, and thus they may be in a comparable situation regarding antisocial behavior studied in minorities in the United States (Barnes et al., 2002; Hawkins et al., 2000; Jordan & Freiburger, 2010; Peterson & Krivo, 2005). Roma have been assumed to be highly delinquent and aggressive, receiving high media attention in several Central and Eastern European (CEE) countries including Slovakia (Kušnierik, 2009; Project on Ethnic Relations, 2000; Terenzani-Stanková, 2009). According to Šuryová (2001), Roma criminality exceeds the average level of criminality of the majority population, but

it is mostly driven by their bad living conditions. However, reliable statistics on the prevalence of adolescent criminality or delinquency among Roma compared with non-Roma do not exist. Higher rates of delinquency among ethnic or racial minorities have been reported in regard to the United States (Barnes et al., 2002; Hawkins et al., 2000; Jordan & Freiburger, 2010). Studies on Blacks, Hispanics, and Asians in that country show these higher rates to be partially an artifact due to differential risks of arrest for crime (Hawkins et al., 2000), sentences being more severe for these minorities (Jordan & Freiburger, 2010), and levels of verbal and physical aggression being higher than among White counterparts (S. Kim, Kamphaus, Orpinas, & Kelder, 2010). Evidence on rates of aggression and delinquency obtained via other sources, such as via self-report, may prevent these biases. Self-reports might be biased. One of such biases is social desirability, which comes into consideration when undesirable behaviors are assessed. In such a situation, the results may be confounded by the respondent's tendency to answer in a socially desirable way (van deMortel, 2008). Social desirability reflects the tendency of the subjects to deny socially undesirable traits and to claim socially desirable ones, and the tendency to say things that place the speaker in a favorable light (Nederhof, 1985). Bardwell and Dimsdale (2001) cited several studies that reported ethnic differences in response bias and therefore such bias should be considered when assessing psychosocial variables and behaviors by self-report.

Our study was inspired by several statements and issues presented in the mass media about Roma as "criminals" without any reliable evidence and with a lack of scientific data that might provide insights into this topic. The aim of our study is to provide a baseline comparison of self-reported delinquent behavior and aggressive behavior among Roma and non-Roma adolescents and to assess the effects of gender, socioeconomic status (SES), and social desirability on differences regarding such behaviors.

Method

Sample and Procedure

We obtained information on antisocial behaviors 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 Roma communities whose children could potentially attend schools. In all, 15 of these schools fulfilled our criteria, though 1 of them was not willing to participate in the study, while the other 14 were willing to participate. From 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 who were trained for our study. A duration of 1 hr was scheduled for each interview; they lasted between 30 and 65 min.

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 neighborhood. We identified 25 such schools in the Košice and Prešov regions of eastern Slovakia and contacted a random sample of 15 of them. Out of those contacted, 11 schools were willing to participate but 2 of these were excluded because they did not have at least one class of eighth and ninth grade that had not been included previously in a research project of our department. The questionnaires were administered during regular class time (45 min) by our research assistants, who had both 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 P.J. Safarik University in Kosice in August 2005. Data were collected from May to 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 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%). This sample comprised 160 boys (48.5%) and 170 girls (51.5%) with ages ranging from 12 to 17 years ($M = 14.50$; $SD = 1.03$). The sample of non-Roma adolescents consisted of 722 elementary school pupils attending the eighth and ninth grades (response 95.9%). This sample comprised 354 boys (53.2%) and 312 (46.8%) girls, with ages ranging from 14 to 17 years ($M = 14.86$; $SD = 0.63$).

Measures

The questionnaires covered *demographic characteristics* (age, gender), *socioeconomic characteristics* (father's and mother's highest completed education, with four levels of education distinguished: elementary education, apprenticeship, secondary education with a leaving certificate, and university education—parental education was used as the only SES indicator because it appeared to be a better predictor than parental unemployment), *social desirability*, and scales assessing *delinquent and aggressive behavior*. All scales were translated from the English original to Slovak by means of a forward-backward procedure (Beaton, Bombardier, Guillemin, & Ferraz, 2000; Guillemin, Bombardier, & Beaton, 1993).

Delinquent behavior was measured by questions on vandalism, violence, and crime against property from the short version of the International Self-Reported Delinquency (ISRD) Study II (Zhang, Benson, & Deng, 2000), an instrument that was developed by criminologists from 15 Western countries. We included 10 items on the frequency of making threats with or using weapons, vandalism, and stealing. Each item has a 5-point answering scale ranging from 1 (*never*) to 5 (*3 and more times in the last year*), yielding a total ranging from 10 to 50 points, with a higher score indicating higher levels of delinquent behavior. The internal consistency of the scale was satisfactory (Cronbach's $\alpha = .79$).

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 individual, representing the instrumental or motor component of the behavior. Hostility consists of feelings of ill will and injustice, representing the cognitive component of the behavior. Respondents were asked to rate each item on a 5-point scale ranging from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*). Total scores were computed and used for analyses. These 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 $\alpha = .79$).

Social desirability is the tendency of respondents to reply in a manner that will be viewed favorably by others. A self-report represents a combination of self-disclosure (factual communication about the self) and self-presentation (information about how one wishes to be regarded). Higher social desirability thus can affect the validity of results. It was measured using the 5-item Social Desirability Response Set (SDRS-5; Hays, Hayashi, & Stewart, 1989). The scale inquires about common situations in which people are prone to respond

favorably (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-type 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 .53, but the mean inter-item correlation (MIIC) was .19. According to Clark and Watson (1995) and Parker, Taylor, and Bagby (2003), consistency is acceptable if the MIIC is above .15.

Statistical Analysis

As the first step, we computed baseline statistics (prevalence rates and means) for the background characteristics and antisocial behaviors of Roma and non-Roma adolescents. We tested the statistical significance of the differences between them by using chi-square tests for categorical variables and *t* tests and *U* tests for continuous variables. Next, linear regression analyses were used to assess whether ethnic differences existed in delinquency, physical aggression, and hostility, and whether these were affected by gender, SES, and social desirability. We used four models for the explanation of ethnic differences in the psychosocial characteristics. Model 1 tested the crude effect of ethnicity on the outcome variables; in Model 2, we added gender; in Model 3, parental education; and in Model 4, social desirability was added to the previous variables. Categorical variables were entered into linear regression models using “dummy variables,” that is, all categories except one (the reference category) were transformed into dichotomous variables, being “1” if the category applied and being “0” otherwise (Blankmeyer, 2006). All analyses were performed using the statistical software SPSS 20.0 for Windows.

Results

Roma parents more frequently had lower education levels when compared with non-Roma parents (Table 1). In general, this reflects the situation of Roma in Slovakia and in the CEE region as a whole. Table 1 also shows that Roma adolescents reported significantly lesser delinquent behavior and lesser physical aggression but more hostility and social desirability when compared with non-Roma adolescents.

Linear regression analyses show a significant effect of Roma ethnicity (Model 1, crude effect) on delinquent behavior, physical aggression, and hostility (Table 2). The effects of ethnicity on delinquency, physical aggression, and hostility remained statistically significant after adjustment for gender. Introduction of parents’ highest education resulted in a decrease in the effect

Table 1. Sociodemographic Characteristics, Self-Reported Delinquency, Aggression, Hostility and Sensitivity for Social Desirability Among Roma and Non-Roma Adolescents.

Categorical Variables	Roma		Non-Roma		p Value
	N = 330	%	N = 722	%	
Gender					
Boys (n, %)	160	48.5	354	53.2	ns ^a
Father's education (n, %)					
Elementary	169	54.2	18	2.6	<.001 ^a
Apprenticeship	116	37.2	144	21.2	
Secondary	20	6.4	328	48.2	
University	7	2.2	190	27.9	
Mother's education (n, %)					
Elementary	231	74.3	32	4.6	<.001 ^a
Apprenticeship	62	19.9	114	16.5	
Secondary	16	5.1	340	49.1	
University	2	0.6	206	29.8	
Parents' highest education (n, %)					
Elementary	154	47.8	9	1.3	<.001 ^a
Apprenticeship	132	41.0	82	11.6	
Secondary	28	8.7	338	47.9	
University	8	2.5	277	39.2	
Continuous Variables					
	M (SD)		M (SD)		p Value
Delinquent behavior (M, SD)	11.42 (2.97)		13.00 (5.28)		<.001 ^b
Physical aggression (M, SD)	22.85 (7.80)		24.09 (7.34)		<.05 ^b
Hostility (M, SD)	22.96 (7.10)		21.68 (6.57)		<.05 ^b
Social desirability (M, SD)	2.17 (1.29)		1.00 (1.08)		<.001 ^c

Note. SD = standard deviation.

^a χ^2 test.

^bMann-Whitney *U* test.

^cStudent's *t* test.

of ethnicity with regard to physical aggression and in a loss of significance of the effect of ethnicity on hostility after the same adjustment.

After introduction of social desirability into the model, the effect estimates changed, however. The effect of Roma ethnicity on delinquency decreased remarkably. Regarding physical aggression, the direction of the ethnicity effect changed and was no longer statistically significant. However, the effect

Table 2. The Effects of Ethnicity on Self-Reported Delinquency, Aggression, and Hostility Between Roma and Non-Roma Adolescents Adjusted for Gender, Parental Educational Level, and Social Desirability in Four Models: β s (B) and 95% Confidence Intervals.

	Delinquent Behavior	Physical Aggression	Hostility
	B (95% CI)	B (95% CI)	B (95% CI)
Model 1			
Roma ethnicity	-1.64 [-2.27, -1.00]***	-1.52 [-2.58, -0.47]**	1.01 [0.06, 1.96]*
Model 2			
Roma ethnicity	-1.57 [-2.19, -0.96]***	-1.42 [-2.41, -0.43]**	0.99 [0.04, 1.93]*
Male gender	2.53 [1.95, 3.12]***	5.18 [4.22, 6.13]***	-0.90 [-1.82, 0.01]
Model 3			
Roma ethnicity	-1.61 [-2.60, -0.63]***	-2.09 [-3.70, -0.49]**	0.80 [-0.72, 2.33]
Male gender	2.54 [1.95, 3.13]***	5.18 [4.22, 6.14]***	-0.90 [-1.81, 0.02]
Parents' education			
Elementary	0	0	0
Apprenticeship	-0.22 [-1.20, 0.77]	-0.18 [-1.41, 1.76]	-0.63 [-2.14, 0.87]
Secondary	-0.20 [-1.42, 1.03]	-0.85 [-2.84, 1.13]	-0.18 [-2.06, 1.70]
University	-0.08 [-1.36, 1.20]	-0.75 [-2.84, 1.35]	-0.80 [-2.79, 1.19]
Model 4			
Roma ethnicity	-1.08 [-2.12, -0.04]*	0.45 [-1.14, 2.07]	2.43 [0.87, 3.99]**
Male gender	2.48 [1.90, 3.07]***	4.87 [3.95, 5.78]***	-1.09 [-1.99, -0.19]*
Parents' education			
Elementary	0	0	0
Apprenticeship	-0.23 [-1.21, 0.75]	0.09 [-1.41, 1.60]	-0.69 [-2.16, 0.77]
Secondary	-0.18 [-1.40, 1.03]	-0.82 [-2.70, 1.07]	-0.25 [-2.09, 1.58]
University	-0.04 [-1.32, 1.24]	-0.48 [-2.47, 1.51]	-0.74 [-2.68, 1.20]
Social desirability	-0.40 [-0.66, -0.15]**	-1.95 [-2.35, -1.56]***	-1.31 [-1.70, -0.92]***

Note. CI = confidence interval.

* $p < .05$. ** $p < .01$. *** $p < .001$.

of Roma ethnicity on hostility increased and gained significance after adjusting for social desirability. Gender and parental education did not affect the association between ethnicity and problematic behavior outcomes in a crucial way; their effect was rather trivial or small. Social desirability proved to be an important confounder of the ethnicity effect on antisocial behavior.

Discussion

The aim of our study was to compare self-reported delinquent behavior and aggressive behavior among the Roma minority and non-Roma adolescents with regard to the effect of gender, SES, and social desirability on the differences. We found that non-Roma adolescents reported more delinquent and physically aggressive behavior than Roma, but that Roma reported more

hostility. Social desirability affected these ethnic differences in an important way. Adjustment for social desirability diminished the ethnic differences in delinquency and physical aggression, with the latter fully disappearing, but increased the differences in hostility.

If we focus on the statement about unadjusted results, we can conclude that Roma adolescents are less delinquent and physically aggressive compared with non-Roma. Taking into account the adjustment for social desirability, we can conclude that Roma are slightly less delinquent and do not differ in physical aggression from non-Roma adolescents. These conclusions both contradict the previous findings on ethnic differences in delinquent behavior, which indicate that minorities are usually more antisocial than the majority, reference group (Barnes et al., 2002; Hawkins et al., 2000; Jordan & Freiburger, 2010). More importantly, this disproves the general opinion regarding Roma adolescents as being much more delinquent or criminal (Kušnierik, 2009; Project on Ethnic Relations, 2000; Šúryová, 2001; Terenzani-Stanková, 2009). The higher tendency for socially desirable responses among the Roma sample leads to lower rates of reported delinquent and aggressive behaviors, which in reality might be on a similar level as among non-Roma adolescents; however, this also suppressed the significant disparity in hostility. Statistical controlling for such a tendency can provide us with an important insight into how it can influence the results and their final interpretation. Such an influence of social desirability on outcomes between culturally diverse samples was shown by Randall, Huo, and Pawelk (1993).

Our findings support the hypothesis that ethnic groups differ regarding antisocial behaviors (Aebi, 2009; Barnes et al., 2002; Eichelsheim et al., 2010; Stevanovic, 2005), but in a direction opposite to what is usually reported. Other studies reported higher delinquency among ethnic minorities compared with the majority population in the United States (Barnes et al., 2002; Hawkins et al., 2000), whereas we found delinquency to be higher among non-Roma, that is, among the majority population. Specifically, Roma are usually assumed to be more delinquent than non-Roma (Šúryová, 2001), but again our study shows the opposite. This discrepancy might be explained by Roma being more prone to answer in a socially desirable way in surveys. In general, the validity of self-reports may differ between the minority and the majority groups (Hawkins et al., 2000). However, data collected in routine databases, such as police crime statistics, may be biased toward over-recording offences committed by Roma (MacDonald, 2001). The results of our adjustments for sensitivity toward social desirability show that the social desirability provides at least some explanation of lower self-report of delinquency, but the over-recording by officials is also likely, taking into account

that Roma being generally highly discriminated against (European Union Agency for Fundamental Rights, 2009).

The higher hostility among Roma might reflect the negative personal experience of Roma people when in contact with non-Roma. The European Union Agency for Fundamental Rights (2009) reported the Roma as the most discriminated against group as surveyed by the European Union Minorities and Discrimination Survey (EU-MIDIS). The Hostility subscale consists of resentment and suspicion items that might be higher among Roma who thus score higher on the Hostility subscale (Buss & Perry, 1992). Higher hostility might also be explained by the application of the relative deprivation theory. Roma might feel frustration regarding the neglect of their subjective rights and needs. As a consequence, they might feel resentment against the non-Roma population, which is blamed for causing, maintaining, and not solving this situation (Finkel & Rule, 1986). Roma youth might acquire this resentment at a young age from their parents, who act as role models in the social learning of this resentment (Anderson & Kras, 2005; Mercado-Crespo & Mbah, 2013; Nabi & Clark, 2008).

Our finding that non-Roma adolescents reported more delinquent and physically aggressive behavior than Roma refutes the dominant idea of high delinquency among Roma, at least in adolescence. Labeling theory considers adolescence as a crucial life period in the formation of a delinquent identity and the repeating of antisocial behavior (Bernburg et al., 2006). It seems that among non-Roma adolescents, it is more likely to “label” problematic individuals, which is demonstrated by the higher proportion of non-Roma reporting antisocial behavior in our study. However, Roma adolescents might be affected by later in life “societal labeling,” which labels Roma as delinquents and which might be manifested in the form of more delinquent behavior among adult Roma. The labeling mechanisms described by Lee et al. (2014) may fuel a process causing antisocial behavior among Roma adolescents to become gradually more frequent as they reach adulthood. Evidently, this requires further confirmation, preferably in research involving the prospective study of the behavior of the adolescents concerned in the future.

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 and we also achieved relatively high response rates in both samples.

Besides these strengths, our study also has some limitations. First, adolescents most engaged in deviant behaviors may not attend school (Aebi, 2009), leading to an underestimation of differences. According to the Ministry of

Education, in 2005, the rates of unexcused absences were about 5 times higher among Roma than the average rate (Ministry of Education Slovak Republic, 2008). Second, self-reporting tends to underestimate the most serious types of delinquency (Aebi, 2009). Finally, we used different approaches to collect data among Roma and 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. This mixed method of data collection was a compromise in the study design that we chose to cope effectively with potential literacy problems and to be sure about a clear understanding of the questions asked among Roma (resulting in more valid responses and complete questionnaires). The effect of the difference in design between Roma and non-Roma on the validity of the comparisons made was analyzed from previous research and found to be decent in favor of acquiring data from a hard-to-reach population, and the expected validity of both methods of data collection was comparable and thus sufficient (Brener, Billy, & Grady, 2003; Brittingham, Tourangeau, & Kay, 1998).

Implications

Our findings challenge the public opinion that Roma adolescents 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 policymakers.

Our results also show that Roma and non-Roma adolescents are very similar with regard to the level of reported antisocial behaviors. Thus, interventions aiming at prevention of antisocial behavior should focus on the entire population, but even then a different approach may be needed for ethnic minorities such as Roma. Whether the latter is the case requires additional study, preferably framed in a longitudinal design following Roma and non-Roma from adolescence to early adulthood and including qualitative assessments. Future research should also focus on other risk factors for delinquency and aggression other than the demographics that were used in our study. It might test important criminological theories in that unique population.

Our survey was conducted in mostly a rural setting; a survey in an urban setting might yield different results, rates of delinquency being generally higher in urban settings (Salagaev, 2004). Thus, our study should be replicated elsewhere, also outside the classic Roma settlements, as Roma communities have been shown to vary in terms of regional settlement patterns, integration levels, economic and social development (Ringold, Orenstein, & Wilkens, 2005), and health (Filadelfiová, Gerbery, & Škobla, 2007; Vaňo & Mészáros, 2004).

Conclusion

Delinquent behavior and physical aggression seem to be reported less frequently by Roma adolescents, but this may be mostly due to social desirability. After adjustment for social desirability, ethnic differences in delinquent behavior and physical aggression diminished or disappeared, and only hostility appeared to be more frequent among Roma adolescents.

Our findings provide a rather new perspective, indicating that Roma, a minority group, are not so different from non-Roma, the majority group, in terms of antisocial behavior. Further research on this sensitive topic is needed. It might support or disprove our findings and give a deeper insight into this issue.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was partially supported by the Research and Development Support Agency (APVV-0032-11), by the Agency of the Slovak Ministry of Education for the Structural Funds of the EU (ITMS: 26220120058 [30%]), and was also partially funded within the framework of the project "Social determinants of health in socially and physically disadvantaged and other groups of population" of the Ministry of Education, Youth and Sports in Czech Republic (CZ.1.07/2.3.00/20.0063).

References

- Aebi, M. F. (2009). Self-reported delinquency surveys in Europe. In R. Zauberman (Ed.), *Self-reported crime and deviance studies in Europe: Current state of knowledge and review of use* (pp. 11-50). Brussels, Belgium: VUB Press.
- Anderson, J. F., & Kras, K. (2005). Revisiting Albert Bandura's social learning theory to better understand and assist victims of intimate personal violence. *Women & Criminal Justice, 17*, 99-124.
- Bardwell, W. A., & Dimsdale, J. E. (2001). The impact of ethnicity and response bias on the self-report of negative affect. *Journal of Applied Biobehavioral Research, 6*, 27-38.
- Barnes, G. M., Welte, J. W., & Hoffman, J. H. (2002). Relationship of alcohol use to delinquency and illicit drug use in adolescents: Gender, age, and racial/ethnic differences. *Journal of Drug Issues, 32*, 153-178.
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine, 25*, 3186-3191.

- Bernburg, J. G., Krohn, M. D., & Rivera, C. J. (2006). Official labeling, criminal embeddedness, and subsequent delinquency: A longitudinal test of labeling theory. *Journal of Research in Crime & Delinquency, 43*, 67-88.
- Blankmeyer, E. (2006). *How robust is linear regression with dummy variables?* Online Submission. Retrieved from <https://digital.library.txstate.edu/handle/10877/4105>
- Bowling, A. (2005). Mode of questionnaire administration can have serious effects on data quality. *Journal of Public Health, 27*, 281-291.
- Brener, N. D., Billy, J., & Grady, W. R. (2003). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health, 33*, 436-457.
- Brittingham, A., Tourangeau, R., & Kay, W. (1998). Reports of smoking in a national survey: Data from screening and detailed interviews, and from self-and interviewer-administered questions. *Annals of Epidemiology, 8*, 393-401.
- Buss, A. H., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology, 63*, 452-459.
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7*, 309-319.
- Eichelsheim, V. I., Buist, K. L., Deković, M., Wissink, I. B., Frijns, T., van Lier Pol, A. C., . . . Meeus, W. H. J. (2010). Associations among the parent-adolescent relationship, aggression and delinquency in different ethnic groups: A replication across two Dutch samples. *Social Psychiatry & Psychiatric Epidemiology, 45*, 293-300.
- European Union Agency for Fundamental Rights. (2009). *Housing conditions of Roma and Travellers in the European Union: Comparative report*. Wien, Austria: Author.
- Filadelfiová, J., Gerbery, D., & Škobla, D. (2007). *Report on the living conditions of Roma in Slovakia*. Bratislava, Slovakia: United Nations Development Programme Regional Bureau for Europe.
- Finkel, S. E., & Rule, J. B. (1986). Relative deprivation and related psychological theories of civil violence: A critical review. *Research in Social Movements, Conflicts and Change, 9*, 47-69.
- Guillemin, F., Bombardier, C., & Beaton, D. (1993). Cross-cultural adaptation of health-related quality of life measures: Literature review and proposed guidelines. *Journal of Clinical Epidemiology, 46*, 1417-1432.
- Hawkins, D. F., Laub, J. H., Lauritsen, J. L., & Cothorn, L. (2000). *Race, ethnicity, and serious and violent juvenile offending*. Washington, DC: Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- Hays, R. D., Hayashi, T., & Stewart, A. L. (1989). A five-item measure of socially desirable response set. *Educational and Psychological Measurement, 49*, 629-636.
- Herrenkohl, T. I., Maguin, E., Hill, K. G., Hawkins, J. D., Abbott, R. D., & Catalano, R. F. (2000). Developmental risk factors for youth violence. *Journal of Adolescent Health, 26*, 176-186.
- Hughes, M., & Louw, J. (2013). Playing games: The salience of social cues and group norms in eliciting aggressive behaviour. *South African Journal of Psychology, 43*, 252-262.

- Jordan, K. L., & Freiburger, T. L. (2010). Examining the impact of race and ethnicity on the sentencing of juveniles in the adult court. *Criminal Justice Policy Review*, 21, 185-201.
- Junger, M., Feder, L., & Côté, S. M. (2007). Policy implications of present knowledge on the development and prevention of physical aggression. *European Journal on Criminal Policy and Research*, 13, 301-326.
- Kim, K. (2012). The role of culture in theories of the intergenerational transmission of violence. *Child & Family Social Work*, 17, 395-405.
- Kim, S., Kamphaus, R. W., Orpinas, P., & Kelder, S. H. (2010). Change in the manifestation of overt aggression during early adolescence: Gender and ethnicity. *School Psychology International*, 31, 95-111.
- Krug, E. G., Mercy, J. A., Dahlberg, L. L., & Zwi, A. B. (2002). The world report on violence and health. *Lancet*, 360, 1083-1088.
- Kugihara, N. (2001). Effects of aggressive behaviour and group size on collective escape in an emergency: A test between a social identity model and deindividuation theory. *British Journal of Social Psychology*, 40, 575-598.
- Kušnierik, J. (2009, August 9). Rómska štatistika [Roma statistics]. *Týždeň*. Retrieved from <http://www.tyzden.sk/nazivo-doma/romska-statistika.html>
- Lee, J., Menard, S., & Bouffard, L. A. (2014). Extending interactional theory: The labeling dimension. *Deviant Behavior*, 35, 1-19.
- MacDonald, Z. (2001). Revisiting the dark figure. *British Journal of Criminology*, 41, 127-149.
- McQuoid, J. (1996). The ISRD study—Self-report findings from N. Ireland. *Journal of Adolescence*, 19, 95-98.
- Mercado-Crespo, M., & Mbah, A. K. (2013). Race and ethnicity, substance use, and physical aggression among U.S. high school students. *Journal of Interpersonal Violence*, 28, 1367-1384.
- Ministry of Education Slovak Republic, 2008. Education of Roma pupils including development of secondary and university education: proposal of conception. Approved by Government of Slovak Republic by resolution No. 206 from April 2, 2008.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674-701.
- Nabi, R. L., & Clark, S. (2008). Exploring the limits of social cognitive theory: Why negatively reinforced behaviors on TV may be modeled anyway. *Journal of Communication*, 58, 407-427.
- Nederhof, A. J. (1985). Methods of coping with social desirability bias: A review. *European Journal of Social Psychology*, 15, 263-280.
- Parker, J. D. A., Taylor, G. J., & Bagby, R. M. (2003). The 20-item Toronto Alexithymia Scale: III. Reliability and factorial validity in a community population. *Journal of Psychosomatic Research*, 55, 269-275.
- Peterson, R. D., & Krivo, L. J. (2005). Macrostructural analyses of race, ethnicity, and violent crime: Recent lessons and new directions for research. *Annual Review of Sociology*, 31, 331-356. doi:10.1146/annurev.soc.31.041304.122308

- Powell, D., Perreira, K. M., & Harris, K. M. (2010). Trajectories of delinquency from adolescence to adulthood. *Youth & Society, 41*, 475-502.
- Project on Ethnic Relations. (2000). *Roma and the law: Demythologizing the Gypsy criminality stereotype*. Princeton, NJ: Author.
- Randall, D. M., Huo, Y. P., & Pawelk, P. (1993). Social desirability bias in cross-cultural ethics research. *The International Journal of Organizational Analysis, 1*, 185-202.
- Reimann, M., & Zimbardo, P. G. (2011). The dark side of social encounters: Prospects for a neuroscience of human evil. *Journal of Neuroscience, Psychology, and Economics, 4*, 174-180.
- Reingle, J. M., Maldonado-Molina, M., Jennings, W. G., & Komro, K. A. (2012). Racial/ethnic differences in trajectories of aggression in a longitudinal sample of high-risk, urban youth. *Journal of Adolescent Health, 51*, 45-52.
- Ringold, D., Orenstein, M. A., & Wilkens, E. (2005). *Roma and the transition in Central and Eastern Europe: Trends and challenges*. Washington, DC: World Bank.
- Ruchkin, V., Kuposov, R., Vermeiren, R., & Schwab-Stone, M. (2003). Psychopathology and age at onset of conduct problems in juvenile delinquents. *Journal of Clinical Psychiatry, 64*, 913-920.
- Salagaev, A. (2004). Juvenile delinquency. In *World youth report 2003* (pp. 188-211). New York, NY: United Nations.
- Shepherd, J. P., Shepherd, I., Newcombe, R. G., & Farrington, D. (2009). Impact of antisocial lifestyle on health: Chronic disability and death by middle age. *Journal of Public Health, 31*, 506-511.
- Silke, A. (2003). Deindividuation, anonymity, and violence: Findings from Northern Ireland. *Journal of Social Psychology, 143*, 493-499.
- Stevanovic, N. (2005). *Does ethnicity matter in juvenile delinquency studies?* (Conference papers). American Sociological Association. Retrieved from http://citation.allacademic.com/meta/p22576_index.html
- Šúryová, E. (2001). Romanians and delinquency. *Sociologia, 33*, 473-490.
- Terenzani-Stanková, M. (2009, October 26). A wall to keep out Roma. *The Slovak Spectator*. Retrieved from http://spectator.sme.sk/articles/view/36901/2/a_wall_to_keep_out_roma.html
- van deMortel, T. F. (2008). Faking it: Social desirability response bias in self-report research. *Australian Journal of Advanced Nursing, 25*, 40-48.
- Vaňo, B., & Mészáros, J. (2004). *Reprodukčné správanie obyvateľstva v obciach s nízkym životným štandardom* [Reproductive behaviour of inhabitants from villages with low living standard]. Bratislava, Slovakia: Infostat.
- Vermeiren, R. (2003). Psychopathology and delinquency in adolescents: A descriptive and developmental perspective. *Clinical Psychology Review, 23*, 277-318.
- Zhang, S., Benson, T., & Deng, X. (2000). A test-retest reliability assessment of the International Self-Report Delinquency Instrument. *Journal of Criminal Justice, 28*, 283-295.

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