Int J Public Health (2016) 61:621–630
DOI 10.1007/s00038-016-0823-y

ORIGINAL ARTICLE

Positive parenting attitudes and practices in three transitional Eastern European countries: Bosnia and Herzegovina, Macedonia and Serbia

Marija Petrovic · Vladimir Vasic · Oliver Petrovic · Milena Santric-Milicevic

Received: 4 October 2015 / Revised: 24 March 2016 / Accepted: 21 April 2016 / Published online: 4 May 2016
© Swiss School of Public Health (SSPH+) 2016

Abstract
Objectives To identify potential predictors of using only non-violent forms of discipline for children aged 2–14 years and of being against physical punishment among Roma and non-Roma parents/caregivers in Eastern European countries with similar cultural-historical backgrounds.
Methods UNICEF Multiple Indicator Cluster Survey data collected in 2010–2011 in Bosnia and Herzegovina, Macedonia and Serbia (total of 9973 respondents) were analysed using multivariate logistic regression modelling with receiver operating characteristic analysis.
Results Approximately 27 % of the respondents practiced only non-violent child discipline. Roma children experienced only non-violent discipline less than half as often as their non-Roma counterparts. Household wealth index and child sex were significant predictors of positive parenting attitudes and practice. For Roma respondents, rural residence also contributed to being against physical punishment.
Conclusions Parents\caregivers from more affluent households are more likely than those who are less affluent to be against physical punishment of children and are more likely to practice only non-violent discipline. Evidence-based interventions are required to support existing positive forms of child rearing. These should target less affluent households from Roma settlements in the studied countries.

Keywords Sociodemographic characteristics · Child disciplining, violence · Roma settlements, Eastern Europe

Introduction

Raising children to become satisfied and successful people is a great and challenging responsibility of parenthood, because children learn from watching others and not only from listening to adults. Most parents and caregivers are not specifically educated to raise children. Parents' and caregivers' child-rearing attitudes and practices are rooted in their knowledge, skills, experience and personality, as well as in the culture, social norms and expectations, and economic and political context of a community (Krug et al. 2002; Smith et al. 2005).

Providing discipline is essential for proper child development and involves a continuous process of teaching a child the difference between appropriate and inappropriate behaviour (Smith et al. 2005). The purpose of discipline is to change an impulsive or instinctive behaviour of a child into a controlled and meaningful behaviour (Smith et al. 2005). Socio-cultural theory and social learning theory emphasize that positive parenting (based on communication, social interaction guidance and secure attachment) is a key to the proper and healthy development of a child (Smith et al. 2005). Further, emotional support creates trustful and meaningful parent–child relationship (Steinberg and Silk 2002; Damsgaard et al. 2014) that will be

Electronic supplementary material The online version of this article (doi:10.1007/s00038-016-0823-y) contains supplementary material, which is available to authorized users.

M. Petrovic (✉) · M. Santric-Milicevic
Institute of Social Medicine, Faculty of Medicine, University of Belgrade, Dr Subotica 15, 11000 Belgrade, Serbia
e-mail: petrovicma@hotmail.com

V. Vasic
Department of Statistics and Mathematics, Faculty of Economics, University of Belgrade, Belgrade, Serbia

O. Petrovic
UNICEF, Kigali, Rwanda

mirrored in child's relationships with others (Smith et al. 2005). Positive parenting relies on setting limits and routines, delivering rewards and punishments, supervising and preventing high-risk situations, teaching mood management and imparting coping skills (Sanders et al. 2014). Some parents use psychological and/or physical force to punish unacceptable behaviour, despite the evidence of its harmful consequences to child health and development, with detrimental effects including coronary and malignant diseases, depression and suicide (Krug et al. 2002; Smith et al. 2005), as well as, intellectual difficulties and high-risk behaviour (Lee et al. 2013; Smith et al. 2005).

The level of child protection has slowly and unequally improved across the globe; this inequality is explained by many factors related to community context and characteristics of parents/caregivers (Barnett et al. 2011; Belsky 1993). In 1989, the UN General Assembly adopted the Convention on the Rights of the Child, which recognizes that parents have the most important role in the bringing up children (United Nations 1989). The Convention has been ratified by 196 countries including Bosnia and Herzegovina, Macedonia and Serbia, who officially committed to protect children from 'all forms of physical or mental violence' (United Nations 2006). Corporal punishment, defined as 'any punishment in which physical force is used and intended to cause some degree of pain or discomfort, however light', is, therefore, opposing the aim of the Convention (United Nations 2006). Current statistics indicates that about 30 % of adults worldwide still think that they should use physical punishment to raise or educate children adequately, and almost one billion children between 2 and 14 years old are exposed to physical punishment by their caregivers on a regular basis (United Nations Children's Fund 2014).

Generations of people in Bosnia and Herzegovina, Macedonia and Serbia, endured a great deal of suffering during the 1990s because of unstable political, social and economic situation associated with the breakup of the former Yugoslavia, and slow reforms of the legal system and other public systems. These three countries have shared the same values and ideology of Balkan patriarchy characterized by dominancy of male authority and rearing the male child to be the future head of the family (Akmatov 2011; Halpern et al. 1996). Parenting style in patriarchal cultures practices high respect of authority and compliance with rules and dependence among the members (Smith et al. 2005), which may include some form of punitive discipline. Culture with traditional values and manners has an important impact on creating acceptable parenting and varies among different countries (Krug et al. 2002; Pinderhughes et al. 2001). Roma population, as a substantial ethnic minority group in these European countries, has its own cultural values, needs and way of living. According to the study of Cook et al. (2013), people of Roma ethnicity across the Europe have some differences, but they mostly live in low socio-economic conditions comparing to non-Roma people. More researches on child rearing in Roma households are needed, since their collectivistic cultural heritage and parenting practices may be influenced by local politics and economics (Penderi and Petrogiannis 2011).

Ecologic theory supports studying family relationships in relation to social, cultural and economic influences that can support or diminish parents' ability to bring up children using positive disciplining practice (Smith et al. 2005). Disciplining methods of male and female children of different age may vary across population groups with regard to their socio-economic and cultural characteristics (Pinderhughes et al. 2001; Smith et al. 2005; United Nations Children's Fund 2010). It is therefore important to explore these demographics in these transitional populations given that these families tend to be of lower socio-economic status. The risk of physical punishment increases in larger families and with lower socio-economic status (Akmatov 2011; Smith et al. 2005). Low educated mothers/primary caregivers and poor families support the attitude that children need to be physically punished to be properly brought up (United Nations Children's Fund 2014). The research in India found no gender differences (Hunter et al. 2000); though boys may be at greater risk for punitive discipline in developing and transitional countries (Akmatov 2011; Smith et al. 2005).

The idea of creating progressive societies in the Eastern European region has led to national and international efforts to encourage positive parenting. In Macedonia and in the Republic of Srpska (a part of Bosnia and Herzegovina) corporal punishment has been fully prohibited, while Bosnia and Herzegovina and Serbia have prohibited corporal punishment in schools and penal institutions and in criminal sentencing (Law on Child Protection of the Former Yugoslav Republic of Macedonia 2013; Global Initiative to End All Corporal Punishment of Children 2015). However, the awareness of citizens of the effectiveness of legal framework for the full prohibition of corporal punishment is also important to sustain its complete implementation. After 70 years, Serbia is legally modernizing family relations through the work on a new Civil Code modelled on European codes.

Inspired by a quote from the poet Johann Wolfgang von Goethe—'If you treat an individual… as if he were what he ought to be and could be, he will become what he ought to be and could be'—this study's purpose was to identify factors that predict use of positive parenting to deal with child's misbehaviour rather than identifying factors predicting the use of negative methods. The study focused on households in Bosnia and Herzegovina, Macedonia and Serbia and included Roma households living in Roma

settlements in these countries. The study's objective was to identify potential predictors of the use of only non-violent methods of discipline for children aged 2–14 years and to highlight the determinants of a parent/caregiver holding an attitude against physical punishment. Furthermore, potential predictors were discussed in the context of a comparison of Roma community with the majority in respective countries and between Roma communities in different countries.

The cross-country comparisons of the use of only non-violent child-rearing approaches and the identification of significant contributing factors are valuable for creating a good environment for positive parenting. The study findings may reinforce effective regional interventions in countries with a similar cultural-historical background.

Methods

Study design and population

This cross-sectional study was based on the secondary analysis of the fourth global round of the Multiple Indicator Cluster Survey (MICS4), which was collected in 2010 and 2011 in Eastern European countries by UNICEF in a participatory approach with national institutions: in Bosnia and Herzegovina, the Agency for Statistics, the Federal Ministry of Health, the Ministry of Health and Social Welfare of the Republic of Srpska and the Institute for Public Health of the Federation; in the former Yugoslav Republic of Macedonia by IPSOS Strategic Plus, the Ministry of Health, the Ministry of Education and Science and the Ministry of Labour and Social Policy; and in the Republic of Serbia by the Statistical Office of the Republic of Serbia.

For studying positive parenting, we used the child discipline module of the MICS4 that embraced attitude against physical punishment and only non-violent disciplining practices. The child discipline module was adapted from the Parent–Child Conflict Tactics Scale (Straus et al. 1998). The household questionnaire that provided data on child discipline in the MICS4 was translated from the English version into the local language where the survey was administered, pre-tested, and modified. To obtain informed consent, trained interviewers explained the purpose of the survey to all participants. In each household, they interviewed parents/caregivers about attitudes against physical punishment and about child disciplining for one randomly selected child. The response rates for the randomly selected households in the six population samples ranged from 85 to 94 %. In total, information on child discipline attitudes and practice was provided by 9973 parents/caregivers (3347 in Bosnia and Herzegovina, 2259 in Macedonia and 4367 in Serbia) and covered 13,903 total children 2–14 years old (5297 in Bosnia and Herzegovina, 3316 in Macedonia and 5290 in Serbia) in the surveyed households, with an average response rate of 81 %. The detailed methodology for the surveys was described in the final reports of Bosnia and Herzegovina Multiple Indicator Cluster Survey 2011–2012 (The Agency for Statistics of Bosnia and Herzegovina et al. 2013), the Republic of Macedonia Multiple Indicator Cluster Survey 2011 (Institute of Public Health of Macedonia et al. 2013) and the Serbia Multiple Indicator Cluster Survey 2010 (Statistical Office of the Republic of Serbia 2011).

Study variables

The study hypothesized that certain sociodemographic characteristics contributed to the parent's/caregiver's attitude and practice towards children's misbehaviour. Independent variables in the study were the following: child age (from 2 to 14 years), child sex (female = 0 and male = 1); type of residence (rural = 0 and urban = 1); education of household head (1 = none; 2 = primary; 3 = secondary; 4 = higher/high); and household wealth index (ranging from 1 = the poorest quintile to 5 = the richest quintile; quintiles are determined separately within the Roma and non-Roma samples), Roma–non-Roma population and country (Bosnia and Herzegovina, Macedonia and Serbia).

The study was concerned with two dependent variables: (1) the attitude of a parent/caregiver about whether a child needs physical punishment to be properly brought up (yes or no), and (2) the practice of child discipline (only non-violent practice or any violent practice). The practice of only non-violent discipline included a parent/caregiver explaining why some behaviour was wrong, taking away privileges or not allowing a child to leave the house and giving a child something else to do (The Agency for Statistics of Bosnia and Herzegovina et al. 2013; Institute of Public Health of Macedonia et al. 2013; Statistical Office of the Republic of Serbia 2011). Any violent practice was considered psychological and/or physical (severe or any) disciplining (The Agency for Statistics of Bosnia and Herzegovina et al. 2013; Institute of Public Health of Macedonia et al. 2013; Statistical Office of the Republic of Serbia 2011).

Statistical analyses

Descriptive statistics and the Chi-square test were used to assess the significant differences across the samples regarding sociodemographic variables and attitudes and practices related to positive parenting methods. The multivariate logistic regression analysis was used in modelling the association between dependent and independent

variable in accordance with the Hosmer and Lemeshow test (Hosmer et al. 2013). After carrying out a series of univariate logistic regression analyses, the significant independent variables (at the level of $p < 0.25$) were involved in the construction of multivariate logistic regression model. For the given multivariate model, the independent variables were taken as relevant if the level of significance was $p < 0.05$. The results of modelling showed the adjusted odds ratios (OR) and 95 % confidence intervals (CI) in both univariate and multivariate model. The receiver operating characteristic (ROC) curve was used to assess the fitness of the constructed multivariate logistic regression model (Hosmer et al. 2013). The area under the curve (AUC) of the ROC provided an overall fitted value of the model on a scale from 0.5 to 1.0 with a corresponding asymptotic 95 % CI; the closer AUC is to one, the better was the predictive accuracy of the model. Statistical analyses were conducted using IBM SPSS Statistics, Version 23.0.

Results

The samples significantly differed on all household variables ($p < 0.001$) (Table 1). There were more boys than girls in the observed households ($p < 0.001$), but the households were similar regarding mean age ($p = 0.617$). Rural areas were more populated in Bosnia and Herzegovina and its Roma settlements than in other samples. More household heads in samples from Roma settlements had only primary education, whereas in the other samples many of the household heads had secondary education. The distribution of households across wealth index quintiles was proportional, with the majority of households at a middle or lower wealth index quintile. Most respondents were against physical punishment (ranging from 66 % in Serbian Roma settlements to 95.4 % in Macedonia), but the range of respondents reporting only non-violent discipline was from 10.8 % (Serbian Roma settlements) to 36 % (Bosnia and Herzegovina) (Table 1).

Potential predictors of a parent's/caregiver's attitude against physical punishment of a child

The ROC curves demonstrate discriminability of the models for the parent's/caregiver's attitude against physical punishment (Appendix 1) in all observed samples ($p < 0.001$ for AUC of models for Bosnia and Herzegovina, Macedonia, Serbia and Roma settlements in Macedonia and Serbia; and $p = 0.002$ for AUC of model for Roma settlements in Bosnia and Herzegovina). Child's sex and age, type of residence and wealth index significantly contribute to the attitude against physical punishment (Table 2). Compared with girls, boys in Roma settlements of Bosnia and Herzegovina and in Bosnia and Herzegovina and Serbia were by 43, 26.9 and 23.3 %, respectively, less likely to have a parent/caregiver who was against physical punishment. In Bosnia and Herzegovina, the odds of a parent/caregiver being against physical punishment decreased by 3.4 % with each 1-year increase in the child's age. Among Roma parents/caregivers in Bosnia and Herzegovina, attitudes against physical punishment were 55 % less common, respectively, in urban than in rural areas. In contrast, in Bosnia and Herzegovina, parents/caregivers who were residents of urban areas were 39.7 % more likely than those in rural parts of the country to hold an attitude against physical punishment. With each one-unit increase of the household wealth index, the odds of having an attitude against physical punishment significantly increased throughout the study area: among parents/caregivers, these odds increased by 13.7 % in Bosnia and Herzegovina, by 52.8 % in Macedonia and by 13 % in Serbia. Among those from Roma settlements, these odds increased by 30.7 % in Macedonia and 24.3 % in Serbia (Table 2). Odds ratios (multivariate model) in Table 2 apply when other variables are held at fixed value.

Potential predictors of practice of only non-violent discipline

The ROC curves show discriminability of the multivariate logistic regression models for the practice of only non-violent discipline (Appendix 2) ($p < 0.001$) for Bosnia and Herzegovina, Macedonia and Serbia. Boys were less likely than girls to be disciplined with only non-violent methods: 31.2 % less likely in Bosnia and Herzegovina, 19.7 % less likely in Macedonia and 21.1 % less likely in Serbia (Table 3). Additionally, with each one-unit increase of the household wealth index, the odds of practicing only non-violent discipline increased by 14 % in Bosnia and Herzegovina. In Macedonia, the odds of practicing only non-violent discipline increased with child maturing (an increase of 4.6 % for each 1-year increase in child's age). In Serbia, the odds of using only non-violent discipline increased by 20.1 % with each one-unit increase in the education level of the household head. The non-violent practice among Roma parents/caregivers in Bosnia and Herzegovina were 42.3 % less likely in urban than in rural areas (Table 3). Odds ratios (multivariate model) in Table 3 apply when other variables are held at fixed value.

Discussion

The current study examined predictors of positive parenting practices in Roma and non-Roma populations in Bosnia

Table 1 Sociodemographic variables among Roma and non-Roma population in Bosnia and Herzegovina, Macedonia and Serbia (UNICEF 2010–2011 Multiple Indicator Cluster Survey)

Variables	Non-Roma population of Bosnia and Herzegovina	Non-Roma population of Macedonia	Non-Roma population of Serbia	Roma population of Bosnia and Herzegovina	Roma population of Macedonia	Roma population of Serbia	Chi-square test *p* value
Child sex, *n* (%)							
Female	1235 (49.2)	796 (46.9)	1476 (48.3)	401 (47.9)	264 (46.9)	650 (49.7)	<0.001
Male	1275 (50.8)	900 (53.1)	1582 (51.7)	436 (52.1)	299 (53.1)	659 (50.3)	
Total	2510 (100)	1696 (100)	3058 (100)	837 (100)	563 (100)	1309 (100)	
Child age							
Mean (sd)	6.67 (3.85)	7.34 (3.98)	5.91 (3.54)	7.85 (3.95)	7.65 (3.89)	6.48 (3.73)	0.617
Type of residence, *n* (%)							
Rural	1638 (65.3)	829 (48.9)	1272 (41.6)	738 (88.2)	0 (0)	485 (37.1)	<0.001
Urban	872 (34.7)	867 (51.1)	1786 (58.4)	99 (11.8)	563 (100)	824 (62.9)	
Total	2510 (100)	1696 (100)	3058 (100)	837 (100)	563 (100)	1309 (100)	
Education of a household head, *n* (%)							
None	37 (1.5)	39 (2.3)	31 (1)	211 (25.2)	80 (14.2)	178 (13.6)	<0.001
Primary	683 (27.2)	668 (39.4)	794 (26)	510 (60.9)	385 (68.4)	947 (72.3)	
Secondary	1533 (61.1)	740 (43.6)	1667 (54.5)	116 (13.9)	93 (16.5)	174 (13.3)	
High(er)	256 (10.2)	248 (14.6)	564 (18.4)	0 (0)	5 (0.9)	10 (0.8)	
Total	2510 (100)	1695 (99.9)	3056 (99.9)	837 (100)	563 (100)	1309 (100)	
Household wealth index (quintiles), *n* (%)							
Poorest	425 (16.9)	326 (19.2)	467 (15.3)	179 (21.4)	111 (19.7)	358 (27.3)	<0.001
Second	491 (19.6)	357 (21)	564 (18.4)	177 (21.1)	115 (20.4)	272 (20.8)	
Middle	534 (21.3)	341 (20.1)	608 (19.9)	160 (19.1)	108 (19.2)	230 (17.6)	
Fourth	496 (19.8)	322 (19)	649 (21.2)	150 (17.9)	122 (21.7)	223 (17)	
Richest	564 (22.5)	350 (20.6)	770 (25.2)	171 (20.4)	107 (19)	226 (17.3)	
Total	2510 (100)	1696 (100)	3058 (100)	837 (100)	563 (100)	1309 (100)	
Attitude against physical punishment, *n* (%)							
Yes	2027 (80.8)	1618 (95.4)	2610 (85.3)	755 (90.2)	500 (88.8)	864 (66)	<0.001
No	326 (13)	54 (3.2)	269 (8.8)	60 (7.2)	56 (9.9)	338 (25.8)	
Total	2353 (93.7)	1672 (98.6)	2879 (94.1)	815 (97.4)	556 (98.8)	1202 (91.8)	
Discipline practice, *n* (%)							
Other than non-violent	1606 (64)	1220 (71.9)	2207 (72.2)	592 (70.7)	469 (83.3)	1167(89.2)	<0.001
Only non-violent	904 (36)	476 (28.1)	851 (27.8)	245 (29.3)	94 (16.7)	142 (10.8)	
Total	2510 (100)	1696 (100)	3058 (100)	837 (100)	563 (100)	1309 (100)	

Table 2 Potential predictors for a parent's/caregiver's attitude against physical punishment of a child among Roma and non-Roma population in Bosnia and Herzegovina, Macedonia and Serbia (UNICEF 2010–2011 Multiple Indicator Cluster Survey)

Population samples	Variables	Univariate logistic regression				Multivariate logistic regression		
		B	SE	Sig.	Odds ratio (95 % confidence intervals)	*B*	Sig.	Odds ratio (95 % confidence intervals)
Non-Roma of Bosnia and Herzegovina	Child sex	−0.315	0.120	0.009	0.730 (0.577–0.924)	−0.314	0.010	0.731 (0.576–0.926)
	Child age	−0.035	0.015	0.021	0.965 (0.937–0.995)	−0.034	0.024	0.966 (0.938–0.996)
	Type of residence	0.499	0.136	0.000	1.646 (1.262–2.148)	0.334	0.024	1.397 (1.044–1.868)
	Education of household head	0.185	0.095	0.051	1.203 (0.999–1.448)	0.018	0.861	1.018 (0.829–1.251)
	Wealth index	0.176	0.043	0.000	1.193 (1.096–1.298)	0.129	0.010	1.137 (1.031–1.255)
Non-Roma of Macedonia	Child sex	−0.185	0.280	0.509	0.831 (0.481–1.438)			
	Child age	0.031	0.036	0.389	1.031 (0.962–1.105)			
	Type of residence	0.526	0.284	0.063	1.692 (0.971–2.950)	−0.164	0.615	0.849 (0.448–1.609)
	Education of household head	0.566	0.199	0.004	1.760 (1.192–2.600)	0.205	0.382	1.227 (0.776–1.941)
	Wealth index	0.448	0.110	0.000	1.565 (1.261–1.942)	0.424	0.002	1.528 (1.166–2.003)
Non-Roma of Serbia	Child sex	−0.245	0.129	0.058	0.783 (0.608–1.009)	−0.265	0.041	0.767 (0.595–0.989)
	Child age	0.025	0.019	0.180	1.025 (0.989–1.063)	0.027	0.151	1.027 (0.990–1.066)
	Type of residence	0.186	0.129	0.148	1.205 (0.936–1.551)	−0.044	0.773	0.957 (0.708–1.292)
	Education of household head	0.198	0.093	0.034	1.219 (1.016–1.463)	0.100	0.352	1.105 (0.895–1.365)
	Wealth index	0.132	0.046	0.004	1.142 (1.044–1.249)	0.122	0.035	1.130 (1.008–1.267)
Roma of Bosnia and Herzegovina	Child sex	−0.558	0.280	0.046	0.572 (0.330–0.991)	−0.562	0.046	0.570 (0.329–0.990)
	Child age	0.008	0.034	0.806	1.008 (0.943–1.078)			
	Type of residence	−0.793	0.334	0.018	0.453 (0.235–0.871)	−0.797	0.017	0.450 (0.233–0.869)
	Education of household head	−0.102	0.218	0.640	0.903 (0.589–1.385)			
	Wealth index	−0.017	0.093	0.856	0.983 (0.819–1.181)			
Roma of Macedonia	Child sex	−0.431	0.290	0.138	0.650 (0.368–1.148)	−0.409	0.164	0.664 (0.373–1.181)
	Child age	0.018	0.037	0.622	1.018 (0.947–1.095)			
	Education of household head	0.700	0.254	0.006	2.013 (1.224–3.311)	0.461	0.095	1.586 (0.923–2.726)
	Wealth index	0.337	0.107	0.002	1.401 (1.136–1.727)	0.267	0.019	1.307 (1.044–1.635)
Roma of Serbia	Child sex	−0.090	0.128	0.483	0.914 (0.710–1.175)			
	Child age	0.020	0.018	0.254	1.020 (0.986–1.056)			
	Type of residence	−0.122	0.134	0.363	0.885 (0.681–1.151)			
	Education of household head	0.351	0.121	0.004	1.420 (1.119–1.802)	0.140	0.285	1.151 (0.889–1.489)
	Wealth index	0.237	0.046	0.000	1.268 (1.158–1.388)	0.218	0.000	1.243 (1.128–1.370)

SE standard error, *Sig.* significance

and Herzegovina, Macedonia and Serbia. Roma children experienced only non-violent discipline less than half as often as their non-Roma counterparts in two of three populations. Household wealth index and child sex were significant predictors of positive parenting attitudes and practice in most populations. For Roma respondents, rural residence also contributed to being against physical punishment.

The present study showed that most of the respondents believed that physical punishment was not necessary to raise their children properly, but that only 27 % practiced only non-violent discipline at home. In comparison to 2005, a study carried out in 2010–2011 reported that the frequency of the use of only non-violent discipline increased in Serbia (from 19 to 27.8 % of children) and in Macedonia (from 22 to 28.1 %), but it declined in Bosnia and Herzegovina (from 57 to 36 %) (Directorate for Economic Planning Bosnia and Herzegovina et al. 2006; State Statistical Office of Macedonia and United Nations Children's Fund 2005; Statistical Office of the Republic of

Table 3 Potential predictors for the only non-violent discipline practice among Roma and non-Roma population in Bosnia and Herzegovina, Macedonia and Serbia (UNICEF 2010–2011 Multiple Indicator Cluster Survey)

Population samples	Variables	Univariate logistic regression				Multivariate logistic regression		
		B	SE	Sig.	Odds ratio (95 % confidence intervals)	*B*	Sig.	Odds ratio (95 % confidence intervals)
Non-Roma of Bosnia and Herzegovina	Child sex	−0.376	0.084	0.000	0.687 (0.583–0.809)	−0.374	0.000	0.688 (0.584–0.812)
	Child age	−0.006	0.011	0.580	0.994 (0.973–1.015)			
	Type of residence	0.264	0.087	0.002	1.302 (1.099–1.543)	0.067	0.487	1.070 (0.885–1.293)
	Education of household head	0.251	0.067	0.000	1.285 (1.127–1.466)	0.123	0.094	1.131 (0.979–1.306)
	Wealth index	0.162	0.030	0.000	1.175 (1.108–1.247)	0.131	0.000	1.140 (1.064–1.221)
Non-Roma of Macedonia	Child sex	−0.218	0.108	0.044	0.804 (0.651–0.994)	−0.220	0.044	0.803 (0.648–0.994)
	Child age	0.036	0.014	0.009	1.036 (1.009–1.064)	0.045	0.001	1.046 (1.018–1.075)
	Type of residence	0.266	0.109	0.014	1.305 (1.054–1.614)	0.188	0.151	1.207 (0.934–1.560)
	Education of household head	0.170	0.073	0.020	1.185 (1.027–1.368)	0.092	0.287	1.096 (0.926–1.297)
	Wealth index	0.100	0.038	0.009	1.106 (1.025–1.192)	0.052	0.299	1.054 (0.955–1.163)
Non-Roma of Serbia	Child sex	−0.223	0.081	0.006	0.800 (0.683–0.937)	−0.237	0.004	0.789 (0.673–0.925)
	Child age	0.019	0.011	0.084	1.020 (0.997–1.042)	0.020	0.072	1.021 (0.998–1.043)
	Type of residence	0.000	0.082	0.999	1.000 (0.852–1.174)			
	Education of household head	0.183	0.059	0.002	1.201 (1.070–1.348)	0.184	0.007	1.202 (1.053–1.373)
	Wealth index	0.049	0.029	0.091	1.050 (0.992–1.111)	0.009	0.793	1.009 (0.945–1.077)
Roma of Bosnia and Herzegovina	Child sex	−0.084	0.152	0.582	0.920 (0.683–1.239)			
	Child age	−0.014	0.019	0.462	0.986 (0.949–1.024)			
	Type of residence	−0.550	0.263	0.037	0.577 (0.345–0.966)	−0.550	0.037	0.577 (0.345–0.966)
	Education of household head	0.119	0.124	0.335	1.127 (0.884–1.436)			
	Wealth index	0.007	0.053	0.891	1.007 (0.908–1.117)			
Roma of Macedonia	Child sex	−0.098	0.226	0.663	0.906 (0.582–1.412)			
	Child age	0.024	0.029	0.419	1.024 (0.967–1.084)			
	Education of household head	0.302	0.192	0.115	1.353 (0.929–1.970)	0.302	0.115	1.353 (0.929–1.970)
	Wealth index	0.034	0.081	0.677	1.034 (0.883–1.211)			
Roma of Serbia	Child sex	−0.079	0.178	0.658	0.924 (0.652–1.310)			
	Child age	0.008	0.024	0.751	1.008 (0.962–1.055)			
	Type of residence	−0.179	0.181	0.322	0.836 (0.586–1.192)			
	Education of household head	−0.046	0.163	0.778	0.955 (0.694–1.314)			
	Wealth index	0.100	0.061	0.099	1.105 (0.981–1.245)	0.100	0.099	1.105 (0.981–1.245)

SE standard error, *Sig.* significance

Serbia and Strategic Marketing Research Agency 2006). The present study found that there were more respondents against physical punishment in Macedonia and fewer in Bosnia and Herzegovina and Serbia. Though previous research found non-violent discipline was the most common approach to disciplining children in countries with middle and low levels of development, cases where only non-violent methods were practiced were extremely rare (Runyan et al. 2010; United Nations Children's Fund 2010). The smallest number of respondents against physical punishment was found in the Roma settlements of Serbia, where one in four respondents had a positive attitude towards physical punishment, similar to the respondents from Djibouti (United Nations Children's Fund 2010). Emotional and stressful behaviour of parents (Belsky et al. 2007; Vittrup et al. 2006), established beliefs in the effects of spanking (Hunter et al. 2000; Wang and Liu 2014) and legal conflicts and cultural models in a

society (Cappa and Khan 2011; Zolotor and Puzia 2010) may explain the discrepancy found between the common nature of the practice of violent discipline and the mainstream belief that physical punishment is not necessary to bring up a child properly.

Consistent with other studies (Akmatov 2011; United Nations Children's Fund 2010), the multivariate models in this study showed that attitudes against physical punishment were significantly more likely when children were female and when the index of household wealth was higher. In the patriarchal tradition of the studied countries, boys were raised to become a resilient heads of their future families, and that might explain why they were more likely to experience physical punishment for their misbehaviour. Other research has found no significant differences in the use of violent discipline by the child's sex (Mulatie 2014; United Nations Children's Fund 2010). Additionally, in Macedonia, as in China and rural India (Hunter et al. 2000; Wang and Liu 2014), the present study found that positive parenting practices expanded as children's age increased.

Wealthier respondents are less likely than poor ones to practice violent discipline, as found in Bosnia and Herzegovina, possibly because they are able to afford help with raising their children or providing additional educational and intellectual stimulation and because poverty increases parental stress (United Nations Children's Fund 2010). Similar odds ratios of influence of wealth on attitudes against physical punishment were obtained in Roma and non-Roma population. The reason for that can be because in Roma sample quintiles were defined within Roma and not all participants.

In our study, rural residence was an important but contradictory predictor for non-Roma and Roma parent's/caregiver's attitude against physical punishment in Bosnia and Herzegovina. Non-Roma respondents from urban parts and wealthier were more likely against physical punishment than their counterparts, maybe because of higher awareness about children rights. Although almost all Roma respondents of Bosnia and Herzegovina (90.2 %) were against physical punishment, respondents from urban areas were less likely against physical punishment than respondents in rural areas. Since most Roma of Bosnia and Herzegovina are in rural parts (88.2 %), the assumption is that their children often work hard with parents in farms to earn money, while in urban areas Roma parents collect money from children who beg at streets. If true, those assumptions point to the barriers to education that Roma children face since children of that age should be in educational settings and not at work. Underlying reasons for disrespect of children rights such as, physical punishment, unawareness of children rights, parents' indifference toward education or the discrimination of Roma children in educational settings, etc., should be appropriately addressed.

The finding that the education level of the household head is significantly related to the use of only non-violent methods of disciplining children in Serbia suggests that once parents/caregivers learn and become skilled in positive parenting, they will not easily return to other methods to deal with their children's misconduct, regardless of the household wealth index. The education of mothers/primary caregivers appears essential in low- and middle-income countries (United Nations Children's Fund 2010).

Study limitations

The study results might be over- or underestimated because of the nature of data, which may reflect respondents' readiness to share information about sensitive issues or the accuracy of their recollection. Further analysis should focus on the factors omitted in this study (e.g. the parent's/caregiver's mental health, substance abuse history, the experience of inter-parental and inter-generational violence and other stressful events). The cross-sectional design of this study allows a conclusion to be drawn only about potential correlates of positive parenting practices in the studied population—not about their causes. The study is based on standardized and validated measurement instruments that maximize comparability of the results with future research. The findings may have important policy implications for the development of culturally sensitive parenting interventions that can improve child development in these transitioning countries.

Implications for policy and practice

The idea of creating progressive societies that practice positive parenting has already been implemented in national and international efforts in Eastern European countries. Attitudes and practices regarding positive parenting are expected to be more advanced in a population where corporal punishment is fully prohibited than in the studied populations. More precisely, Zolotor and Puzia (2010) concluded in the systematic review on impacts of the law against corporal punishment that attitude and practice of physical punishment were declining in countries which ban corporal punishment. Worldwide, there are numerous implemented programmes intending to help parents bring up their children properly. With an increase of knowledge and improvement of parenting skills, parents' confidence and satisfaction grow and their children are better at coping with social and emotional relationships and show better conduct (Sanders et al. 2014). More evidence-based interventions commissioned by institutions

and civic, religious, political, governmental, non-governmental and other interest groups, as well as the media are needed at national and regional levels to sustain the existing positive forms of childrearing at home and in other environments. Specific interventions should target poor households such as those found in Roma settlements in the studied Eastern European countries to strengthen attitudes against physical punishment and to encourage only non-violent discipline. To reinforce the critical mass of households in Eastern European countries that practice only non-violent discipline, it is necessary to carry out child-empowering interventions, provide direct support for positive parenting, and prohibit corporal punishment in communities. The significance of this study is that it provides data on socio-economic disparities that are important for global public health action for positive parenting.

Less affluent parents/caregivers and those with lower levels of education in the studied Eastern European countries need direct support for positive parenting. Positive parenting benefits may be realized over multiple generations (Madden et al. 2015).

Acknowledgments The authors are grateful to UNICEF for the provision of the MICS databases. The author was supported by the Ministry of Education, Science and Technology Development of the Republic of Serbia (Grant No. 175087).

References

Akmatov MK (2011) Child abuse in 28 developing and transitional countries—results from the multiple indicator cluster surveys. Int J Epidemiol 40(1):219–227. doi:10.1093/ije/dyq168

Barnett OW, Miller-Perrin CL, Perrin RD (2011) Family violence across the lifespan, 3rd edn. SAGE Publications Inc, Thousand Oaks

Belsky J (1993) Etiology of child maltreatment: a developmental-ecological analysis. Psychol Bull 114(3):413–434

Belsky J, Bell B, Bradley RH, Stallard N, Stewart-Brown SL (2007) Socioeconomic risk, parenting during the preschool years and child health age 6 years. Eur J Public Health 5:508–513. doi:10.1093/eurpub/ckl261

Cappa C, Khan SM (2011) Current understanding on attitudes towards violent discipline and their impacts on disciplinary practices. Child Abuse Neglect 35:1009–1021

Cook B, Wayne GF, Valentine A, Lessios A, Yeh E (2013) Revisiting the evidence on health and health care disparities among the Roma: a systematic review 2003-2012. Int J Public Health 58:885–911. doi:10.1007/s00038-013-0518-6

Damsgaard MT, Holstein BE, Koushede V (2014) Close relations to parents and emotional symptoms among adolescents: beyond socio-economic impact? Int J Public Health 59:721–726. doi:10.1007/s00038-014-0600-8

Directorate for Economic Planning Bosnia and Herzegovina, Federal Office of Statistics Federation of Bosnia and Herzegovina, Institute of Statistics Republic of Srpska, Ministry of Health Federation of Bosnia and Herzegovina, Ministry of Health and Social Welfare Republic of Srpska, Public Health Institute of Federation of Bosnia and Herzegovina, United Nations Children's Fund (UNICEF). (2006) Bosnia and Herzegovina multiple indicator cluster survey New York, United States UNICEF

Global Initiative to End All Corporal Punishment of Children (2015) Global progress towards prohibiting all corporal punishment. http://www.endcorporalpunishment.org/assets/pdfs/legality-tables/Global%20progress%20table%20(commitment).pdf. Accessed 5 Aug 2015

Halpern JM, Kaser K, Wagner RA (1996) Patriarchy in the Balkans: temporal and cross-cultural approaches. Hist Fam 1(4):425–442. doi:10.1016/S1081-602X(96)90011-1

Hosmer DW, Lemeshow S, Sturdivant RX (2013) Applied logistic regression, 3rd edn. Wiley, Hoboken. doi:10.1002/9781118548387.ch6

Hunter WM, Jain D, Sadowski LS, Sanhueza AI (2000) Risk factors for severe child discipline practices in rural India. J Pediatr Psychol 25(6):435–447. doi:10.1093/jpepsy/25.6.435

Institute of Public Health of Macedonia. Ipsos Strategic Puls. Ministry of Education and Science of Macedonia. Ministry of Labour and Social Policy of Macedonia. United Nations Children's Fund (2013) Macedonia Multiple Indicator Cluster Survey 2011. UNICEF, New York

Krug E, Dahlberg LL, Mercy JA, Zwi AB, Lozano R et al (2002) World report on violence and health. World Health Organization, Geneva

Law on Child Protection of the Former Yugoslav Republic of Macedonia 2013

Lee SJ, Altschul I, Gershoff ET (2013) Does warmth moderate longitudinal associations between maternal spanking and child aggression in early childhood? Dev Psychol 49(11):2017–2028. doi:10.1037/a0031630

Madden V, Domoney J, Aumayer K et al (2015) Intergenerational transmission of parenting: findings from a UK longitudinal study. Eur J Public Health 25(3):1–6. doi:10.1093/eurpub/ckv093

Mulatie M (2014) Parental practices of disciplining children: implications for intervention. Int J Psychol Couns 6(3):22–26. doi:10.5897/IJPC2013.0240

Penderi E, Petrogiannis K (2011) Parental ethnotheories and customs of childrearing in two Roma urban communities in Greece: examining the developmental niche of the 6-year-old child. J Soc Evol Cult Psychol 5(1):32–50. doi:10.1037/h0099276

Pinderhughes EE, Nix R, Foster EM, Jones D (2001) Parenting in context: impact of neighbourhood poverty, residential stability, public services, social networks, and danger on parental behaviours. J Marriage Fam 63(4):941–953. doi:10.1111/j.1741-3737.2001.00941.x

Runyan DK, Shankar V, Hassan F et al (2010) International variations in harsh child discipline. Pediatrics 126:701–711. doi:10.1542/peds.2008-2374

Sanders MR, Kirby JN, Tellegen CL, Day JJ (2014) The Triple P-positive parenting program: a systematic review and meta-analysis of a multi-level system of parenting support. Clin Psychol Rev 34(4):337–357. doi:10.1016/j.cpr.2014.04.003

Smith AB, Gallop MM, Taylor NJ, Marshall KA (2005) The discipline and guidance of children: Messages from research. Children's Issues Centre, University of Otago, the Office of the Children's Commissioner, Dunedin

State Statistical Office of Macedonia and United Nations Children's Fund (UNICEF) (2005) Macedonia multiple indicator cluster survey New York. UNICEF, United States

Statistical Office of the Republic of Serbia (2011) Republic of Serbia Multiple Indicator Cluster Survey 2011, Final Report. Statistical Office of the Republic of Serbia, Belgrade

Statistical office of the Republic of Serbia and Strategic Marketing research Agency (2006) Republic of Serbia Multiple Indicator Cluster Survey 2005, Final Report. Belgrade, Republic of Serbia:

Statistical Office of the Republic of Serbia and Strategic Marketing Research Agency

Steinberg L, Silk JS (2002) Parenting adolescents. In: Bornstein MH (ed), Handbook of parenting: Vol. 1 children and parenting. Lawrence Erlbaum Associates, Inc, Mahwah, pp 103–133

Straus MA, Hamby SL, Finkelhor D et al (1998) Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: development and psychometric data for a national sample of American parents. Child Abuse Neglect 22(4):249–270. doi:10.1016/S0145-2134(97)00174-9

The Agency for Statistics of Bosnia and Herzegovina. The Federal Ministry of Health. The Ministry of Health and Social Welfare of the Republic of Srpska and the Institute for Public Health of the Federation of the Bosnia and Herzegovina (2013) Bosnia and Herzegovina Multiple Indicator Cluster Survey 2011–2012. Final Report. UNICEF, Sarajevo

United Nations (1989) Convention on the Rights of the Child, article 19. United Nations, New York

United Nations (2006) Committee on the rights of the child. General Comment No. 8. Paragraph 11. United Nations, New York

United Nations Children's Fund (2010) Child disciplinary practices at home: evidence from a range of low- and middle-income countries. New York

United Nations Children's Fund (2014) Hidden in plain sight: a statistical analysis of violence against children. United Nations, New York

Vittrup B, Holden GW, Buck J (2006) Attitudes predict the use of physical punishment: a prospective study of the emergence of disciplinary practices. Pediatrics 117(6):2055–2064. doi:10.1542/peds.2005-2204

Wang M, Liu L (2014) Parental harsh discipline in mainland China: prevalence, frequency, and coexistence. Child Abuse Neglect 38(6):1128–1137

Zolotor AJ, Puzia ME (2010) Bans against corporal punishment: a systematic review of the laws, changes in attitudes and behaviours. Child Abuse Review 19:229–247. doi:10.1002/car.1131