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## The Mediating Role of Parents and School in Peer Aggression Problems

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TENA VELKI<sup>1</sup>

Starting from the ecological framework, the present study aimed to examine the mediating effects of parental supervision and school climate on the relationship between exosystem variables (time spent with media and perceived neighbourhood dangerousness) and peer aggression problems (peer aggression and victimisation). The participants were 880 primary school students. The data were analysed with multiple regression. The results show that both mediators (parental supervision and school climate) have statistically significant partial mediating effects on peer aggression and victimisation. If students experienced more parental supervision, there was a decrease in the relationship between a) time spent with media and peer aggression, and b) perceived neighbourhood dangerousness and peer aggression and victimisation. Identical findings were obtained for positive school climate. Thus, positive school climate and parental supervision served as protective factors against the negative influence of dangerous neighbourhoods and excessive use of media on peer aggression problems.

**Keywords:** parental supervision, school climate, peer aggression, peer victimisation, media, neighbourhood

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## Posredniška vloga staršev in šole pri vrstniškem nasilju

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TENA VELKI

☞ Izhajajoč iz ekološkega ogrodja, se je ta raziskava usmerila na preučevanje posredniških učinkov starševskega nadzora in šolske klime na razmerje med eksosistemskimi spremenljivkami (čas, namenjen medijem, in zaznava nevarnosti v bližnji okolici) in težavami, povezanimi z vrstniškim nasiljem (vrstniško nasilje in viktimizacija). Raziskava je bila izvedena na vzorcu 880 osnovnošolcev, pri čemer so bili podatki analizirani z multiplo regresijo. Rezultati kažejo, da imajo posredniki in starševski nadzor ter šolska klima statistično pomemben delni posredniški učinek na vrstniško nasilje in viktimizacijo. Če so bili učenci deležni več starševskega nadzora, se je zgodil upad v razmerju med a) časom, namenjenim medijem, in vrstniško agresijo; b) zaznavo nevarnosti v bližnji okolici ter vrstniškim nasiljem in viktimizacijo. Enake ugotovitve smo pridobili glede pozitivne šolske klime. Pozitivna šolska klima in starševski nadzor sta torej služila kot zaščitna dejavnika pred negativnim vplivom nevarnosti v bližnji okolici in pretirano uporabo medijev ob težavah, povezanih z vrstniškim nasiljem.

**Ključne besede:** starševski nadzor, šolska klima, vrstniško nasilje, vrstniška viktimizacija, mediji, bližnja okolica

## Introduction

A significant amount of research deals with the issue of peer violence, but only a limited number addresses the complexity of this phenomenon and applies Bronfenbrenner's ecological approach for empirical testing (Ferrer et al., 2011; Khoury-Kassabri et al., 2004; Kim et al., 2011; Swearer et al., 2006; Velki, 2018; You et al., 2014; Yuhong, 2012). Starting from the definition of peer aggression as all behaviours intended to physically or psychologically hurt or harm another human being (Berkowitz, 1993; Hawley & Vaughn, 2003), the main goal of the aforementioned studies was to explore predictors of peer aggression or peer victimisation.

## Influence of the microsystem on peer violence

According to Bronfenbrenner (1986), a microsystem is the system closest to the child with a direct influence on his/her behaviour. Family and school have been the most frequently investigated microsystems related to peer aggression problems.

Lack of parental supervision or parental monitoring has been confirmed not only as a good predictor of peer aggressive behaviour (Kim et al., 2011; Velki, 2018; Velki & Kuterovac Jagodić, 2015; You et al., 2014) but also good at predicting peer victimisation (Lereya et al., 2013). Nonetheless, a meta-analysis study found the protective effects of positive parenting, including parental supervision, to be generally small to moderate for victims of peer aggression (Lereya et al., 2013). In families in which parental control is poor, children are left alone, and there is no control over their activities or correction of problematic behaviour; consequently, they become more easily involved in peer aggression problems as victims or perpetrators.

Research has consistently shown that school climate is a good predictor of peer aggression (Barboza et al., 2009; Harel-Fisch et al., 2010; Lee, 2011; Petrie, 2014; Swearer et al., 2006) and victimisation at schools (Ferrer et al., 2001; Harel-Fisch et al., 2010; Khoury-Kassabri et al., 2004). Low teacher support predicts both peer aggression and peer victimisation (You et al., 2014). In particular, deficits in the emotional aspect of the school climate are related to children's increasingly aggressive behaviour (Kasen et al., 2004). A child's negative emotional relationship with the teacher increases the likelihood of aggressive behaviour, especially among primary school children (Hanish et al., 2004). If teachers fail to provide social

support to children and fail to participate in their life within the school, an increase in violent behaviour is found (Demaray & Malecki, 2003; Kasen et al., 2004).

### **Distal influence on peer violence**

Although Bronfenbrenner's ecological theory (1986) hypothesises that variables from the distal system (i.e., the exosystem) exert only indirect influence on child behaviour, many researchers have investigated their direct influence; most of them were based on media and community characteristics (Barboza et al., 2009; Bowes et al., 2009; Gentile & Walsh, 2002; Kim et al., 2011; Kuntsche, 2004). For over half a century, media and community have constantly been proven to be important factors in the development of peer aggression (e.g., Aneshensel & Sucoff, 1996; Bandura, 1973; Huesmann & Eron, 1986); accordingly, their indirect influence should be empirically confirmed.

### **Excessive use of media**

The negative effects of excessive use of media are well documented. Generally, exposure to violence through television has been confirmed as a risk factor in the development of violence among children (Barboza et al., 2009; Kim et al., 2011; Kuntsche, 2004; Zimmerman et al., 2005). Moreover, playing violent computer games increases the likelihood of students' engagement in physical confrontations with peers and arguments with their teachers (Barboza et al., 2009; Gentile & Walsh, 2002). Parental restrictions on playing violent games have a positive effect in reducing aggressive behaviour in children (Gentile et al., 2004). Spending large amounts of time browsing the Internet is a risk factor in the development of violent behaviour among children and also for victimisation (Dooley et al., 2009). Parental supervision of internet activities in adolescents resulted in less engagement in chat, social networking, video streaming, and multiplayer online games (Vaala & Bleakley, 2015).

Only a few studies have attempted to empirically investigate the indirect influence of excessive use of media as posited in ecological theory. The mediating role of parental monitoring results in lower exposure to violent media that, consequently, reduces aggressive behaviour in children (Gentile et al., 2014). Parental presence (i.e., their passive supervision) has moderating effects on the relationship between the time spent on three

types of media use and peer aggression; negative relationships between the time spent watching TV, playing computer games and browsing the Internet and peer aggression decreased in the presence of parents (Velki & Kuterovac Jagodić, 2017). Moreover, a positive school climate had a mediating role in the association between watching TV and peer aggression, but not peer victimisation. In the case of students who often watch TV, a positive school climate significantly reduced aggressive behaviour (Barboza et al., 2009).

### **Neighbourhood dangerousness**

Several studies conducted in the USA have shown that exposure to violence in the community is a risk factor in the development of peer aggression and victimisation at schools (Bowes et al., 2009; Bradshaw et al., 2009; Kim et al., 2011; Lambert et al., 2005; Tolan et al., 2003). Even low levels of community violence increase the likelihood of peer aggression problems at schools (Bradshaw et al., 2009). The most significant characteristics of neighbourhoods that adversely affect the development of aggression in children are exposure to violence and high crime rates (Leventhal & Brooks-Gunn, 2000; Trentacosta et al., 2009).

Alongside the direct influence of neighbourhood characteristics on peer aggression, neighbourhood characteristics have an indirect role through a moderating effect of parental supervision. For example, the association between neighbourhood safety and violence in children and adolescents is often indirect, moderated by parental control (Pettit et al., 1999). Furthermore, parental monitoring decreases the effects of exposure to community violence on peer aggression and victimisation by reducing adolescent involvement in deviant behaviours (Low & Espelage, 2014). School climate also has a moderating role: if the school climate is positive, the association between neighbourhood dangerousness and peer aggression (Velki, 2012) and externalising behaviours in adolescents (Gaias et al., 2019) decreases.

As reported above, most previous studies investigate only the direct influence of family and school on peer aggression problems (Bowes et al., 2009; Khoury-Kassabri et al., 2004; Kim et al., 2011; Swearer et al., 2006; You et al., 2014). Although Bronfenbrenner's ecological model (1968) posits mediational influence of closer systems (i.e., microsystems) on the association between the distal system (i.e., exosystem) and the child's behaviour, only a few studies investigate interaction effects of these

systems empirically (Gaias et al., 2019; Low & Espelage, 2014; Pettit et al., 1999; Velki, 2012; 2018; Velki & Kuterovac Jagodić, 2017), and the number of studies that examine mediation effects is even smaller (Barboza et al., 2009; Gentile et al., 2014).

## The Current Study

Starting from Bronfenbrenner's ecological theory of peer aggression (Swearer & Doll, 2001; Swearer & Espelage, 2004), which states that exosystem variables influence students' behaviour only indirectly, that is, through microsystem variables, the goal of the current study was to examine mediation effects of two most frequently investigated microsystems (parents and school) on the relationship between two exosystem variables (media and neighbourhood) and peer aggression and victimisation.

Parental supervision and positive school climate are consistently shown to have a protective role against children's aggressive behaviour and to reduce levels of unwanted behaviour (Hanish et al., 2004; Kasen et al., 2004; Vaala & Bleakley, 2015; Velki, 2018). Some previous studies examined moderation effects (Velki & Kuterova Jagodić, 2017) and mediation effects (Gentile et al., 2014) of parental supervision on the relationship between media use and peer aggression but not peer victimisation. Furthermore, moderation effects (Low & Espelage, 2014; Pettit et al., 1999) of parental supervision on associations between neighbourhood violence and peer aggression and victimisation were tested, but the examination of mediation effects was missing. Only a few studies tested for moderation (but not mediation) effect of school climate on the association between neighbourhood dangerousness and peer aggression (Gaias et al., 2019; Velki, 2012), and none of them addressed peer victimisation. Also, mediating effect of school climate was found only in the association between watching TV and peer aggression (Barboza et al., 2009), but not in connection to peer victimisation or excessive use of other media.

In line with the findings reviewed above, it is hypothesised that:

1. parental supervision has a mediating effect on the relations between two variables from the exosystem (media and neighbourhood) and peer aggression and victimisation
  - a. parental supervision reduces the negative impact of media use, that is, parental supervision makes the association between time spent with media and a) peer aggression and b) peer victimisation weaker
  - b. parental supervision reduces the negative impact of neighbourhood

- dangerousness, that is, parental supervision makes the association between neighbourhood dangerousness and a) peer aggression and b) peer victimisation weaker
2. school climate has a mediating effect on relations between two variables from the exosystem (media and neighbourhood) and peer aggression and victimisation
    - a. a positive school climate reduces the negative impact of media use, that is, a positive school climate makes the association between time spent with media and a) peer aggression and b) peer victimisation weaker
    - b. a positive school climate reduces the negative impact of neighbourhood dangerousness, that is, a positive school climate makes the association between neighbourhood dangerousness and a) peer aggression and b) peer victimisation weaker.

## Method

### Participants

Students from Grades 5 to 8 from six primary schools in the eastern part of Croatia participated in this study with a total number of 880 participants (52% girls). The students' average age was  $M = 12.8$  ( $SD = 1.15$ ) years, ranging from 10 to 15 years old.

### Instruments

**Demographic data.** A general form was used to gather data about study participants, including basic demographic information (e.g., age, gender and grade level).

**Peer Aggression among School Children Questionnaire** (UNŠD; Velki, 2012). This self-assessment instrument measures the level of peer aggression and victimisation; it consists of two scales ( $k = 38$ ). The Scale of Peer Aggression among children measures the frequency of aggression against peers at school, and the Scale of Peer Victimization measures the frequency of aggression experienced at school. The Scale of Peer Aggression among children consists of the Subscale of Aggression among Children in Schools (13 items further divided into the Verbal Aggression subscale ( $k = 6$ ; e.g., *I spread gossip about someone*) and Physical Aggression subscale ( $k = 7$ ; e.g., *I hit or push someone*)) and the Subscale of Electronic

Aggression ( $k = 6$ ; e.g., *I insult others through social networks, like Facebook, Twitter, etc.*). The Scale of Victimization among children consists of the Subscale of Victimization among children in schools (13 items further divided into the Verbal Victimization subscale ( $k = 6$ ) and the Physical Victimization subscale ( $k = 7$ )) and the Subscale of Electronic Victimization ( $k = 6$ ). For this study, only the results on the Subscale of Aggression among Children in Schools and the Subscale of Peer Victimization among Children in Schools were used. The participants were invited to respond to the items by indicating frequency for each act of aggression committed and experienced. A five-point Likert scale was used with '1' meaning 'never', '2' 'rare (a few times per year)', '3' 'sometimes (once a month)', '4' 'frequently (several times per month)', and '5' 'always (nearly every day)'. The result on each subscale was computed as the arithmetic mean of responses to the corresponding items and theoretically ranges from 1 to 5. The internal consistency was high for both the Subscale of Aggression among Children in Schools ( $\alpha = .82$ ) and for the Subscale of Victimization among Children in Schools ( $\alpha = .85$ ).

**Parental Behaviour Questionnaire** (URP29; Keresteš, et al., 2012).

The Parental Behaviour Questionnaire examines the most common behaviour towards the child. There are three versions of the questionnaire: the mother's, the father's and the child's version. Only the child's version of the questionnaire was used. It includes two identical questionnaires: one pertaining to the mother's and the other to the father's behaviour. Each questionnaire consists of 29 items. Participants specify their level of agreement with a described parental behaviour on a 4-point Likert scale where '1' stands for 'not true at all', '2' for 'not very true', '3' for 'quite true', and '4' for 'entirely true'. The result for each subscale was computed as an arithmetic mean of the responses to the corresponding items and theoretically ranges from 1 to 4. The questionnaire has a total of seven subscales: Warmth ( $k = 4$ ), Autonomy ( $k = 4$ ), Intrusiveness ( $k = 4$ ), Supervision ( $k = 4$ ), Permissiveness ( $k = 3$ ), Inductive Reasoning ( $k = 5$ ) and Punishment ( $k = 5$ ). For the purpose of the present study, only the responses obtained on the Supervision subscale (the item example: *He/She knows my friends well*) were used, and the internal consistency was high ( $\alpha = .84$ ).

**Croatian School Climate Survey for students** (HUŠK-U, version for students; Velki, et al., 2014). Croatian School Climate Survey for students measures the overall climate of the school. More specifically, it addresses the sense of safety and belonging to the school, the relationship between teachers and students, learning atmosphere, parental involvement

in school and predicting the future based on education. HUŠK-U consists of 15 items (e.g., *I enjoy learning in my school*). It is a self-assessment scale of agreement employing a five-point Likert scale (ranging from 'strongly agree' to 'strongly disagree') for the specification of participants' level of agreement with the statements. The total score was computed as an arithmetic mean of responses to all items and theoretically ranges from 1 to 5. Larger values indicate a more positive school climate. The internal consistency of the total scale was high ( $\alpha = .92$ ).

**Exposure to the Media Scale** (UM; Velki, 2012). This self-report scale consists of three items related to the amount of time children spend using media (watching TV daily, playing computer games and browsing the Internet weekly). Participants specify the frequency of use of each type of media on a five-point Likert scale (ranging from 'never' to 'more than 10 hours of watching television per day' or 'more than 10 hours of browsing the Internet or playing games per week'). The total score is obtained as an arithmetic mean of answers to all the items and theoretically ranges from 1 to 5. The internal consistency was satisfactory ( $\alpha = .66$ ).

**Scale of Perception of Neighbourhood Dangerousness** (POS; Velki, 2012). This self-report scale consists of six items that measure different types of dangerous situations to which children can be potentially exposed in their neighbourhood (e.g., *There are drugs in my neighbourhood*). On a five-point Likert scale (ranging from 'strongly disagree' to 'strongly agree'), the participants indicated their agreement with the statements on the scale. The total score was computed as an arithmetic mean of responses to all items and theoretically ranges from 1 to 5. The internal consistency of the scale was high ( $\alpha = .81$ ).

## Procedure

Parents were asked to give their written consent for the child's participation in the study at PTA meetings. The main researcher explained the purpose and procedure of the study. Data were collected from students during their regular school hours. All students were informed that they could withdraw at any time. Also, it was made clear that all information collected for the study would be treated confidentially. It took the participants about 45 minutes to complete the questionnaires.

## Results

All calculations relating to variables were based on arithmetic means of the previously described items on the questionnaires and scales. Criteria for the use of parametric statistics and assumptions for regression analysis were met.

**Table 1**

*Descriptive statistics*

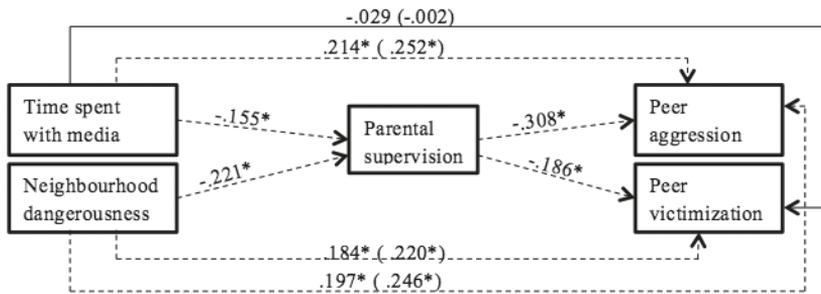
Variable	N	Min	Max	M	SD	Sk	Ku
Peer victimisation	880	1.00	4.54	1.80	.560	1.51	1.62
Peer aggression	880	1.00	4.08	1.40	.381	2.07	3.83
Parental supervision	880	1.00	4.00	3.17	.643	-.73	.10
School climate	880	1.00	5.00	3.67	.782	.52	-.10
Time spent with media	880	1.00	5.00	2.83	.869	.49	-.54
Perceived neighbourhood dangerousness	880	1.00	5.00	1.82	.752	-1.26	1.71

*Note.* N = number of participants, Min = minimal score, Max = maximal score, M = mean, SD = standard deviation, Sk = skewness, Ku = kurtosis.

A series of regression analyses (Figure 1) was run. First, whether time spent with media and neighbourhood dangerousness (independent variables) significantly affected parental supervision (the mediator) was verified ( $F_{(2,878)} = 38.33, p < .001, R^2 = .082$ ). Next, whether the independent variables (time spent with media and neighbourhood dangerousness) significantly affect the dependent variables when parental supervision (mediator) is removed, that is, peer aggression ( $F_{(2,878)} = 70.83, p < .001, R^2 = .141$ ) and peer victimisation was examined ( $F_{(2,878)} = 21.82, p < .001, R^2 = .048$ ). Finally, whether the effect of the independent variables (time spent with media and neighbourhood dangerousness) on the dependent variables (peer aggression and peer victimisation) changed upon the addition of parental supervision to the model was examined (effect on peer aggression  $F_{(3,877)} = 47.21, p < .001, \Delta R^2 = .044$ ; effect on peer victimisation  $F_{(3,877)} = 20.17, p < .001, \Delta R^2 = .022$ ).

**Figure 1**

*Mediation model: parental supervision as a mediator variable in the relationship between two exosystem variables (time spent with media and perceived neighbourhood dangerousness) and peer aggression and victimisation.*



\* $p < .001$ .

Parental supervision had a partially mediating role that resulted in a weakening of the association between peer aggression and a) time spent with media ( $\beta_1 = .252$ ,  $p < .001$ ;  $\beta_2 = .214$ ,  $p < .001$ ) and b) neighbourhood dangerousness ( $\beta_1 = .246$ ,  $p < .001$ ;  $\beta_2 = .197$ ,  $p < .001$ ). Likewise, parental supervision had a partially mediating role that made the association between neighbourhood dangerousness and peer victimisation weaker ( $\beta_1 = .220$ ,  $p < .001$ ;  $\beta_2 = .184$ ,  $p < .001$ ). No statistically significant association between time spent with media and peer victimisation was found; hence, a mediating effect test was not performed. The mediating role of parental supervision was statistically significant for all significant associations (Sobel and Goodman tests, Table 2) and, according to Preacher and Kelley (2011), the effect size of parental supervision was medium.

**Table 2**

*Findings on the mediating role of parental supervision and its effect size*

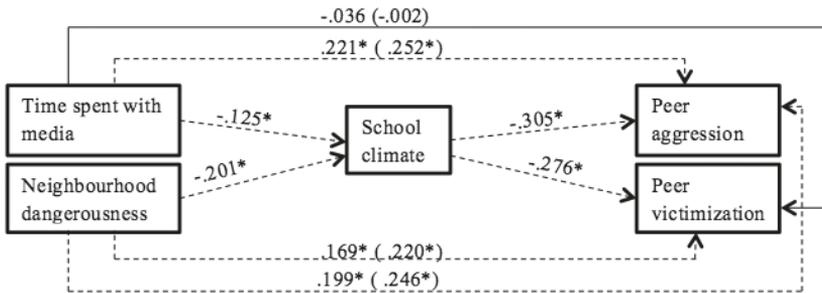
Associations	Sobel test	SE	Goodman test	SE	$\kappa^2$
<i>peer aggression</i>					
time spent with media	3.92*	.004	3.95*	.004	.035
perceived neighbourhood dangerousness	4.81*	.005	4.83*	.005	.049
<i>peer victimisation</i>					
time spent using media	-	-	-	-	-
perceived neighbourhood dangerousness	3.71*	.007	3.73*	.007	.034

Note.  $\kappa^2$  = effect size, SE = standard error. \* $p < .001$

The independent variables (time spent with media and neighbourhood dangerousness) significantly affected not only the school climate ( $F_{(2,878)} = 28.83, p < .001, R^2 = .063$ ) but also the dependent variables, peer aggression ( $F_{(2,878)} = 70.83, p < .001, R^2 = .141$ ) and peer victimisation ( $F_{(2,878)} = 21.82, p < .001, R^2 = .048$ ) when the school climate (mediator) was removed from the model. The effect of the independent variables on the dependent variables changed upon the addition of school climate (mediator) to the model (Figure 2), both on peer aggression ( $F_{(3,877)} = 52.87, p < .001, \Delta R^2 = .050$ ) and peer victimisation ( $F_{(3,877)} = 54.94, p < .001, \Delta R^2 = .057$ ).

**Figure 2**

*Mediation model: school climate as a mediator variable in the relationship between two exosystem variables (time spent with media and neighbourhood dangerousness) and peer aggression and victimisation.*



\* $p < .001$ .

School climate had a partially mediating role that resulted in a weakening of the association between peer aggression and a) time spent with media ( $\beta_1 = .252, p < .001; \beta_2 = .221, p < .001$ ), and b) neighbourhood dangerousness ( $\beta_1 = .246, p < .001; \beta_2 = .199, p < .001$ ). Likewise, school climate had a partially mediating role that made the association between neighbourhood dangerousness and peer victimisation weaker ( $\beta_1 = .220, p < .001; \beta_2 = .169, p < .001$ ). No statistically significant association between time spent with media and peer victimisation was found. The mediating role of school climate was statistically significant for all significant associations and had a medium effect size (Table 3).

**Table 3***Findings on the mediating role of school climate and its effect size*

Associations	Sobel test	SE	Goodman test	SE	$\kappa^2$
<i>peer aggression</i>					
time spent with media	3.36*	.004	3.39*	.004	.030
neighbourhood dangerousness	4.66*	.005	4.69*	.005	.047
<i>peer victimisation</i>					
time spent with media	-	-	-	-	-
neighbourhood dangerousness	4.63*	.008	4.66*	.008	.049

Note.  $\kappa^2$  = effect size, SE = standard error. \* $p < .001$

## Discussion

In Bronfenbrenner's ecological theory of peer aggression (Swearer & Doll, 2001; Swearer & Espelage, 2004), distal systems (e.g., exosystem and macrosystem) have an indirect influence on children's behaviour through a closer system (e.g., microsystem). Children's reactions to certain situations are surely dependent not only on what they learn from media or see in their community but also on how the related information and knowledge is processed within their close environments (e.g., family and school). Depending on the feedback received from parents and teachers, everyday events related to media and neighbourhood could be understood and interpreted differently and lead to choices of actions in accordance with these interpretations. It is the children's parents and teachers who emerge as mediators when attempting to explain the indirect influence of community and media on their behaviour.

In line with the first hypothesis, the mediation effects of parental supervision were examined. Regarding the distal influence of media, parental supervision had a partially mediating effect with a medium effect size only on the association between time spent with media and peer aggression, not peer victimisation. The findings are consistent with previous research in which more exposure to violent media was reported to predict peer aggression, but not victimisation (Barboza et al., 2009; Gentile & Walsh, 2002). Continuous exposure to aggressive content in the media could change an individual's attitudes towards aggression and teach aggressive behaviour. Children do not comprehend the negative consequences of violent behaviour from exposure to violence in the media. Instead, from the media,

they receive the message that a goal can easily be achieved with aggressive behaviour (even heroes, 'good guys', use extremely violent strategies to achieve positive goals), and, later, transfer such experiences to school situations. A decrease in aggressive behaviour is accomplished by limiting time spent on violent media content and by monitoring and explaining negative effects of media violence (Gentile et al., 2004; Vaala & Bleakley, 2015). This finding is supported by the present study, which points at a significant mediation effect of parental supervision.

Regarding the distal influence of the neighbourhood, a partially mediating role of parental supervision was obtained for associations between neighbourhood dangerousness and both dependent variables (peer aggression and victimisation), again with a medium effect size. Parental supervision buffers the association between neighbourhood dangerousness and peer aggression and victimisation. In line with previous studies, living in dangerous neighbourhoods characterised by high levels of aggression and criminality is a strong predictor of peer aggression and victimisation (Bradshaw et al., 2009; Bowes et al., 2009; Lambert et al., 2005; Tolan et al., 2003). In dangerous communities, children are likely to observe conflicts on a daily basis and learn that violence is a suitable way to deal with problems. Although school is a relatively safe place, according to Bandura's theory of social learning, children transfer these aggressive behaviours to school situations and react excessively violently at the slightest sign of potential danger. Unfortunately, some children become victims of violence in their community and transfer submissive behaviour to school contexts, which makes them easy victims. In these dangerous neighbourhoods, parental supervision can have a major role (Low & Espelage, 2014; Pettit et al., 1999). Children without parental supervision are more likely to engage in violent activities because they might believe that their behaviour will go unnoticed and, therefore, without negative consequences. Also, they seem to be more inclined to engage in other risky activities (e.g., alcohol abuse), probably because of lack of control. Moreover, when parents have no influence on the choice of people their children socialise with, these violent children tend to choose violent and delinquent peer groups, which further supports and encourages aggressive behaviour toward peers (Orpinas & Horne, 2006).

Other than the family environment, the school setting is the place where children spend most of their time. Regarding peer violence, school climate has a similar operating mechanism as the family. The school climate is a reflection of social interactions in the classroom, school canteen, hallways, and elsewhere (Tubbs & Garner, 2008). A positive school climate

supports for a child's sense of safety and belonging to the school as well as a good relationship with peers and teachers, and it represents a protective factor against children's unwanted behaviour, especially in cases of children coming from problematic families (Nader, 2008). In line with the second hypothesis, mediation effects of school climate on the association between two variables from the exosystem (media and neighbourhood) and peer aggression and victimisation were examined. The results were identical to those obtained for the mediation effect of parental supervision.

Regarding the distal influence of media, school climate had a partially mediating effect only in association with peer aggression, not peer victimisation. Regarding the distal influence of neighbourhood dangerousness, school climate had a partially mediating effect on associations with peer aggression and peer victimisation. The effect size of school climate was medium. Previous studies have shown that positive school climate can reduce negative impact from violent TV content (Barboza et al., 2009), but results from this study show that school climate can serve as a buffer that mediates the negative impact of excessive use of media on peer aggression. In school environments with a prevalingly positive school climate, children learn about values and ethics, develop empathy and prosocial behaviour, all of which helps in prevention of peer aggression. As exposure to violent contents in the media had no influence on victimisation, no significant mediation of the school climate was expected.

Next, a positive school climate has been reported to have a significant role in dangerous neighbourhoods, decreasing its association with peer aggression (Gaias et al., 2019; Velki, 2012). Moreover, the findings of the current study show that positive school climate has a mediating effect on associations between neighbourhood dangerousness and peer aggression, *and* neighbourhood dangerousness and peer victimisation. When children transfer violent behaviour experienced in neighbourhoods to school situations, it is important to show them that school is a safe place where all children are accepted and welcomed. In schools with a positive school climate, children can relearn that behaving aggressively in order to survive is unnecessary: other words, that aggression is an unacceptable response to problems. Likewise, children who are victimised can ask for help from teachers and educational practitioners in schools where they experience the feeling of emotional and social support (Demaray & Malecki, 2003; Kasen et al., 2004).

There are certain shortcomings to the present study that need to be mentioned. The selection of schools that contributed to the sample

was random; however, they were all from one county. The fact that only primary school students participated in the study (Grades 5 to 8) limits attempts to generalise across student populations. In comparison to data from the national sample (Rajhvan-Bulut & Ajduković, 2012), a slightly higher prevalence rate of peer aggression was found, probably a consequence of the sample profile that consisted of participants from the county most affected by the Croatian War of Independence. Further, the data were collected from students only and, at least for some variables, it would be interesting to see if other significant persons in the participants' lives share their opinions on issues at hand. For example, in connection with parental supervision, it could be important to examine how parents self-evaluate their supervision. As for school climate, it could be revealing to investigate teachers' perceptions of it. With reference to peer aggression and victimisation, contributions in the form of peer evaluations would be of extreme importance. Finally, the study was cross-sectional in design.

## **Conclusion**

Once again, family and school-related variables, acting through both direct and mediation mechanisms, emerged as significant protective factors in the prevention and reduction of peer aggression problems, which is of key importance for educational practitioners. As the primary formal educational institution, the school can cater for a wide range of prevention and intervention programmes that take into account media content children are exposed to on a daily basis and features of the community in which they live. Some previous research (Tušak, 2001) confirmed that educational practitioners should devote more time to developing children, not only educating them, in order to prevent peer aggression. For example, watching some educational movies together, talking about superheroes and their aggressive action in movies and cartoons, discussing all possible negative consequences of such behaviour could help students to understand violence better and to learn how to act in a nonviolent way.

Furthermore, educational practitioners should consider the active involvement of parents in these prevention programmes on account of parental supervision's emergence as a buffer that moderates the negative impact of environments, both physical and virtual. Sometimes educational practitioners are not aware of what kind of community the children live in, and parents can give them additional information (Dusi, 2012). During PTA meetings, teachers and parents can discuss potential dangers in their

neighbourhood and a positive solution that both of them can offer to a child. Finally, it is of crucial importance that children from troubled families feel accepted, safe, and welcome in their school, that is, in the setting, which can help them to resolve their problems and develop value systems, code of ethics, and rules of behaviour when their parents fail to do so.

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