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Evaluating empathy in adolescents with conduct disorders

Ispitivanje empatije kod adolescenata sa poremećajem ponašanja

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Abstract

Background/Aim. According to currently available data, there is no research dealing with evaluating empathy in adolescents with conduct disorders in our region. The aim of the research was to examine the differences in the severity of cognitive and affective empathy in adolescents with and with no conduct disorder, as well as to examine the relationship between cognitive and affective empathy and the level of externalization in adolescents with conduct disorder. **Methods.** This research was conducted on 171 adolescents, aged 15 to 18, using the Interpersonal Reactivity Index, Youth Self-Report and a Questionnaire constructed for the purpose of this research. **Results.** The results showed that adolescents with conduct disorder had significantly lower scores for Perspective Taking (t = 3.255, p = 0.001), Fantasy (t = 2.133, p = 0.034) and Empathic Concern (t = 2.479, p = 0.014) compared to the adolescents in the control group, while the values for Personal Distress (t = 1.818, p = 0.071) were higher compared to the control group, but the difference was not statistically significant. The study showed a statistically significant negative correlation between Perspective Taking and aggression (r = -0.318, p = 0.003) and a negative correlation between Perspective Taking and the overall level of externalizing problems (r = -0.310, p = 0.004) in the group of adolescents with conduct disorder. **Conclusion.** This research contributes to better understanding of behavioral disorders in terms of individual factors, especially empathic reactivity. Preventive work with young people who have behavioral problems associated with empathy deficit disorder proved to be an important tool in preventing the development, or at least relieving the symptoms, of this ever more common disorder.

Key words:
adolescents; conduct disorder; empathy; aggression; questionnaire.

Apstrakt

Uvod/Cilj. Prema trenutno raspoloživim podacima, u našoj sredini nema istraživanja empatije kod adolescenata sa poremećajem ponašanja. Cilj ovog istraživanja bio je da se ispitaju razlike u izraženosti kognitivne i afektivne empatije između adolescenata sa i bez poremećaja ponašanja, kao i povezanost kognitivne i afektivne empatije i nivoa eksternalizacije kod adolescenata sa poremećajem ponašanja. **Metode.** Istraživanjem je obuhvaćen 171 ispitanik, uzrasta od 15 to 18 godina. Primenjeni su Indeks interpersonalne reaktivnosti, Upitnik za samoprocenu mladih od 11 do 18 godina i Opšti upitnik sačinjen za potrebe ovog istraživanja. **Rezultati.** Adolescenti sa poremećajem ponašanja postigli su statistički značajno niže vrednosti na dimenzijama kognitivne empatije *Perspective Taking* (t = 3,255, p = 0,001), *Fantasy* (t = 2,133, p = 0,034) i afektivnoj dimenziji *Empathic Concern* (t = 2,479, p = 0,014) u odnosu na adolescente kontrolne grupe, i više vrednosti na dimenziji *Personal Distress* (t = 1,818, p = 0,071) u odnosu na kontrolnu grupu, ali ne na nivou statističke značajnosti. U istraživanju je nađena statistički značajna negativna povezanost kognitivne dimenzije empatije *Perspective Taking* i agresije (r = -0,318, p = 0,003), kao i negativna povezanost *Perspective Taking* i ukupnog nivoa eksternalizacionih problema (r = -0,310, p = 0,004) u grupi adolescenata sa poremećajem ponašanja. **Zaključak.** Ovo istraživanje doprinosi boljem razumevanju poremećaja ponašanja sa aspekta individualnih faktora, pre svega empatijske reaktibilnosti. Preventivni rad sa mladima koji imaju probleme ponašanja udružene sa nedostatkom empatije pokazao se kao značajno oruđe u sprečavanju razvoja ili bar ublažavanju simptoma ovog sve učestlijeg poremećaja.

Ključne reči:
adolescenti; ponašanje, poremećaji; empatija; agresivnost; upitnici.

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Introduction

Empathy is defined as "an emotional reaction that stems from comprehension and apprehension of another person's emotional experience or situation which is identical or similar to what the other person feels or should feel" [1] and represents the basis of social functioning and effective interaction in a social environment. Empathy appears early in life and its development is conditioned by individual factors (genetics, neural factors, temperament) and socialization factors (imitation, emotional quality of parenting, parent-child relations). Social outcomes of empathy affect the behavior towards others (internalization rules, prosocial behavior) as well as social relations (social competence, the quality of interpersonal relations). Davis [2] gave a rather broad definition of empathy and proposed that it was a "complex cognitive and affective response to the experiences of others". The complex empathic response is multidimensional and involves cognitive (perspective taking, fantasy) and affective aspects (empathic concern, personal distress). The abilities for perspective taking and empathic concern increase from childhood to adolescence and reach adult levels, while personal distress decreases [3]. By the end of adolescence, a person is able to take a broader perspective and feel concern for other people, as well as analyze these aspects and act accordingly [4]. Many studies show the positive correlation between empathy and prosocial helping behavior in children and adolescents [5].

The model of empathy that includes both cognitive and affective aspects involves several mechanisms which should lead to a reduction of aggression and increasing prosocial behavior in an empathetic person: the ability to discriminate and indicate the feelings of other people in social conflicts, a more mature cognitive ability which is responsible for perspective taking and should lead to conflict mitigation, as well as affective responsiveness, which has a special role in aggression regulation [6]. Compassion and better understanding of other people's feelings and another person's general condition make it possible for empathetic children to resolve conflicts successfully because their cognitive and emotional understanding of interpersonal situations inhibit aggressive reactions [7].

Adolescents with conduct disorder often lack positive motivation and are not able to take another person's perspective or take care of other people's needs, understand the harmful effects of their actions on others and experience guilt [8]. There are only a few studies that have been performed on a clinical sample; therefore, little is known about the nature and causes of empathic dysfunction in adolescents with conduct disorder [9]. There is also not engough consistent data about which specific dimensions of empathy are disrupted in this disorder. As conduct disorder is becoming ever more common in our region, and has implications for both individual and social environment, it is important to test the hypothesis about reduced empathy reactivity in adolescents with conduct disorder on our sample.

The aim of the study was to investigate whether there is a statistically significant difference in the prominence of cognitive and affective empathy (perspective taking, phantasy, empathic concern, personal distress) between adolescents with conduct disorder and adolescents without conduct disorder and investigate the correlation between cognitive and affective empathy and the level of externalizing problems in adolescents with conduct disorder.

Methods

The study was conducted at the Department of Children and Adolescent Psychiatry, Mental Health Clinic, Clinical Center Niš, Serbia in 2012 and 2013. It included 171 adolescents, aged 15 to 18. The examined group consisted of 86 outpatient or hospitalized adolescents with conduct disorders. The diagnosis of conduct disorder was based on clinical interviews and existing criteria for conduct disorder [10]. The subjects with the following comorbid diagnoses were excluded from the study: attention deficit disorder and activity disorder, mental insufficiency under 80 on the basis of standard psychological tests, acute psychotic disorder and drug addiction. The group without conduct disorder (the control group) consisted of 85 high school students. Both groups were matched for sex, age and place of residence. Subjects and parents/caregivers gave informed consent to participate in the research.

The questionnaire designed for the purpose of this research consisted of questions about sociodemographic characteristics of the participants: gender, age, the number of household members, parents' marital status, as well as the presence of parental mental illness. The questionnaire was filled out by the researcher based on the interviews with adolescents and parents and the data from the medical records or polyclinic records.

The Interpersonal Reactivity Index (IRI)[2] is a multidimensional scale composed of 28 self-report items designed to measure both cognitive and affective components of empathy. The subscales of the IRI were arrived at by factor analysis and consisted of four subscales *per* seven items each: Perspective Taking (PT), Fantasy Scale (FS), Empathic Concern (EC) and Personal Distress (PD). The Perspective Taking scale measures the tendency to take the psychological point of view of others. The Fantasy Scale measures the tendency to get caught up in fictional stories and imagine oneself in the same situations as fictional characters. The Empathic Concern scale measures sympathy and concern for others. The Personal Distress scale measures the type of feelings (anxiety, etc.) that get in the way of helping others. The participants were asked to report their agreement or disagreement with certain statements on the Likert Scale 1 (strongly disagree) to 5 (strongly agree). The minimum and maximum scores on each subscale was from 7 to 35, respectively. The higher scores indicate higher levels of congnitive or affective empathy. Employing a summation of the IRI subscale scores as an index of high or low empathy is not possible because the four subscales do not positively correlate, i.e. the increases in every subscale are not considered indicative of greater levels of empathy [2].

The Youth Self-Report (YRS) [11] is a scale of emotional problems and behavior problems. The questionnaire has two parts: competence scale and the scale of problems with 112 items, which are grouped into eight syndrome scales. The

seventh and eighth scale referred to the group of externalizing problems – aggressive behavior (behavior aimed at drawing attention, passive aggressive and open aggressive behavior), and rule breaking behavior (morality aspect, violation of the legal norms, socially immature and maladapted behavior) that represent symptoms of behavioral disorders. The examinees were supposed to assess the extent to which they could relate to a particular problem on the Likert scale. Responses ranged from 0 (not true) to 2 (completely true).

The results of the study were statistically analyzed on the scales in relation to the study objective (the sum of scores on the seventh and eight syndrome scales).

All data are presented as mean and standard deviation, or percent frequency. Comparisons between groups were made by *t*-test, Mann-Whitney test or χ2-test. A p value < 0.05 was considered statistically significant. Statistical analyses were done with SPSS 16.0 for Windows.

Results

Sociodemographic characteristics of adolescents with and without conduct disorders are shown in Table 1.

The analysis of the YRS questionnaire showed the expected differences between the groups which suggest that adolescents with conduct disorder have significantly higher scores for Rule Breaking Behavior, Aggressive Behavior and total Externalization in comparison to the control group (Table 2). YSR was not standardized for adolescents in our region, which is why it was not possible to compare the results we obatained to the standard values for our population.

The results indicated that there is a statistically significant difference in three of the four dimensions of empathy on IRI between adolescents with conduct disorders and the control group (Table 3). The analysis showed significantly lower scores on Perspective Taking in adolescents with conduct disorder in comparison to the control group. Fantasy was significantly lower in adolescents with conduct disorders in comparison to the control group. Empathic Concern was significantly lower in adolescents with conduct disorders in comparison to the control group. Personal Disstres was higher in adolescents with conduct disorder in comparison to the control group, but the difference was not statistically significant (Table 3).

In the group of adolescents with conduct disorder, there was a correlation among all the dimensions of empathy,

Table 1

Baseline characteristics in the two groups of adolescents

Parameter	Adolescents		
	With conduct disorder (n = 86)	Controls (n = 85)	*p*
Age (years), $\bar{x}$ ± SD	17.15 ± 0.97	17.19 ± 0.68	
Gender (M/F), n	43/43	40/45	0,817
The number of children in the family, n			0.008
1	15	12	
2	43	65	
> 2	21	8	
Divorced parents, n	28	8	< 0.001
Parental psychiatric disorders, n	36	9	0.001

$\bar{x}$ – mean values; SD – standard deviation.

Table 2

The average scores on the subscale for externalizing problems

Externalizing problems	Adolescents			
	With conduct disorder (n = 86)	Controls (n = 85)	Z*	*p*
Rule breaking behavior	11.31 ± 4.00 11.00 (4.00–26.00)	3.09 ± 2.41* 3.00 (0.00–11.00)#	10.717	< 0.001
Aggressive behavior	14.23 ± 5.19 14.00 (3.00–27.00)	6.28 ± 3.30 5.00 (0.00–17.00)	9.234	< 0.001
Externalization	25.54 ± 8.03 14.00 (3.00–27.00)	9.38 ± 4.91 5.00 (0.00–17.00)	10.548	< 0.001

*** – Mann-Whitney test. The values are persented as mean ± standard deviation, median and (minimum-maximum).**

Table 3

Differences in the dimensions of empathy in the adolescents with conduct disorders and the control group

Dimension of empathy	Adolescents			
	With conduct disorder (n = 86)	Controls (n = 85)	*t*	*p*
Perspective Taking	21.19 ± 4.47 20.00 (12.00–35.00)	23.49 ± 4.80 23.00 (12.00–35.00)	3.255	0.001
Fantasy	20.67 ± 5.23 20.00 (7.00–34.00)	22.41 ± 5.42 22.00 (11.00–35.00)	2.133	0.034
Empathic Concern	22.74 ± 3.84 23.00 (16.00–35.00)	24.28 ± 4.25 24.00 (14.00–33.00)	2.479	0.014
Personal Distress	20.05 ± 5.27 20.00 (7.00–33.00)	18.54 ± 5.55 19.00 (7.00–30.00)	1.818	0.071

The values are presented as mean ± standard deviation, median and (minimum-maximum).

except Personal Distress. The correlation was positive and low. The highest correlation existsed between Perspective Taking and Empathic Concern (Table 4). In the group of adolescents with conduct disorder, there was a statistically significant correlation among the scores on externalizing behavior. The correlation was positive and high. The highest correlation was between Aggressive Behavior and Externalizaton scores (Table 4). The analysis of the correlation between the scores on the dimensions of empathy and externalization scores showed a statistically significant negative correlation between Perspective Taking and Aggressive Behavior and Perspective Taking and Externalization scores (Table 4).

In the control group, there was a correlation among all the dimensions of empathy, except for Personal Distress. The correlation was positive and low. The correlation between Perspective Taking and Empathic Concern was strongest (Table 5). In the control group, there was a statistically significant correlation among the scores on externalizing behavior. The correlation was positive and high. The correlation between Aggressive Behavior and Externalization was strongest (Table 5). The analysis of the correlation between the scores on the dimensions of empathy and externalizing behavior showed a statistically significant negative correlation between scores on Perspective Taking and Rule Breaking Behavior, as well as Perspective Taking and Externalization scores (Table 5).

Discussion

According to the literature which states that the presence or absence of individual, social and emotional responsiveness, which is associated with compassion, concern and understanding the other person's position, represent the protective or risk factors for the development of antisocial and aggressive behavior [5], this research was based on the assumption that adolescents with conduct disorder exhibit reduced empathic reactivity compared to their peers without behavioral symptoms. Sociodemographic analysis of the data show that adolescents with conduct disorders often come from families that are characterized by many members, frequent divorce of parents and parents with multiple psychiatric disorders. These findings are consistent with previous studies [12]. Adolescents with conduct disorder had score significantly lower on Perspective Taking in comparison to the adolescents in the control group. Our results are consistent with the results of other studies [13–15]. The study by Lee and Prentice [16] shows that, compared to the control group, male delinquents have significantly lower scores not only on Perspective Taking, but also on cognitive tests and Kohlberg's moral dilemmas. Jolliffe and Farington [17] state that "offenders are ... insensitive and with low empathy. Their ability to take and understand others people's perspective is low and they may misinterpret other people's intentions. The lack of awareness

Table 4

The correlation between the dimensions of empathy and externalization in the group of adolescents with conduct disorder

Scores	Fantasy	Empathic Concern	Personal Distress	Rule Breaking Behavior	Aggressive Behavior	Externalization
Perspective Taking	0.050	0.447**	0.128	-0.210	-0.318**	-0.310**
	0.645	< 0.001	0.240	0.052	0.003	0.004
Fantasy	-	0.166	0.117	-0.068	-0.019	-0.046
		0.126	0.158	0.533	0.860	0.671
Empathic Concern		-	0.154	-0.206	-0.155	-0.203
			0.076	0.057	0.153	0.061
Personal Distress			-	-0.066	0.089	0.025
				0.543	0.413	0.822
Rule Breaking Behavior				-	0.517**	0.833**
					< 0.001	< 0.001

***p* < 0.05 (double); ****p* < 0.001 (double)**.

Table 5

Correlation between the dimensions of empathy and externalization in the control group

Scores	Fantasy	Empathic Concern	Personal Distress	Rule Breaking Behavior	Aggressive Behavior	Externalization
Perspective Taking	0.299**	0.439**	0.146	-0.347**	-0.195	-0.302**
	0.005	< 0.001	0.182	0.001	0.073	0.005
Fantasy	-	0.429	0.120	-0.022	0.103	0.059
		< 0.001	0.154	0.840	0.347	0.594
Empathic Concern		-	0.159	-0.154	0.053	-0.040
			0.072	0.160	0.632	0.717
Personal Distress			-	-0.103	0.023	-0.035
				0.350	0.836	0.750
Rule Breaking Behavior				-	0.462**	0.802**
					< 0.001	< 0.001
Aggressive Behavior					-	0.900**
						< 0.001

***p* < 0.05 (double); ****p* < 0.001 (double)**.

or sensitivity to people's intentions and feelings diminishes their ability to assess the effects of their own behavior on others". The ability to discriminate and identify signs of other people's affection and take other people's perspective is a prerequisite for empathy which inhibits aggressive and antisocial behavior [6]. Fantasy is an essential factor in the cognitive aspect of empathy [2], which means that imagination is one of the key factors that facilitate empathy and contribute to more vibrant experience of the observer, or the one who takes on this role. However, Fantasy is rarely used as a measure of interpersonal functioning in the available research data [17]. Our study shows that, compared to the control group, the adolescents with conduct disorder achieved statistically significantly lower scores on Fantasy. Cohen's study reported similar results [13]. Empathic Concern is a prosocial aspect of empathy. People who show higher scores on this dimension are characterized by greater emotional reactivity, vulnerability, and higher level of self-control [2]. It has been reported that people with greater empathic concern spend more time doing volunteering and helping the homeless, give more to charity and have a positive attitude towards the protection of animals [18]. The results based on the scores for Empathic Concern in our research support these findings [13, 15] in the sense that adolescents with conduct disorder show significantly lower levels of compassion and concern for other people compared to the control group. Contrary to the expectations, our results show that adolescents with conduct disorder scored higher on Personal Distress than the adolescents in the control group, but the difference is not statistically significant. Cohen's [13] study reports that adolescents with conduct disorder have score significantly higher on Personal Distress and higher scores on this subscale correlate with greater aggression of the participants. The motivational role of personal distress in the process of empathy is most contoversal in the literature. Batson [19] talks about personal distress as "the self-focused, aversive affective reaction that arises from the anticipation of another person's emotional experiences or state and is related to the desire to alleviate their own, not someone else's, distress. Personal distress is driven by a self-centered motivation to alleviate one's own stress [1]. On the other hand, other authors believe that individual differences in the level of personal distress or the ability to empathize are the result of general emotionality and the ability to regulate their own emotions [20]. Empathy underlies both of these processes, but the child who does not feel personal distress is able to act prosocially, whereas the child in personal distress is focused on him or herself and looks for ways to alleviate their own stres [21].

The results of an Italian research on a larger sample of adolescents (142 females and 176 males, mean age 13.2 years) show that bullyng among schoolchildren negatively correlate with the scores on Empathic Concern (affective dimension) and Perspective Taking (cognitive dimension) from the IRI questionnaire, and that helping the victimized peer actively positively correlates with the higher scores on the dimensions of empathy [22]. The research performed by Beven et al. [23] on a group of aggressive delinquents reported a negative correlation between the scores on Perspective Taking and impulsivity and antisocial attitudes of the participants on the Criminal Sentiments Scale. The same research reported that the lower scores on Empathic Concern were associated with highly expressed antisocial attitudes and *vice versa*, pronounced Empathic Concern positively correlated to the prosocial attitudes of the participants [23].

In the group of adolescents with conduct disorders, the results of the correlation analysis show that there is a negative correlation between Perspective Taking and aggression, and a negative correlation between Perspective Taking and the overall level of externalization. There were no significant correlation between other dimensions of empathy (EC, FS, PD) and aggression, rulebreaking behavior and the overall level of externalization. Based on the data from the literature, we expected a stronger negative correlation between the scores for the dimensions of empathy and externalization. One possible interpretation of our results concerns the questionnaire we used in our research (IRI), which divides empathy into several dimensions which can cause "poor" results, particularly on a smaller sample. Literature suggests that this is not the problem that is related only to the use of IRI; therefore, researchers believe that it is necessary to improve the instruments for measuring empathy since many of the currently available self-assessment instruments do not give expected results [4]. A negative correlation between Perspective Taking, aggression and the overall level of externalization in adolescents with conduct disorder indicates the importance of cognitive empathy for the appearance of eksternalizing problems. The ability to take on other people's perspective is a cognitive skill that promotes solving problems in a positive manner. Perspective Taking in conflict situations leads to better understanding of the other person's position, prevents destructive behavior and encourages prosocial actions [6]. The results of our research support the studies that report on the significant negative correlation between cognitive empathy and aggression [17], rather than those which indicate a stronger inverse relationship between affective empathy and aggression and bullying [24, 25].

Analysis of the results regarding the correlation between the dimensions of empathy and externalization in the control group indicates that the lower scores on Perspective Taking correlate with the higher average scores on rule breaking behavior. Namely, the same dimension of empathy, Pespective Taking, correlates with externalizing problems both in the control group and the group of adolescents with conduct disorder. In the control group, there is a correlation with rule breaking behavior. Externalizing problems which were exibited in the control group were expected. Almost every child sometimes violates social norms and the rights of other people or damages property, and almost all children go through a period of lying, stealing or playing truant [26], which YRS questionnaire includes on the scale for rule breaking behavior. There was no significant correlation between other dimensions of empathy and externalizing problems, which can be explained by a vast interindividual variability in the sample of the control group.

It has been shown that empathy training may be a valuable tool to reduce aggression in school settings. There are

several empathy training techniques aimed at school children like Empathy Slide Series; training that include role plaing, acting and storytelling. There is also Aggression Replacement Training which combines cognitive techniques with teaching of impulse control and moral reasoning [27]. The results indicated that the empathy training helped bring about more positive social behaviours and more positive self-evaluation in both aggresive and non-aggresive children. Pecukonis [28] has reported the usefulness of empathy training among 14–17-year old aggressive females in the residential treatment centre.

Conclusion

This research shows that adolescents with conduct disorders have significantly lower scores on prosocial oriented dimensions of empathy – Perspective Taking and Empathic Concern, as well as on Fantasy on the Interpersonal Reactivity Index questionnaire, while the differences in Personal Distress are very close to the statistically significant values. In the group of adolescents with conduct disorder, there is a statistically significantly negative correlation between Perspective Taking and aggression and the overall level of externalization. The results of the research conducted for the purpose of this paper indicate the importance of individual factors, primarily empathic reactibility, for developing behavioral symptoms in youth. Preventive work which includes empathy training programs for young people who have behavioral problems associated with empathy deficit disorder proved to be an important tool in preventing the development, or at least relieving the symptoms, of this ever more common disorder among young people.

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