

## **BULLYING IN ROMANIAN SCHOOL CHILDREN: THE ROLE OF SUBSTANCE ABUSE**

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**ABSTRACT-** School bullying has an increased prevalence worldwide and its negative effects on children's mental health are well documented. Children involved in bullying (as bullies or as victims) tend to experience more mental health problems. These children have higher levels of depression, anxiety or behavioral problems compared to their non-involved peers. Moreover, they tend to have high rates of engaging in health risk behaviors, especially alcohol drinking and smoking cigarettes. The present study aims to test several possible mechanisms through which the involvement in bullying behaviors (as bully or as victim) is related to the experience of negative emotional states in school aged children. The sample included in this study ( $N=4,882$ ) was a national representative sample for Romanian school children included in the Health Behavior in School Children Study (HBSC). We tested several mediation models which could explain the relationship between being a bully and bad temper, using the engagement in risk behavior (weekly drinking and weekly smoking) as possible mediators. Also, we tested if the relationship between being a victim and depression could be explained by engagement in health risk behaviors (weekly drinking). Our results show that involvement in bullying episodes have high prevalence among Romanian children, boys reporting more often being involved in these behaviors (as bully or as victims) compared with girls. The results for the mediation analysis showed that all the mediation models tested are significant. We found that the relationship between being a bully and bad temper was partially mediated by the engagement in weekly drinking and smoking. The relationship between being a victim during bullying episodes and feeling depressed was partially mediated by weekly drinking. Our results support the idea that children involved in bullying episodes might use the engagement in health risk behavior as a coping mechanism for their experience of negative emotional states. Also intervention strategies targeting bullying behaviors should also target the engagement in risky behaviors.

*Keywords-* bullying; victimization; risk behaviors; mental health problems

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## **BULLYING NAS CRIANÇAS ROMENAS: O PAPEL DO ABUSO DE SUBSTÂNCIAS**

**RESUMO** -O bullying nas escolas tem uma grande prevalência a nível mundial e os seus efeitos na saúde mental das crianças estão bem documentados. As crianças envolvidas (vitimizador ou vítima) tendem a experimentar mais problemas de saúde mentais e de se envolver em comportamentos de risco. Usando uma amostra nacional representativa da pesquisa HBSC 2010 ( $N=4\ 882$ ), o presente estudo tem como objetivo testar vários mecanismos através dos quais a participação em comportamentos de bullying está

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relacionado á experiência de estados emocionais negativos. Nós testamos vários modelos de mediação que poderiam explicar a relação entre ser vitimizador e mau temperamento, pela participação em comportamentos de risco (beber e fumar semanalmente). Também testamos se a relação entre ser vítima e sentir-se deprimido(a) poderia ser explicado pelo envolvimento em comportamentos de risco para a saúde (beber semanalmente). Nossos resultados mostram que todos os modelos de mediação são significativos. Encontrámos que a relação entre ser vitimizador e o mau temperamento foi parcialmente mediada por beber semanalmente. A relação entre ser vítima e sentir-se deprimido(a) foi parcialmente mediada por beber semanalmente. Assim, as estratégias de intervenção visando os comportamentos de bullying devem também direcionar-se para o envolvimento em comportamentos de risco.

*Palavras-chave*- bullying; vitimização; comportamentos de risco; problemas de saúde mental

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Bullying is one of the most studied issues among researchers concerned with aggressive behaviors in the school context. Although bullying can occur in various places (e.g. schools, workplace, playground, homes, prisons), the prevalence of this experience is significantly higher in school contexts as compared to out-of-school contexts (Hartjen & Priyadarsini, 2012; Klomek, Marrocco, Kleinman, Schonfeld & Gould, 2007). Bullying in school context is defined as the repetitive and harmful action toward others, with an abuse of power toward those being bullied or victimized (Olweus, 2001). It is considered bullying any deliberate action through which one is repeatedly intimidated, discriminated or treated unfairly by one or more of his/her peers. Additionally, bullying involves an unequal relationship of power between the victim and those who bully. This imbalance of power is highly significant in defining bullying since bullying behaviors do not occur among people of similar level of power. The victim has to be less influential than the aggressor (Olweus, 2001). As emphasized by Rigby (2003), this distinction is essential since a bullied adolescent might experience a higher level of helplessness compared to an adolescent who is aggressed by someone of equal power. Although Olweus's definition has been repeatedly brought into question and although there are researchers arguing that bullying does not necessarily involve the intention to harm the other person, an unequal power between the victim and those who victimize or repeatable bullying behaviors (Rigby, 2002), there is a general consent that bullying involves all three components of Olweus's definition: unequal power, repetitive actions (at least once a week, for a month or more) and the intention to harm (Berger, 2007; Olweus, 2001; Smith & Sharp, 2003).

### **Relationship between involvement in bullying behaviors and the experience of negative emotional states**

Experiences of negative emotional states stress of bullying victims involve increased levels of anxiety, depression and suicidal thinking. Although one might believe that victimized adolescents generally become violent (maybe due to media portrayals of school shooting incidents), most of them confront with major depressive symptoms. Some adolescents are particularly likely to experience depressive symptoms when they get victimized because they blame themselves for the behaviors of others toward them. Graham and Juvonen (1998) have

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shown that sixth and seventh graders who perceived themselves as victimized, made self-blaming attributions for their plight and, as a consequence, felt more depressed than their peers who did not perceived themselves as victimized. Van der Wal, Wit, and Hirasing (2003) have indicated that depression and suicidal ideation is higher among 7th and 8th grade adolescents who were sometimes or frequently bullied, compared to adolescents who were almost never the victims of bullying. Another study has revealed that victims of bullying are 4 times more likely to experience depressive symptoms while bully/victims are 6 to 9 times more likely to confront with depressive symptoms (Dake, Price & Telljohann, 2003). Nansel, Craig, Overpeck, Saluja, and Ruan (2004) conclude that being a victim or a perpetrator of abusive social relationship can lead to a negative impact on youth's physical, emotional and mental health. Saluja, Iachan, Scheidt, Overpeck, Sun, and Giedd (2004) indicate that adolescents who were frequently involved in bullying were more than twice likely to report depressive symptoms compared to those who were not involved in bullying. Bullying was found to be a significant predictor of depression even after controlling for pre-existing risk factors, as revealed by the meta-analysis conducted on 29 longitudinal studies by Ttofi, Farrington, Losel and Loeber (2011). All this research indicates that one important consequence for children involved in bullying behavior can be the experience of internalizing problems (especially, emotional problems like anxiety and depression). Most of these internalizing problems are based on the experience of high levels of negative emotional states.

On the other hand, children and adolescents who have the bully status tend to have higher rates of substance abuse, school problems and mental health problems later in life Tharp-Taylor, Haviland and D'Amico (2009). Farrington (1993) emphasized the fact the bullying can be considered as a part of antisocial behavior. Besides internalizing problems, as mentioned above, bullies tend to have higher rates for externalizing problems such as: ADHD (Schwartz, 2000), conduct disorder (Kokkinos & Panayiotou, 2004) and alcohol use (Nansel et. al., 2004). They also present high levels of physical and verbal aggression (Craig, 1998). Thus, one of the most important features associated with being a perpetrator is the manifestation of externalizing behaviors. Kim, Walden, Harris, Karrass, and Catron (2007) analyzed how the experience of negative emotions is associated with externalizing problems. They conclude that anger consistently emerged as a significant predictor of externalizing problems in school aged children.

### **Substance abuse as a mediator between involvement in bullying behaviors and the experience of negative emotional states**

Early adolescence is a vital period for the development of the future adult. In most cases, if adolescents start smoking at this early age, this behavior will be maintained through adulthood (Akers & Lee, 1996; Chassin, Presson, Rose, & Sherman, 1996). According to Morris, Zhang and Bondy (2006) bullying status was associated with being currently smoking. On the other hand, being a current smoker was not associated with being a victim or a bully-victim. Girls had a much higher chance of involvement in bullying episodes if they were currently smoking. Tharp-Taylor, Haviland and D'Amico (2009) conclude that adolescents who have experienced mental and physical bullying (separate or in combination) had a greater chance for reporting substance abuse (drinking, smoking, or using cannabis) one year later, after controlling for gender, grade level, ethnicity and substance use in the previous year. Also, for adolescents,

online victimization seemed to be independently associated with depression and substance abuse (Mitchell, Ybarra, and Finkelhor, 2007). Children who are bullies tend to have higher rates of substance abuse (alcohol or smoking) compared to victimized or non-involved children (Sourander et al., 2007).

Repetti, Taylor and Seeman (2002) proposed a theoretical model that could explain how children who grow up in abusive environment surrounded by aggression and conflict develop mental health problems in adolescence and young adulthood. One possible mechanism presented was the engagement in health risk behaviors (sexual risky behaviors and substance abuse) that could mediate the relationship between experience of abuse and mental health problems. Only few studies have examined what factors could explain the relationship between perpetration and bullying victimization and the experience of negative emotional states in adolescents (as indicators of internalizing and externalizing problems) (McLaughlin, Hatzenbuehler, & Hilt, 2009; Seeds, Harkness, & Quilty, 2010). By using a representative national sample, the present study seeks to explore how the involvement in health risk behaviors (weekly smoking and drinking) could explain the relationship between involvement in bullying behavior (as a perpetrator or victim) and the experience of negative emotional states. Specifically, our hypotheses were:

H1: The relationship between bullying involvement as perpetrator and the experience of negative emotional states (irritability) in children will be mediated by the engagement in risky behaviors (weekly smoking and drinking).

H2: The relationship between bullying victimization and the experience of negative emotional states (feeling low) will be mediated by the engagement in risky behaviors (weekly drinking).

## METHOD

### *Participants*

The Health Behavior in School Children Survey (HBSC) is a multinational, school-based, cross-sectional survey. Romania has gathered its second data wave during 2009-2010 school year from a representative national sample for school aged children. The final sample consisted from HBSC 2010 sample ( $N=4,882$ ), from which 48,5% were boys, and 51,5% were girls). The age range was from 10 to 16 years old ( $M=13.28$ ,  $SD=1.62$ ). Specifically, 29,2 % were 5<sup>th</sup> grade students, 32,1% were 7<sup>th</sup> grade students and 38,8% were 9<sup>th</sup> grade students.

### *Material*

*Bullying-* Questions about bullying experiences were derived after Olweus Bully/Victim Questionnaire (Olweus, 1994) and were preceded by the following introduction: *Here are some questions about bullying. We say a student is BEING BULLIED when another student, or a group of students, say or do nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she doesn't like. But it is NOT BULLYING when two students of about the same strength quarrel or fight.* Involvement in bullying episodes as perpetrator was assessed by one question that asked respondents to report the frequency with which they bullied others in school and away from school in the last 2 months. Similarly, being bullied was assessed by one question that respondents had to report the frequency with which

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they were bullied in school and away from school in the last 2 months. Response categories were "I haven't . . . ," "once or twice," "sometimes," "about once a week," and "several times a week". All answers were dichotomized and in the following statistical analysis were included only the answers of children who reported bullying others or being bullied sometimes, about once a week and several times a week.

*The experience of negative emotional states-* Two items from the Psychosomatic Scale included in the HBSC survey were used: bad temper (as an indicator of irritability) and feeling low. Students were asked how often in the past 6 months have they felt low ( $M=3.71$ ,  $SD=1.44$ ) and irritable or had a bad temper ( $M=3.57$ ,  $SD=1.47$ ). Responses to these questions ranged from 1= rarely/ never to 5=about once a day. All the answers were dichotomized and the following statistical analysis included only the answers of children who reported those complaints almost every week, more times a week and about once a day.

*Substance abuse-* The frequency of smoking was assessed by one item. Children were asked how often do they smoke cigarettes and the responses categories were "I don't smoke", "less than one time per week", "more than one time per week, but not daily", "daily". One latent variable was created and the following statistical analysis included only the answers of children who reported that they smoke cigarettes more than one time per week or daily (11,3% of respondents). The frequency of drinking was assess through several items which evaluated how often children drank several alcohol types (wine, beer, whisky, aperitifs etc.) and the response categories were "never", "less than once a month", "once a month", "weekly" and "daily". If a child had answered weekly or daily to any of this category it has been considered that he is drinking alcohol weekly. A composite latent score was calculated for each respondent regarding his/hers alcohol consumption and the following statistical analysis included only the answers of children who reported that they drank alcohol weekly or daily (18,5% of respondents).

*Control variables-* Past studies point that there are several socio-demographic factors and external variables that influence the propensity of children to be involved in bullying episodes, their level of mental health problems, as well as the engagement in health risk behaviors and therefore they serve as important control variables in the present study. The socio-demographic factors taken into account were age (which was measured in years) and gender (which was coded as a dummy variable). The external variables taken into account were: the easiness of communication with their parents, which was coded as a dummy variable (high communication quality- responses of easy and very easy- and low communication quality- responses of difficult and very difficult) and easiness of communication with the same sex friends, which was coded as a dummy variable (high communication quality- responses of easy and very easy- and low communication quality- responses of difficult and very difficult).

### *Procedure*

Data analysis was made using SPSS 22 software. The mediation analysis was performed respecting the required steps by Baron & Kenny(1986). Also, we respected the requirements of mediation analysis for dichotomous variables proposed by MacKinnon and Dwyer (1993).All the regression equations have been calculated using by binary logistic regression, since all the variables included in the model were dichotomous.

## RESULTS

### Prevalence of bullying behaviors among Romanian school children

Analyzing the prevalence of bullying behaviors among Romanian school children it can be noticed that these behaviors are well widespread. Table 1 presents the prevalence of involvement in bullying behaviors by age and gender. Descriptive results are weighted and based on non missing data. Overall, 19.8% of boys and 13.9 % girls indicated that they have been bullied at least 2-3 times in the last couple of months. On the other hand, 30.8% of boys and 20.6% of girls indicated that they have bullied others at least 2-3 times in the last couple of months. The present results indicate that the involvement rate in bullying behaviors among Romanian school children is higher than the average involvement rate across several countries across Europe according to HBSC 2010 survey (Currie et al., 2012). For both situations, significant chi-square revealed that there are significant differences between the two genders in involvement in bullying behaviors ( $p<0.05$ ). The highest rates were registered for both behaviors and both genders around the age of 13 years old. Also, as the age increases the involvement rate in bullying behaviors decreases for both genders.

Table 1.

The prevalence of involvement in bullying behaviors by age and gender

|                    |       | 11 years<br>old | $\chi^2$ | 13 years<br>old | $\chi^2$ | 15 years<br>old | $\chi^2$ | Total | $\chi^2$ |
|--------------------|-------|-----------------|----------|-----------------|----------|-----------------|----------|-------|----------|
| Victimization      | Boys  | 19.4            | 9.47**   | 23.4            | 7.77*    | 17.2            | 15.65**  | 19.8  | 30.26**  |
|                    | Girls | 13.3            |          | 17.7            |          | 10.9            |          | 13.9  |          |
| Bullying<br>others | Boys  | 25.7            | 14.56**  | 35.2            | 27.30**  | 30.8            | 38.39**  | 30.8  | 66.45**  |
|                    | Girls | 17.4            |          | 25.5            |          | 18.5            |          | 20.6  |          |

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

### Correlations among variables

Correlations among variables included in the study are presented in Table 2. The mediating role of weekly smoking and drinking between bullying perpetration and irritability required that both bullying perpetration and weekly smoking and drinking were related with irritability, and that bullying perpetration and irritability were related. Likewise, the mediating role of weekly drinking between bullying victimization and feeling low required that both bullying victimization and weekly drinking were related with feeling low, and that bullying victimization and feeling low were interrelated. All correlations between measures of the mediation models were statistically significant. The correlation between two variables can also be interpreted in terms of effect size (Cohen, 1988). The effect sizes of the relations among variables were medium to small ( $r_s - 0.30$ ). Thus, the prerequisites for testing the mediation hypotheses were met (see Baron and Kenny 1986).

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Table 2.  
Correlations among predictor, mediator and outcome variables

|                     | 1      | 2      | 3      | 4      | 5      | 6 |
|---------------------|--------|--------|--------|--------|--------|---|
| Predictor variables |        |        |        |        |        |   |
| 1.Victim            | -      |        |        |        |        |   |
| 2.Bully             | 0.28** | -      |        |        |        |   |
| Mediator variables  |        |        |        |        |        |   |
| 3.Smoking           | -0.01  | 0.09*  | -      |        |        |   |
| 4. Drinking         | 0.04** | 0.16** | 0.27** | -      |        |   |
| Outcome variables   |        |        |        |        |        |   |
| 5. Irritability     | 0.11** | 0.14** | 0.11** | 0.09** | -      |   |
| 6. Feeling low      | 0.14** | 0.12** | 0.05** | 0.05** | 0.47** | - |

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

### Weekly smoking and drinking as mediator between bullying perpetration and Irritability

Statistically, mediation is calculated with three equations: X is considered the causal variable, M is the mediator, and Y is the outcome. a, b, c, and c' are the calculated coefficients between the variables. In order to have a full mediation model, in the first step there has to be a significant relationship between causal variable and the outcome (path c). In step 2, the causal variable has to be a significant relationship between causal variable and the outcome (path b). In step 3, the mediator has to have a significant effect on the outcome variable while controlling the causal variable (path b). In step 4, in order to establish if M completely mediates the X-Y relationship, the effect of X on Y controlling for M should be zero (path c'). If the relationship X-Y remains significant, then M partially mediates the relationship between X-Y. The effects in both step 3 and 4 are estimated in the same equation (Baron and Kenny, 1986). Sobel test was used in order to test the significance of the indirect effects.

Three mediation models were proposed. In Model 1, weekly smoking would be a mediator in the relationship between bullying perpetration and irritability. In Model 2, weekly drinking would be a mediator in the relationship between bullying perpetration and irritability. In Model 3, weekly drinking would be a mediator in the relationship between bullying victimization and feeling low. All models were controlled for the following variables: gender, age, easy of parental communication and same sex close friends.

Table 3 presents the result for the first mediation model. Weekly smoking was a significant predictor for being irritable  $\text{Exp}(B) = 1.62$  (95% CI 1.29-2.02), but the relation between bullying others and being irritable remains significant  $\text{Exp}(B) = 2.20$  (95% CI=1.88-2.59). In this case, weekly smoking partially mediates the relationship between bullying others and being irritable. The indirect effect observed is significant (Sobel=3.03,  $SE=0.07$ ,  $p < 0.001$ ). Nagelkerke's  $R^2$  of 0.09 indicated a weak relationship between prediction and grouping.

Table 3.  
Weekly smoking as mediator between bullying others and being irritable

|      | Term | Predictor | Outcome | B    | SE   | Wald  | p       | Exp(B) |
|------|------|-----------|---------|------|------|-------|---------|--------|
| Mode | a    | X         | M       | 0.49 | 0.11 | 18.80 | <0.0001 | 1.64   |
| 1 1  | b    | M         | Y       | 0.48 | 0.11 | 18.04 | <0.0001 | 1.62   |
|      | c'   | X         | Y       | 0.79 | 0.08 | 94.02 | <0.0001 | 82.20  |
|      | c    | X         | Y       | 0.81 | 0.08 | 99.81 | <0.0001 | 2.25   |

\* Control variables: age, gender, easy communication with mother and father, communication with same sex close friends

Weekly alcohol drinking partially mediated the relationship between bullying others and being irritable  $Exp(B)=1.63$  (95%  $CI=1.35-1.97$ ), but the relation between bullying others and being irritable remains significant  $Exp(B)=2.137$  (95%  $CI=1.819-2.510$ ) (Table 4). Also, in this case the observed indirect effect is significant (Sobel=4.30,  $SE=0.08$ ,  $p<0.001$ ). Nagelkerke's  $R^2$  of 0.09 indicated a weak relationship between prediction and grouping.

Table 4.  
Weekly alcohol drinking as mediator between bullying others and being irritable

|      | Term | Predictor | Outcome | B    | SE   | Wald  | p       | Exp(B) |
|------|------|-----------|---------|------|------|-------|---------|--------|
| Mode | a    | X         | M       | 0.75 | 0.09 | 66.99 | <0.0001 | 2.12   |
| 1 2  | b    | M         | Y       | 0.49 | 0.09 | 25.95 | <0.0001 | 1.33   |
|      | c'   | X         | Y       | 0.75 | 0.08 | 85.29 | <0.0001 | 2.13   |
|      | c    | X         | Y       | 0.81 | 0.08 | 99.81 | <0.0001 | 2.25   |

\* Control variables: age, gender, easy communication with mother and father, communication with same sex close friends

***Weekly alcohol drinking as mediator between bullying victimization and feeling low***

The relationship between bullying victimization and feeling low could be partially explained by the engagement in weekly alcohol drinking (Table 5). The results of the mediation analysis revealed that weekly drinking partially mediates the aforementioned relationship  $Exp(B)=1.47$  (95%  $CI=1.23-1.75$ ). The indirect effect observed is significant (Sobel=2.52,  $SE=0.05$ ,  $p<0.001$ ). Nagelkerke's  $R^2$  of 0.07 indicated a weak relationship between prediction and grouping.

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Table 5.  
Weekly alcohol drinking as mediator between bullying victimization and feeling low

|             | Term | Predictor | Outcome | B    | SE   | Wald  | p       | Exp(B) |
|-------------|------|-----------|---------|------|------|-------|---------|--------|
| Mode<br>1 2 | a    | X         | M       | 0.34 | 0.10 | 9.66  | 0.002   | 1.40   |
|             | b    | M         | Y       | 0.39 | 0.09 | 18.47 | <0.0001 | 1.47   |
|             | c'   | X         | Y       | 0.79 | 0.09 | 76.52 | <0.0001 | 2.20   |
|             | c    | X         | Y       | 0.80 | 0.09 | 80.22 | <0.0001 | 2.24   |

\* Control variables: age, gender, easy communication with mother and father, communication with same sex close friends

## DISCUSSION

The present investigation attempted to extend the existing research on the possible mechanisms that could explain the relationship between involvement in bullying episodes and the experience of negative emotional states. Past research have shown that being a bully perpetrator and being a bullying victim is associated with mental health problems (Craig, 1998, Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999; Mitchell, Ybarra, & Finkelhor, 2007). Our results indicate a significant relationship between being a perpetrator or a victim and the experience of negative emotional states. Being a perpetrator increased 2.25 times the likelihood of manifesting irritability. These results are in line with previous research which indicated that bullies have higher rates of externalizing behaviors (Nansel et al., 2004). Moreover, being a victim in bullying episodes increased 2.24 times the likelihood of feeling low. This negative emotional state could be considered one of the symptoms associated with a depressive episode. Also the initial correlations between variables included in the study indicated that bully status had higher association coefficient with being irritable, and being a victim of perpetration was associated more strongly with complaints of feeling low.

By aiming to investigate if the engagement in risky behaviors during adolescence could explain why children involved in bullying episodes tend to experience higher rates of negative emotional states, the results of the present study bring some new insights in the research field. All three proposed mediational models indicated a partial mediation between the variables. When controlling for gender, age, easy of parental communication and same sex close friends, engaging in weekly smoking and drinking had mediated the relationship between bullying perpetration and being irritable. The standardized regression coefficients between bullying perpetration and feeling irritable decreased significantly when controlling for smoking behaviors. In the second model, the same relationship between the predictor and the outcome decreased significantly when controlling for weekly drinking. Even if the decrease in the relationship between predictor and outcome has been reduced in a significant manner, the whole model explained only around 9% between prediction and the grouping. In line with the aforementioned results, when included in the relationship between bullying victimization and feeling low, the engagement in weekly drinking significantly reduced the relationship between the two. The results support the idea that maybe students engaged in bullying behaviors use

substance abuse as a coping mechanism with the strong emotional feelings that they experience (irritability or sadness) (Simantov, Schoen, & Klein, 2000; Windle & Windle, 1996).

While the present results contribute to the current understanding about the consequences of involvement in bullying behaviors, several limitations of the present study should be mentioned. First of all, this study has used a cross-sectional data, thus the causal inferences about the effects observed are impossible. Future studies should use a longitudinal approach in order to assure a temporal accuracy of the reports of bullying behaviors and mental health problems in school aged children. Also, this approach will allow determining a temporal order in the onset of the questioned problems: involvement in bullying behavior and mental health problems.

Another limit could be due to the validity of the measurement for the outcome variables. We have used a single item as an indicator for the experience of negative emotional states in each mediation models. Further research should use validated measure instruments when assessing aspects associated with adolescents' mental health problems.

Bullying behavior is a widespread phenomenon in schools worldwide. Its consequences on students health has made a priority from finding the right interventions to prevent or to early intervene. The relationships analyzed in the present paper are important first of all because of their immediate effects on children's health and functioning, but they are also important when considering the long term effects. Several studies pointed out that children exposed to violence during childhood tend to have higher rates of alcohol use, substance abuse and mental health problems in adulthood (Dube, Anda, Felitti, Edwards, & Croft, 2002; Widom & Hiller-Sturmhöfel, 2001). Therefore, by identifying that the engagement in health risk behaviors (alcohol drinking and smoking) of children involved in bullying behaviors can represent a possible mechanism through which these children experience negative emotional states, future anti-bullying intervention programs should address the engagement in health risk behaviors and promote alternative functional coping strategies.

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