

**Research article**

**THE EXPRESSION OF AGGRESSIVE BEHAVIOR  
IN SERBIAN SECONDARY SCHOOL STUDENTS  
WHO PLAY SPORTS**

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**Abstract.** *The aim of the study was to examine the occurrence of aggression in school among students who play sports, according to the expression model of Žužul (1989), who identifies five types of aggressive behavior (physically manifest aggression, physical latent aggression, verbally manifest aggression, verbal latent aggression, indirect aggression). Moreover, we investigated gender and age differences and differences across types of secondary schools. The sample consisted of 225 high school students, who completed the Aggression Questionnaire (Žužul, 1989). The total occurrence, gender differences, age differences, and secondary school vocational differences were evaluated. The results indicated that the general aggression occurrence is lower than the normative data from the Serbian population ( $t(224) = 14.90, p < .001$ ), where the preferred expression modality is verbal aggression, independently of the students' gender. The results showed that boys are more prone to physical aggression, both manifest and latent. No gender differences were found regarding both aspects of verbal aggression. Age differences were found in all five types of aggression, suggesting that older students are more likely to engage in different forms of aggressive behavior. Physical latent aggression and overall aggression were the highest among adolescents in vocational high schools. This study contributes to a better understanding of different patterns of aggressive behavior among high school students who play sports.*

**Key words:** aggression, secondary school students, peers, gender, vocational orientation

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## INTRODUCTION

Aggression is a common phenomenon in modern society. Researchers in the fields of psychology, sociology, criminology, and legal and political sciences analyzed the topic and its definition. There is a common agreement that such behavior is meant to harm another person (Bandura, 1973; Berkowitz, 1989; Moyer, 1987). Moreover, a lot of terms have been used to refer to this phenomenon, such as aggressiveness, aggression, and aggressive behavior. In the current paper, we define aggression as “any reaction, physical or verbal, taken to cause harm or injury to anyone of any kind, regardless of whether that intention was fully realized” (Žužul, 1989: 167).

Žužul distinguishes the expression of aggression into four modalities, resulting from the combination of behavioral expressions (verbal and physical aggression) and personality traits (latent and manifest) (Rajhvan, 2004; Žužul, 1989). Verbal aggression entails expression through insults, shouting, swearing, and threatening, while physical aggression is characterized by physical assault towards another person. Moreover, latent aggression is a relatively constant and lasting tendency to respond in provocative situations with increasing emotional tension and a tendency to attack the source of frustration, while manifest aggression is defined as a relatively lasting and stable trait of an individual to respond in provocative situations. Finally, indirect and displaced aggression is a displacement of aggression to objects or persons who are not the target of the aggression (Rot, 2003).

In contemporary society, aggression in the form of violence appears in several contexts, such as the family and domestic environment (violence against children, partners, the elderly, family members with illnesses, and family members with developmental disabilities), workplace (mobbing), the sports context and society in general (e.g., against other racial, ethnic, religious, and LGBT groups) (D’haese et al., 2016; Matić et al., 2022; Milovanović et al., 2019; Nikolić & Višnjić, 2020; Walters, 2018; Williams & Rohrbach, 2019).

Among the aforementioned types of violence, peer violence among children and youth has been the dominant focus of research and media attention in recent years in Serbia. Researchers focused on adolescents/secondary school students’ interests since they are young people who were born during or immediately after the socio-economic and socio-political “crisis” years in Serbian society, at the beginning of the 21<sup>st</sup> century. For example, research conducted on over 100.000 students showed that nearly 50% of boys and about 42% of girls had experienced some form of peer violence (Popadić et al., 2014). As students spend a large part of their day in schools, research focused on the school environment of children and youth. Specifically, adolescents represent a population exposed to numerous problems, a shaky value systems, and an uncontrolled influence of all types of media. Youth is exposed to aggression and violence through television, as well as through newspapers and magazines, the Internet, and computer games. Moreover, some research showed the existence of peer violence in youth sports (Matić et al., 2022; Milovanović et al., 2019).

Previously conducted research indicates that the behavior of their parents and the lack of exchange of a warm emotional relationship between them encourage the development of aggressive behavior in children and adolescents (Altschul et al., 2016). Specifically, risk factors attaining to family dynamics could be inefficient parenting, family dysfunction, family structure, parental psychopathology, and child neglect and abuse (Popović-Čitić, 2007). Also, a family’s socioeconomic status, impaired social cognition, belonging to peer groups with problematic behavior, the influence of the mass media, and some cultural factors could enhance the risk of displaying aggression (Nedimović & Biro, 2011; Pečjak & Pirc, 2017).

The majority of studies on aggression are devoted to physical aggression, since its consequences, at first glance, can be much larger, more visible, and more powerful than those of verbal aggression. Also, unlike physical aggression, findings related to verbal aggression are often inconsistent or controversial.

Previous research indicates that there are gender differences in its expression from childhood. Boys express more hostile, evil, and instrumental behaviors during interactions with peers (Coie & Dodge, 1998; Hartup, 1974). Some authors emphasize the differences in the expression during adolescence and report that some forms of aggression are typical of girls, e.g., isolation from a group, gossiping, ignoring, and sarcasm (Crick, 1996). Several studies showed that female secondary school students display greater manifest and latent verbal aggression, while male secondary school students display greater physical aggression (Rajhvan, 2004). Since girls have a strong sense of guilt and anxiety after acting out these behaviors, the negative arousal could inhibit their future aggression (Bandura, 1973; Buss, 1963; Maccoby & Jacklin 1980). Moreover, compared to adolescent boys, female adolescents tend to engage more in verbal violence than in physical violence to minimize potential risk (Little et al., 2003; Winstok & Enosh, 2008).

Nevertheless, a body of research shows that adolescent boys reported being more physically aggressive than girls (Archer, 2004; Lansford et al., 2012; Nivette et al., 2019), tending to engage in overt forms of aggression to gain power or authority and establish control over others (Crandall et al., 1961; Fagan & Lindsey, 2014; Herrman & Silverstein, 2012). Bojanić et al. (2015) found significant differences across ages, where older adolescents were more likely to act aggressively compared to the younger. Furthermore, young men rated themselves as being increasingly aggressive in conversations.

On the other hand, regardless of previous research indicating that females tend to use more verbal and relational forms of aggression (Björkqvist et al., 1992; Winstok & Enosh, 2008), results on gender differences in verbal aggression are inconsistent. Some findings point out that boys are less likely (Goldweber et al., 2013), equally (Gerlinger & Wo, 2016), or more likely (Donoghue & Raia-Hawrylak, 2015; Toldos, 2005) to exhibit different forms of verbal aggression, compared to girls.

It is important to note that not all research has indicated that there are gender differences in expressing aggression (Antičević, 2021; Caplan, 1979; Frodi et al., 1978; Parke & Slaby, 1983). According to some studies, both women and men show aggressive behavior when there is no control over their behavior when they accuse someone else of their aggression, and when there is aggressor anonymity. Longitudinal research confirms gender differences in aggression, but it also indicates that aggression in both groups rises until a certain adolescent age and then starts to decline (Karraker-Jaffe et al., 2008). Furthermore, Antičević (2021) found the lack of gender differences in the expression of different types of aggression among adolescents (namely verbally manifest aggression, physically manifest aggression, indirect aggression, verbal latent aggression, and physical latent aggression), which indicates that both male and female adolescents are equally prone to engage in aggressive behavior.

Therefore, the current research aimed to detect the occurrence of aggression expression among students attending the first and the fourth grades of secondary schools. Considering that previous studies detected peer violence in youth sports (Matić et al., 2022; Milovanović et al., 2019), this study sample comprised students who practice sports for more than three years. Specifically, we wanted to compare the modalities of aggression expression between males and females, distinguishing the students' age and the secondary grade vocational orientation. In line with previous research (Björkqvist et al., 1992; Herrman & Silverstein,

2012; Lansford et al., 2012; Nivette et al., 2019; Winstok & Enosh, 2008), we expect that males will obtain higher scores in physical aggression, while females will display higher levels of verbal aggression. Moreover, older students should report higher scores of aggression than younger students (Bojanić et al., 2015). No hypotheses were made regarding vocational orientation.

## METHOD

### Participants

The sample consisted of 225 students (see Table 1), of which 106 were boys, (47.11%) and 119 were girls (52.89%) living and attending schools in Novi Sad (The Republic of Serbia). The research involved three secondary schools in Novi Sad, namely a grammar school (41.33%), an art school (44.89%), and a vocational school (13.78%). The sample of students attending the first (56.89%) and the fourth year (43.11%) were selected to determine whether younger and older students differ in different forms of aggression. The age of the respondents ranged from 15 to 19 years of age ( $M = 16.5$ ,  $SD = 0.95$ ). The average age of the students is 16.5 years. The study was conducted during the second semester of the 2017/18 school year. All students have played some sports (soccer, basketball, athletics, gymnastics, swimming) for more than three years. School principals gave their permission for this study to be conducted, and all the participants gave written informed consent to participate in the study.

**Table 1** Sample characteristics

	N (%)	
Total	225	
Gender		
Male	106	(47.11%)
Female	119	(52.89%)
Secondary schools		
Grammar school	93	(41.33%)
Art school	101	(44.89%)
Vocational school	31	(13.78%)
School class		
First-year	128	(56.89%)
Fourth-year	97	(43.11%)
Sport		
Soccer	56	(24.64%)
Basketball	58	(25.52%)
Athletics	37	(16.28%)
Gymnastics	33	(14.52%)
Swimming	41	(18.04%)

### Measures

*The Aggression Questionnaire (A-87; Žužul, 1989)*. The A-87 questionnaire was used to examine impulsive aggressive behavior in provocative situations. The questionnaire consists

of 15 items of different situations to which there are five possible responses or modalities of aggressive behavior. The modalities are *verbally manifest aggression*, *physically manifest aggression*, *indirect or displaced aggression*, *verbal latent aggression*, and *physical latent aggression*. The analysis of the content of items concerning indirect or displaced aggression indicates that this subscale operationalizes the displaced aggression, thus in the text below this dimension is referred to as displaced aggression only. The task of the respondents was to rate each modality within the situation by the degree of agreement from one (I never behave like this) to five (I behave like this very often). For example, for the situation “*If someone disturbs me while I am trying to do some important work, I...*” the rated answers were “*I shout at him/her*” which represents verbal manifest aggression, “*I hit him/her*” for physical manifest aggression, “*I vent my anger on another object*” for indirect or displaced aggression, “*I wish to shout at him/her*” which represents latent verbal aggression, and “*I would rather hit him, but I refrain from doing that*” for latent physical aggression. Modality scores are obtained by summing responses for specific behaviors. For each modality, the cut-off threshold indicating the average expression of aggression is 45 points. The sum of scores of all modalities represents the overall aggression which ranges from 75 to 375, with an average point of 225.

### Data analysis

All data analyses were conducted in SPSS (IBM SPSS, version 23.0). Descriptive statistics were computed for all the study variables. The scores from the aggression questionnaire were first compared to the normative scores of the Serbian population. Afterward, independent sample *t*-tests were used to determine gender and age differences in displaying different types of aggression. Finally, the one-way ANOVA was conducted to determine the difference between the vocational orientation courses.

## RESULTS

The overall aggression score is significantly lower than the standardized cut-off of 225 (Table 2). A difference in the expression of particular modalities of aggression is observed in the total sample (Table 2). First of all, verbal manifest aggression is the most expressed, followed by verbal latent aggression, physical latent aggression, indirect displaced aggression, and physical manifest aggression. However, all these scores are significantly under the cut-off threshold of 45.

**Table 2** Measures of Average Aggression and Deviation of Aggression in a Total Sample of Secondary School Students (N=225)

	Min	Max	<i>M</i>	<i>SD</i>	Cut-off	<i>t</i> (225)
VM	18	75	42.72	12.69	45	2.70**
PM	15	64	28.88	11.23	45	21.53***
IN	15	60	30.50	9.71	45	22.39***
VL	15	65	39.12	11.84	45	7.45***
PL	15	69	33.59	13.85	45	12.36***
Overall Aggression	81	313	174.80	50.55	225	14.90***

Note. VM – verbal manifest aggression; PM – physical manifest aggression; IN – indirect or displaced aggression; VL – verbal latent aggression; PL – physical latent aggression. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Gender differences are found in the expression of physical manifest aggression, where males scored significantly higher than females (Table 3). The same results are found concerning indirect aggression, physical latent aggression, and overall aggression. Effect sizes were interpreted according to Cohen's convention (Cohen, 1998), and the values for physical latent aggression, indirect latent aggression, and overall aggression are small.

**Table 3** Gender Differences in the Aggression in Secondary School Students

	Gender	<i>M</i>	<i>SD</i>	<i>t</i> (223)	<i>p</i>	<i>d</i>
VM	male	44.30	13.04	1.77	.22	0.05
	female	41.31	12.26			
PM	male	32.56	12.58	4.87	<.001***	0.36
	female	25.60	8.69			
IN	male	31.97	10.21	2.17	.0*	0.21
	female	29.18	9.08			
VL	male	39.05	11.04	0.08	.53	0.03
	female	39.18	12.56			
PL	male	36.18	13.71	2.69	.00**	0.31
	female	31.28	13.61			
Overall Aggression	male	184.06	51.68	2.63	.00**	0.23
	female	166.55	48.25			

*Note.* VM – verbal manifest aggression; PM – physical manifest aggression; IN – indirect or displaced aggression; VL – verbal latent aggression; PL – physical latent aggression; *d* – effect size.

\**p* < .05, \*\**p* < .01, \*\*\**p* < .001

Results of the *t*-tests showed that age differences are found in all the aggression aspects (Table 4). Specifically, older adolescents scored significantly higher than younger students in overall aggression and all modalities of aggression (verbal manifest aggression, physical manifest aggression, indirect aggression, verbal latent aggression, and physical latent aggression). Effect size values are small.

**Table 4** Age Differences in Aggression in Secondary School Students

	Grade	<i>M</i>	<i>SD</i>	<i>t</i> (223)	<i>p</i>	<i>d</i>
VM	I	39.35	11.85	4.79	.023**	0.13
	IV	47.16	12.45			
PM	I	26.97	10.11	2.98	.033**	0.18
	IV	31.39	12.16			
IN	I	29.05	9.60	2.61	.035**	0.20
	IV	32.41	9.57			
VL	I	36.86	11.72	3.36	.022**	0.17
	IV	42.09	11.38			
PL	I	31.16	13.12	3.07	.04**	0.21
	IV	36.78	14.20			
Overall aggression	I	163.39	47.60	4.02	.024**	0.27
	IV	189.85	50.62			

*Note.* VM – verbal manifest aggression; PM – physical manifest aggression; IN – indirect or displaced aggression; VL – verbal latent aggression; PL – physical latent aggression; *d* – effect size. \**p* < .05, \*\**p* < .01, \*\*\**p* < .001

The results of one-way ANOVA show statistically significant differences among students from the three secondary schools in physical latent aggression ( $F(2, 222) = 3.77$ ,  $p < .05$ ) and in the overall aggression scores ( $F(2, 222) = 3.06$ ,  $p < 0.05$ ). Additionally, results of the Tukey post-hoc tests indicate that students from grammar school reported significantly lower scores on physical latent aggression ( $M = 30.62$ ;  $SD = 12.12$ ) compared to vocational school ( $M = 38.35$ ;  $SD = 13.30$ ,  $p < 0.05$ ) and art school ( $M = 35.47$ ;  $SD = 15.07$ ,  $p < 0.05$ ). Furthermore, the results suggest that students from vocational schools obtained the highest scores on overall aggression ( $M = 183.90$ ;  $SD = 43.25$ ,  $p < 0.05$ ), followed by art schools ( $M = 172.80$ ;  $SD = 37.23$ ,  $p < 0.05$ ), and grammar schools ( $M = 165.02$ ;  $SD = 32.48$ ,  $p > 0.05$ ). There are no statistically significant differences between the vocational and art schools in terms of both physical latent aggression and overall aggression. Also, no statistically significant differences are found on the other aggression dimensions.

## DISCUSSION

The aim of this study was to detect the presence of aggression in schools and to determine if secondary school students' gender, age, and vocational orientation produced differences in its expression, among students active in youth sports. The study was approached from the perspective of Žužul's theory of aggression (1989). Žužul observes aggression in five aspects – the physical latent and manifest, the verbal latent and manifest, and the fifth aspect is the indirect or displaced aggression.

Generally, high school students obtained lower scores on aggression compared to the normative data from the Serbian population. The highest scores were found on verbal aggression, both manifest and latent. Similar results were found by Rajhvan (2004) concerning the neighboring country Republic of Croatia, except for the physical latent aggression which is less expressed in our sample.

Concerning gender differences, the obtained results showed that boys and girls significantly differed in physically manifest, indirect, and physical latent aggression, which is in line with the results of previous research (Herrman & Silverstein, 2012; Lansford et al., 2012; Nivette et al., 2019; Winstok & Enosh, 2008). Boys seem to be prone to physical aggression, both manifest and latent. Moreover, they are characterized by the tendency to react in provocative situations both by increasing emotional tension and aggressive motivation, as well as by open physical aggression directed at the source of frustration. Gender differences were confirmed concerning the displaced aggression as well, as boys tend to react aggressively towards objects (people), which are not the original targets of their aggression, to avoid punishment. No gender differences were found regarding both aspects of verbal aggression, which is in line with previous research (Antičević, 2021; Archer, 2004), suggesting that both female adolescents and male adolescents are likely to manifest some sort of verbal aggression. Moreover, this result contributes to the debate regarding the effect size of gender differences in verbal and indirect aggression.

Age differences were found across all the expression modalities. Older students showed a greater inclination to all forms of aggression compared to younger students. The obtained differences could be considered as a consequence of greater physical strength, resulting from the healthy development of an individual. Feeling strong gives

them the right to clash verbally, and if they do not solve the problem by shouting and quarreling, they will easily solve it by a physical clash. This finding is in line with previous longitudinal studies indicating that aggression in adolescence rises until a certain point, independently of gender, and then starts to decline (Karraker-Jaffe et al., 2008).

Physical latent aggression and overall aggression were found most in vocational high schools, compared to the grammar and the art schools. The students in these schools are characterized by a large emotional charge towards a source of frustration which, under certain conditions, could develop into a manifest, destructive form of physical aggression. A possible explanation for the absence of physical aggression is the very essence of their chosen professions and their ability to channel their aggression through creativity. Moreover, better students are enrolled in grammar schools who are usually better socialized. It is also likely that students from grammar schools come from a higher socioeconomic status, which corresponds both to better school results and alternative strategies to aggression for solving problems.

The current study presents some limitations: firstly, it did not take into consideration the social status of the students and family context, since aggressiveness occurs more often among adolescents from low socioeconomic backgrounds and negative family climates (Dodge et al., 1994; Farrington, 200; Greitemeyer & Sagioglou, 2016). Moreover, the questionnaire is a good tool for detecting people's tendencies, but considering that this topic is sensitive to social desirability, people could not be honest in their answers. Therefore, their behavior could be different in the real situation. Considering these limitations, future research should include more variables concerning the family's socioeconomic background and more information about parents' education. Furthermore, self-report measures could be used in combination with implicit measures (Gawronski & Bodenhausen, 2006; Gawronski & De Houwer, 2014).

## CONCLUSION

This paper contributes to the understanding of the incidence and intensity of aggression among secondary school students in Serbia. Aggression and violence are daily social phenomena, whose reduction is not in sight at this moment. As we stated in the introduction part, the Serbian society has undergone significant socio-political and socio-economic changes in the last thirty years, and the presence of aggression and violence in real and virtual environments (at school, on the street, in public transport, media, social networks) could be considered partially as a consequence of this change. By analysing the academic literature, it was noted that researchers as well have recognized the issue of aggression and violence in children and the youth, but that they are more focused on physical aggression. However, the study has some limitations, as well. The current study did not take into account the students' socioeconomic status and their family context, which may be a contextual prerequisite for the manifestation of aggressive behavior. Consequently, the generalizability of the results is limited. To provide a more comprehensive understanding of the factors contributing to aggressive behavior among secondary school students in Serbia, future research should consider incorporating additional variables related to family socioeconomic background, as well as parental education. Additionally, the research findings indicate the need for engaging in in-depth research on verbal aggression as well.



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## **IZRAŽAVANJE AGRESIVNOG PONAŠANJA KOD SRPSKIH SREDNJOŠKOLACA KOJI SE BAVE SPORTOM**

*Cilj ovog istraživanja bio je ispitivanje pojave agresije u školi među učenicima koji se bave sportom, prema modelu izraživanja Žužula (1989), koji identifikuje pet vrsta agresivnog ponašanja (fizički manifestna agresija, fizički latentna agresija, verbalno manifestna agresija, verbalno latentna agresija, indirektna agresija). Takođe su istražene razlike u pogledu pola i uzrasta, kao i razlike među vrstama srednjih škola. Uzorak je činilo 225 srednjoškolaca koji su popunili Upitnik o agresivnosti (Žužul, 1989). Procenjena je ukupna pojava agresije, razlike među polovima, uzrasne razlike i razlike između srednjih škola. Rezultati su ukazali da je ukupna pojava agresije niža od normativnih podataka iz srpske populacije ( $t(224) = 14.90, p < .001$ ), pri čemu je preferirana forma istraživanja verbalna agresija, nezavisno od pola učenika. Rezultati su pokazali da su dečaci skloniji fizičkoj agresiji, kako manifestnoj tako i latentnoj. Nisu pronađene razlike među polovima u pogledu oba aspekta verbalne agresije. Uzrasne razlike su uočene u svih pet vrsta agresije, ukazujući na to da su stariji učenici skloniji različitim oblicima agresivnog ponašanja. Fizički latentna agresija i ukupna agresija bile su najizraženije među adolescentima u stručnim srednjim školama. Ovo istraživanje doprinosi boljem razumevanju različitih obrazaca agresivnog ponašanja među srednjoškolcima koji se bave sportom.*

**Ključne reči:** *agresija, srednjoškolci, vršnjaci, pol, stručna orijentacija.*