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Bullying others and being bullied: findings from the Health Behaviour in School-aged Children (HBSC) study conducted in Albania in 2022

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Abstract

Bullying is a widespread public health concern among adolescents worldwide. Our objective was to assess the prevalence and sociodemographic correlates of bullying others and being bullied among Albanian adolescents. A cross-sectional study conducted in Albania in 2022 included a nationwide representative sample of 5454 schoolchildren aged 11, 13 and 15 years (≈52% girls; response rate: 96%). Data on bullying others and being bullied were gathered, along with sociodemographic factors of adolescents. Binary logistic regression was used to assess the associations of bullying perpetration and victimization with adolescents’ sociodemographic factors. About 7% of adolescents reported bullying others and 8% being bullied at least two or three times a month in the past couple of months preceding the survey. Independent positive correlates were male gender, older age, and higher family affluence (perpetration); age 13, father’s unemployment, and lower family affluence (victimization). Bullying among adolescents in transitional Albania is relatively common, with distinct sociodemographic patterns: perpetration reflects “empowerment”, whereas

victimization signals “vulnerability”. These findings highlight the need for targeted prevention in Albania and comparable transitional settings.

Introduction

Peer violence is widespread among adolescents across countries and cultures, profoundly affecting their health and well-being.^{1,2} School bullying, defined as aggressive, intentional, and repetitive behaviour, carried out without clear provocation, inflicted by one or more students upon others³, is prevalent in many countries worldwide³ including the European region.¹

Bullying has been linked to poor physical health,^{1,3,4} emotional and psychological problems,^{5,6} and impaired academic achievement.^{1,4,6} In adolescents, school bullying has been closely connected to depression, anxiety, and insomnia,⁷ whereas persistent bullying may result in self-harming behaviours.⁸ Moreover, bullying has significant and enduring impacts on victims’ health and overall well-being.^{3,9} Indeed, developmental pathways involving bullying are linked to life trajectories that may include adult experiences of violence, criminal behaviour, and adverse physical and mental health outcomes.^{1,10,11} Thus, regular perpetration or victimization can carry serious health consequences throughout the lifespan.^{1,10,11}

It has been argued that bullying peaks between the ages of 11 and 13, during the transition from primary to secondary school.^{3,12} However, in the European region, age-related bullying patterns indicate little consistency across ages 11, 13, and 15, with no clear universal trends among either boys or girls across countries.¹

Despite the growing body of evidence on bullying across Europe, little is known about its prevalence and sociodemographic patterns in Albania, a country undergoing rapid political, social and educational transition.^{13,14} Transitional contexts such as Albania often amplify vulnerabilities, as shifting family structures, economic uncertainties, and evolving school environments can shape adolescents’ experiences of peer violence in unique ways.¹⁴ Furthermore, in a patriarchal society such as Albania,¹⁵ where gendered power relations strongly influence adolescent interactions,¹⁵ examining bullying may be essential to understand how cultural norms reinforce peer violence and its health consequences.

In this context, the aim of this study was to assess the prevalence and sociodemographic correlates of bullying others and being bullied among Albanian adolescents.

Materials and Methods

Design and study population

This was a cross-sectional study pertinent to the last wave of the Health Behaviour in School-aged Children (HBSC) survey which was conducted in Albania in 2022.¹⁶⁻¹⁸

The study population consisted of a nationwide representative sample of 5454 schoolchildren aged 11,13 and 15 years ($\approx 52\%$ girls; overall response: 96%).^{16,17}

Study methods have been described in detail elsewhere.^{16,17}

Data collection

A structured self-administered anonymous questionnaire included, among other health behavioural factors, information on bullying others (perpetration) and being bullied (victimization), in addition to adolescents' sociodemographic characteristics.¹⁹

Bullying others

Adolescents were asked how often they had taken part in bullying (an) other person(s) at school in the past couple of months, with response options ranging from never to several times a week.¹ In the analysis, bullying others was dichotomized into: ≤ 1 time vs. $\geq 2-3$ times a month. The cut-off of at least two or three times a month in the past couple of months was applied to capture a regular pattern of perpetration.¹

Being bullied

Adolescents were asked how often they had been bullied by (an) other person(s) at school in the past couple of months, with response options ranging from never to several times a week. In the analysis, being bullied was dichotomized into: ≤ 1 time vs. $\geq 2-3$ times a month. Likewise, perpetration, a cut-off of "2-3 times a month or more" was used to capture a regular pattern of victimization.¹

Sociodemographic characteristics included adolescents' gender, place of residence, mother's and father's current employment status, and family affluence scale.^{17,19}

Statistical analysis

Inaccurate and/or missing information ranged from 150 adolescents (for bullying others) to 80 adolescents (for being bullied). Therefore, the final response rate in the sample included in the statistical analyses ranged from about 93% (for bullying perpetration) to around 94% (for bullying victimization).

Fisher's exact test was used to assess the distribution of sociodemographic characteristics (age, residence, parental employment, and family affluence) between adolescents distinguished by bullying status for both perpetration and victimization (Table 1).

Conversely, binary logistic regression was used to assess the association of bullying others (Table 2) and/or being bullied (Table 3) with adolescents' sociodemographic characteristics. Crude (unadjusted) models were initially run, followed by multivariable-adjusted models controlling for all sociodemographic factors in a stepwise backward elimination procedure with a p-value to exit set at $P < 0.10$. Odds ratios (ORs) and their respective 95% confidence intervals (95% CIs) and p-values were calculated. All multivariable-adjusted logistic regression models met the Hosmer-Lemeshow goodness-of-fit test criterion.²⁰

A p-value of ≤ 0.05 was considered as statistically significant for all tests. Statistical Package for the Social Sciences (SPSS, version 19.0) was used for all the statistical analyses.

Results

Prevalence and distribution of bullying others

In this large national sample of Albanian adolescents (Table 1, left panel; $N \approx 5300$), the vast majority reported engaging in bullying others ≤ 1 time per month in the past couple of months preceding the survey. However, about 7% of adolescents reported bullying others at least two or three times a month.

Gender differences were evident for bullying others: boys (10%) were significantly more likely than girls (around 5%) to report bullying others ≥ 2 -3 times per month ($P < 0.01$). Also, age differences were notable: the prevalence of bullying others increased with age (from around 5% at 11 years to almost 10% at 15 years; $P < 0.01$). Residence or parental employment showed no significant differences for bullying others. Conversely, the prevalence of bullying others ≥ 2 -3 times per month was significantly higher among adolescents pertinent to more affluent families than their counterparts belonging to less affluent families (about 8% vs. 6%, respectively; $P < 0.01$).

Prevalence and distribution of being bullied

About 8% of adolescents reported being bullied at least two or three times a month, in the past couple of months preceding the survey (Table 1, right panel). This was significantly higher among adolescents aged 13 years (almost 10%) compared to their eldest (8%) and especially the youngest counterparts (around 7%; overall $P < 0.01$), and in adolescents with unemployed fathers than in those whose fathers were employed (around 12% vs. 8%, $P < 0.01$). Conversely, the difference in family

affluence groupings was marginal, whereas there were no differences regarding the place of residence or maternal employment status.

Correlates of bullying others

In crude logistic regression models (Table 2, upper panel), boys had more than twice the odds of bullying others at least two or three times a month compared to girls (95%CI=1.7-2.6).

Furthermore, there was evidence of a gradient relationship with age: compared with the youngest adolescents, the odds of frequent bullying were about 2.2 times higher among 13-year-olds (95%CI=1.7-2.9) and 1.8 times higher among the eldest participants (95%CI=1.3-2.3). Also, adolescents from more affluent families had almost 40% higher odds of bullying other ≥ 2 -3 times per month than those belonging to less affluent families (95%CI=1.1-1.7). In contrast, residence or parental employment status were not related to the frequency of bullying others.

In multivariable-adjusted logistic regression models controlling for all sociodemographic factors in a backward stepwise manner (lower panel), significant positive correlates of bullying others ≥ 2 -3 times per month included: male gender (OR=2.1, 95%CI=1.7-2.7), older age (OR=2.1, 95%CI=1.6-2.8), and pertinence to more affluent families (OR=1.3, 95%CI=1.0-1.6).

Correlates of being bullied

In crude analysis (Table 3, upper panel), gender was not associated with victimization. Age showed a significant effect, with 13-year-olds exhibiting about 59% higher odds (95%CI=1.2=2.0) of being bullied ≥ 2 -3 times per month compared to the eldest adolescents. Additionally, adolescents whose fathers were unemployed had 50% higher odds (OR=1.1-2.1) of being bullied ≥ 2 -3 times per month compared to those whose fathers were employed. Likewise, adolescents from less affluent families exhibited about 20% higher odds of victimization compared to their more affluent counterparts (95%CI=1.0=1.5).

In multivariable-adjusted models (lower panel), age and father's employment remained significant correlates of victimization. Thirteen-year-olds had higher odds of being bullied compared to 15-year-olds (OR=1.5, 95%CI=1.2-1.9). Also, adolescents with unemployed fathers were more likely to be bullied (OR=1.5, 95%CI=1.1-2.0). Conversely, family affluence showed a marginal effect (OR=1.2), which was not statistically significant ($P>0.05$).

Discussion

Main findings

In this large nationally representative sample of Albanian adolescents, bullying emerged as a significant public health concern with distinct sociodemographic patterns. Approximately 7%-8% of adolescents engaged in or experienced bullying at least two to three times per month in the past two months before the study. Perpetration was more common among boys, older adolescents, and those from more affluent families, underscoring how gender, age, and socioeconomic privilege may reinforce aggressive behaviours in transitional Albania. In contrast, victimization peaked at age 13 and was strongly associated with paternal unemployment, highlighting vulnerability potentially linked to family economic hardship. Notably, place of residence showed no significant effects either for perpetration or victimization, suggesting that bullying dynamics in rapidly urbanizing Albania are shaped less by geography and more by gendered and socioeconomic structures.

Comparison with other countries

A multi-country report including all 44 countries which participated in the last round of HBSC survey conducted in 2021-2022 in Europe, Central Asia and Canada indicated that, on average, 6% of adolescents reported that they had bullied others at least two or three times a month in the past couple of months,¹ which is a bit lower than our estimate among Albanian adolescents (7.4%). This difference is related to a higher prevalence in Albanian boys (10%) compared to the multi-country average of 8%, rather than girls where Albania exhibits a similar prevalence with the average estimate of the multi-country report (5%).¹ Of note, boys reported higher levels of bullying others than girls in most of the 44 HBSC participating countries, especially at age 15.¹ Regarding socioeconomic patterns, differences between low- and high-affluence groups were observed in a minority of HBSC participating countries,¹ where adolescents from low-affluence families reported higher levels of bullying others, as opposed to Albanian adolescents where perpetration was positively linked to family influence. Additionally, globally, studies outside HBSC also show that socioeconomic factors shape bullying differently across contexts, with low-affluence often linked to higher perpetration,²¹ contrasting with our study carried out in Albania where affluence was positively associated with bullying others. This difference may reflect the distinct sociocultural dynamics of a transitional society such as Albania, where family affluence is not necessarily linked to higher parental education, thereby shaping adolescents' experiences of peer violence.²² As for victimization, the multi-country report including all 44 HBSC participating countries indicates that about 11% boys and girls reported they had been bullied at least 2-3 times a month in the past couple of months before the HBSC study.¹ This is somehow higher than our estimate among Albanian adolescents (8%). However, the lack of significant gender-differences in victimization evidenced in our study is compatible with findings in most of HBSC participating

countries.¹ According to the multi-country report,¹ the prevalence of bullying victimization in boys ranged from as low as 2% among 15-year-olds in Belgium (French) and France, to as high as 34% among 11-year-olds in Lithuania.¹ For girls, the prevalence of being bullied ranged from 3% among 15-year-olds in Italy, Portugal and Spain to 33% among 13-year-olds in Lithuania.¹ On the other hand, the highest prevalence of bullying victimization evidenced among 13-year-olds in our study resonates findings from many HBSC participating countries including several former communist countries in Europe (Poland, Romania, Slovakia, and Slovenia).¹ As for the socioeconomic patterns, differences in being bullied between low- and high-affluence groups were reported in only a minority of HBSC participating countries,¹ with adolescents from low-affluence families reporting higher rates of being bullied at school.¹ This is in line with the evidence pertinent to Albanian adolescents included in our study notwithstanding the borderline statistically significant findings.

Study limitations

Several limitations should be acknowledged when interpreting findings of our study. The cross-sectional design precludes causal inference, limiting the ability to determine temporal relationships between sociodemographic factors and adolescents' bullying behaviours. Furthermore, data were derived from self-reported questionnaires, which may be subject to recall bias and especially social desirability effects, potentially underestimating or overestimating the true prevalence of bullying perpetration and victimization. Additionally, our analysis did not include several important contextual variables such as school climate, peer networks, or parental involvement, which may further explain variations in the prevalence of bullying perpetration and victimization. Also, findings of our study may not be generalizable to countries with different sociocultural norms but should be interpreted within the distinctive sociocultural environment in Albania and other similar transitional settings. Nonetheless, in the future, mixed-methods research studies should be conducted to deepen understanding of bullying dynamics in Albania and comparable contexts.

Implications

Our finding on the link of both perpetration and victimization to sociodemographic factors highlights bullying as a structural issue in Albania, and not merely as individual misbehaviour.²³ This aligns with global evidence that bullying contributes to long-term health risks, including anxiety, depression, and poor physical outcomes.¹⁻⁸

Furthermore, the association of bullying perpetration with family affluence in Albania suggests that prevention strategies must go beyond traditional assumptions of vulnerability in low-income groups. From this perspective, schools should integrate socio-ecological approaches that address

peer dynamics across socioeconomic strata, as recommended by recent Albanian intervention studies.¹⁴

Additionally, victimization linked to paternal unemployment highlights the role of family economic hardship in shaping vulnerability in the Albanian context. This finding calls for cross-sectoral policies that combine educational reforms with social protection measures, consistent with Council of Europe recommendations on combating bullying and extremism in Albanian schools.²⁴

At a broader regional and global level, our study contributes by documenting unique patterns in a transitional such as Albania, adding to international literature evidence on bullying dynamics and its variation across cultural contexts. From this standpoint, our study complements findings from HBSC¹ and global school-based student health surveys²¹ by demonstrating how socioeconomic privilege can also reinforce aggression in the Albanian context, challenging global assumptions about affluence and bullying.^{1,21}

Conclusions

In conclusion, findings from our study reveal that bullying in Albania reflects both “empowerment” through perpetration and “vulnerability” through victimization, revealing unique sociocultural dynamics in this transitional context.

Our findings have important implications for targeted and evidence-based prevention strategies across schools and communities to safeguard adolescent health and well-being in Albania and other comparable settings.

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Table 1. Prevalence and sociodemographic distribution of *bullying others* and *being bullied* in the past couple of months in a national sample of Albanian adolescents, 2022.

Sociodemographic characteristics	Left panel: number of times <i>bullying others</i> a month in the past couple of months (N=5304)			Right panel: number of times <i>being bullied</i> a month in the past couple of months (N=5374)		
	≤1 time (N=4914)	≥2-3 times (N=390)	P [†]	≤1 time (N=4936)	≥2-3 times (N=438)	P [†]
Gender:						
Boys	2262 (90.0)*	252 (10.0)	<0.001	2345 (91.6)	215 (8.4)	0.549
Girls	2652 (95.1)	138 (4.9)		2591 (92.1)	223 (7.9)	
<i>Total</i>	<i>4914 (92.6)</i>	<i>390 (7.4)</i>		<i>4936 (91.8)</i>	<i>438 (8.2)</i>	
Age:						
11 years	1641 (95.4)	79 (4.6)	<0.001	1645 (93.4)	117 (6.6)	0.002

13 years	1593 (92.2)	135 (7.8)		1583 (90.1)	173 (9.9)	
15 years	1674 (90.5)	175 (9.5)		1700 (92.0)	148 (8.0)	
Residence:						
Urban areas	3279 (92.5)	264 (7.5)	0.738	3306 (92.1)	283 (7.9)	0.315
Rural areas	1635 (92.8)	126 (7.2)		1630 (91.3)	155 (8.7)	
Father employed:						
Yes	4434 (92.5)	362 (7.5)	0.194	4478 (92.2)	381 (7.8)	0.008
No	439 (94.2)	27 (5.8)		416 (88.5)	54 (11.5)	
Mother employed:						
Yes	3309 (92.5)	267 (7.5)	0.570	3333 (92.1)	285 (7.9)	0.282
No	1551 (93.0)	117 (7.0)		1544 (91.3)	148 (8.7)	
Family affluence:						
Less affluent	2380 (93.7)	161 (6.3)	0.003	2336 (91.1)	227 (8.9)	0.054
More affluent	2411 (91.5)	224 (8.5)		2480 (92.6)	198 (7.4)	

* Absolute numbers and their respective *row* percentages (in parentheses). Discrepancies in the totals are due to the missing covariate values.

† P-values from Fisher's exact test.

Table 2. Association of *bullying others* (≥ 2 -3 times vs. ≤ 1 time a month in the past couple of months) with sociodemographic characteristics of Albanian adolescents; results from binary logistic regression analyses.

Upper panel: crude/unadjusted models			
Sociodemographic factors	OR*	95%CI*	P*
Gender:			
Boys	2.14	1.73-2.65	<0.001
Girls	1.00	reference	
Age:			<0.001 (2)[†]
15 years	2.17	1.65-2.86	<0.001
13 years	1.76	1.32-2.34	<0.001
11 years	1.00	reference	-
Residence:			
Urban areas	1.05	0.84-1.30	0.697
Rural areas	1.00	reference	

Father employed:			
Yes	1.33	0.89-1.99	0.168
No	1.00	reference	
Mother employed:			
Yes	1.07	0.85-1.34	0.558
No	1.00	reference	
Family affluence:			
Less affluent	1.37	1.11-1.70	0.003
More affluent	1.00	reference	
Lower panel: multivariable-adjusted models			
Sociodemographic factors	OR[‡]	95%CI[‡]	P[‡]
Gender:			
Boys	2.15	1.73-2.68	<0.001
Girls	1.00	reference	
Age:			<0.001 (2)[‡]
15 years	2.12	1.60-2.80	<0.001
13 years	1.67	1.25-2.24	<0.001
11 years	1.00	reference	-
Residence:			
Urban areas			
Rural areas			
Father employed:			
Yes			
No			
Mother employed:			
Yes			
No			
Family affluence:			
More affluent	1.28	1.03-1.58	0.025
Less affluent	1.00	reference	

* Odds ratios (ORs: bullying others ≥ 2 -3 times vs. ≤ 1 time a month in the past couple of months) and their respective 95% confidence intervals (95% CIs) and p-values from multivariable-adjusted binary logistic regression models.

† Overall p-value and degrees of freedom (in parenthesis).

‡ ORs and their respective 95% confidence intervals (95% CIs) and p-values from multivariable-adjusted binary logistic regression models. Despite of the crude (unadjusted) results, all sociodemographic factors were entered into the multivariable-adjusted logistic regression models in a stepwise backward elimination procedure with a p-value to exit set at $P < 0.10$. Empty cells indicate variables which were rejected from the final models.

Table 3. Association of *being bullied* (≥ 2 -3 times vs. ≤ 1 time a month in the past couple of months) with sociodemographic characteristics of Albanian adolescents; results from binary logistic regression analyses.

Upper panel: crude/unadjusted models			
Sociodemographic factors	OR*	95%CI*	P*
Gender:			
Boys	1.07	0.88-1.30	0.526
Girls	1.00	reference	
Age:			
11 years	1.22	0.95-1.57	0.116
13 years	1.54	1.20-1.96	<0.001
15 years	1.00	reference	-
Residence:			
Urban areas	0.90	0.73-1.11	0.314
Rural areas	1.00	reference	
Father employed:			
No	1.53	1.13-2.06	0.006
Yes	1.00	reference	
Mother employed:			
No	1.12	0.91-1.38	0.281
Yes	1.00	reference	
Family affluence:			
Less affluent	1.22	1.00-1.49	0.053
More affluent	1.00	reference	

Lower panel: multivariable-adjusted models			
Sociodemographic factors	OR[‡]	95%CI[‡]	P[‡]
Gender:			
Boys			
Girls			
Age:			0.005 (2)[†]
11 years	1.20	0.93-1.55	0.167
13 years	1.51	1.17-1.94	0.001
15 years	1.00	reference	-
Residence:			
Urban areas			
Rural areas			
Father employed:			
No	1.45	1.06-1.99	0.020
Yes	1.00	reference	
Mother employed:			
No			
Yes			
Family affluence:			
Less affluent	1.21	0.98-1.48	0.073
More affluent	1.00	reference	

* Odds ratios (ORs: being bullied ≥ 2 -3 times vs. ≤ 1 time a month in the past couple of months) and their respective 95% confidence intervals (95%CIs) and p-values from multivariable-adjusted binary logistic regression models.

[†] Overall p-value and degrees of freedom (in parenthesis).

[‡] ORs and their respective 95% confidence intervals (95%CIs) and p-values from multivariable-adjusted binary logistic regression models. Despite of the crude (unadjusted) results, all sociodemographic factors were entered into the multivariable-adjusted logistic regression models in a stepwise backward elimination procedure with a p-value to exit set at $P < 0.10$. Empty cells indicate variables which were rejected from the final models.

Ethical approval: The study was approved by the Ethics Committee of Tirana Medical University (approval ID: No.700/1), and all procedures were conducted in accordance with the Declaration of Helsinki. All schoolchildren were informed about the objectives and procedures of the study, as well as the aspects regarding the anonymity of the survey and the subsequent aggregated data analysis.

Data availability statement: The data presented in this study is available upon reasonable request from the corresponding author.

Conflicts of interest: None declared.

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