

INFLUENCE OF ATTACHMENT DIMENSIONS AND PERCEIVED PARENTAL ACCEPTANCE/REJECTION IN ADOLESCENT PATIENTS ON CONDUCT DISORDER

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received: 13. 7. 2020;

revised: 8. 11. 2024;

accepted: 15. 11. 2024

Summary

Background: The purpose of this study was to examine the differences in attachment dimensions and the perceived parental acceptance / rejection among adolescents with conduct disorder (CD) in comparison to the control group, and the contribution of the attachment dimensions and parental acceptance /rejection to the CD.

Subjects and methods: The group of male and female adolescents with CD (N=97) and a control group of male and female adolescents with no signs of CD (N=97) participated in this study. Attachment and parental acceptance/rejection were determined in the relationship between adolescents and their mothers and fathers by using self-evaluation questionnaires.

Results: The results showed that subjects with CD had insecure (avoidance) attachment, perception of lower parental acceptance and higher parental rejection more often compared to controls. Higher levels of complex father rejection predicted CD.

Conclusion: The main findings of this study indicated that the subjects with a conduct disorder felt less accepted and more rejected by parents compared to control group subjects. Complex father rejection was shown as a significant predictor of conduct disorder. Parental attachment may affect adolescents' perception of parental acceptance/rejection which may result in an expression of CD symptoms.

Keywords: CD - attachment – parental acceptance/rejection, adolescence

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INTRODUCTION

Attachment theory (Bowlby 1982) points to the importance of developing primary relationships with parents that, through further development, lay the foundations for developing relationships with others. Attachment is defined as an emotional connection with another person. The earliest childhood relationships with a primary caregiver have a major impact on the entire life. The attachment style affects personal and social life, professional relationships, stress control, cognitive development, and it even affects physical and mental health throughout life (Rees 2005). In adolescence, relationships develop further outside the family, thus creating conditions for further development towards independence. During this period relationships with peers become very important. Children and adolescents who have developed a secure attachment to their parents find it easier to create new relationships, show less aggression in those relationships, and are able to cope with stress better (Sroufe 2005; Sroufe et al. 2010). Attachment theory divides attachment into two main styles (categories): secure and

insecure attachment. Insecure attachment is divided into three subcategories: dismissive, fearful and preoccupied. Recent evidence suggests that attachment is most accurately measured by dimensions rather than styles (categories) (Fraleley et al. 2000). Brennan et al. (1998) suggest that there are two fundamental dimensions of attachment: anxiety and avoidance. During this period adolescents who have developed insecure attachment begin to have relationship problems due to increased anxiety induced by close relationships with others. They tend to defend themselves from it with projected defence mechanisms, which distort reality and create an image that the parents are the ones who hinder their independence. These adolescents have problems most of the time in both family and non-family relationships. They often experience loneliness, low self-esteem, inability to cope with stress and often use physical violence and disregard rules. In research on Croatian adolescent a total of 24% of the respondents have experienced violence in relationships, and the highest percentage of violence experienced pertained to psychological violence 54.16% (Tripković et al., 2024). Although attachment has primarily been

explained as childhood-specific, we see that it largely retains its importance in adolescence and adulthood. When viewed from this aspect, an adolescent's need for parental support never ceases, even though the adolescent always wants to be experienced as an individual who is independent from their parents (Keskin and Cam 2009). Conduct disorder has been described as a pervasive and destructive disorder with significant clinical manifestations, for which very few reliable treatments have been found so far. Symptoms are manifested through antisocial behavior, which presents great difficulties in treatment. Once children and young people enter the juvenile penal system as delinquents, it is very difficult for adolescents and their families to successfully get out of the vicious circle of delinquent behavior (Kazdin 1993). Previous research on emotion control and attachment suggests that the development of attachment and emotion control may be associated with the development of CD in adolescence (Holland et al. 1993). Kazdin (1993) states that adolescents with CD are associated with other peers with CD due to poorly developed attachment to parents. The same research shows that these adolescents have significant difficulties in creating any emotional connections. Emotion regulation includes tolerance awareness, and the display and control of psychosocial behavior and experiences (Garber and Dodge 1991). When the lack of emotional clarity, limited access to adaptive emotional regulation skills and difficulty controlling behaviors when upset stand out then an emotion control disorder occurs (Jakovina et al. 2018). Emotional control includes internalization (self-regulation) and externalization (social regulation), i.e., relationships that are first built in relationships with parents as a part of the process of attachment development (Cassidy 1994). Some research suggests important differences between children who begin to show serious behavioral problems and antisocial behavior in childhood as opposed to those whose antisocial behavior occurs in adolescence. (Moffitt 2006). Difficulties in self-regulation and their dependence on corrective behavior put adolescents at increased risk of reacting to frustration with aggressive behavior designed to intimidate and control others (Obsuth et al. 2006). Rohner (2004) identified two characteristics of parental behavior: acceptance and rejection – a continuity in which expression can range from the love and affection of parents who accept their child to the aversion or reprobation of parents who show rejection.

The aim of this study was to examine whether there were differences in the dimensions and styles of attachment in adolescent patients with CD and the control group of adolescents in the healthy population. We also wanted to examine whether there was a difference in the perception of parental behavior between these groups. It

was hypothesized that patients with the conduct disorder would show more anxious and avoidant attachment and would perceive their parents as more rejective. It is also hypothesized that there is a relationship between the dimensions of attachment and the perception of parental behavior with conduct disorder.

SUBJECTS AND METHODS

Subjects

A total of 194 subjects aged 14–18 years participated in the study ($M = 16.01$; $SD = 1.23$). The clinical group consisted of 97 subjects, patients diagnosed with conduct disorder, treated at the Clinical Hospital Center Zagreb and the Department for Mental Health and Addiction Prevention, Andrija Stampar Teaching Institute of Public Health, Zagreb, who had symptoms for more than six months. The control group consisted of 97 subjects, students of XVIII. Gimnazija from Zagreb, who did not show symptoms of conduct disorder. The total number of male respondents was 87 (45.5%), while there were 104 female respondents (54.5%). All participants participated voluntarily with the previously signed consent of the parents.

Methods

Clinical Psychiatric Interview

The final diagnosis (F91 and F92) was made by a child and adolescent psychiatrist based on the ICD-10 classification criteria. The interview was conducted with adolescents and with one or both parents. The diagnosis was made on the basis of collected anamnestic data and the symptoms that meet the diagnostic criteria for a diagnosis lasting for at least six months.

YSR (Youth Self Report) -

Youth Self Report from 11 – 18

Youth self-report (Achenbach and Rescorla 2001) is a part of Achenbach System of Empirically Based Assessment (ASEBA) which consists of three parts: a report for parents, a report for teachers and a report for youth. In this research, the YSR - report for youth was used, which is a standardized measuring instrument for assessing the problems of children and youth. The report is completed by adolescents. The first part deals with data on the personal, social and school competence of adolescents. The second part assesses behavior on 112 items that make up 8 syndrome scales: withdrawal, somatizing problems, anxiety/depression, social, attention and thinking problems,

rule-breaking and aggressive behavior. Clinically oriented scales indicate emotional problems, anxiety problems, attention and hyperactivity problems, oppositional problems, somatic problems, and conduct problems.

Rosenberg Self-esteem Scale

The Rosenberg Self-Esteem Scale (RSE - Rosenberg 1965) is a questionnaire that measures global self-esteem, i.e. what an individual thinks of oneself as a person, which is composed of related aspects of self-perception. The scale contains ten statements, five of which are defined in a positive way (e.g., "I think I am worth at least as much as other people") and the other five in a negative direction ("I am more and more aware that I am worth very little"). Participants for each statement express the degree of agreement on a scale from 1 to 4 ("I completely agree" - 1, to "I completely disagree" - 4). The total score is gained by summarizing the responses to the statements with the previous reverse coding of some statements, and the score ranges from a minimum of 1 to a maximum of 36 points. A higher score indicates a lower level of self-esteem. The reliability of the internal consistency type (Cronbach's alpha) is $\alpha = 0.89$.

Inventory of Experiences in Close Relationships

The Inventory of Close Relationship Experiences (Kamenov and Jelić 2003) is a modified and shortened version of the Inventory of Close Relationship Experiences by Brennan et al. (1998). The factor structure of the scale remained the same, two factors were retained: anxiety and avoidance, to which 9 appropriate items were distributed. The new, more economical scale has not lost on reliability. The questionnaire contains 18 items. The task of the participants in completing the Inventory is to express the degree of agreement with each of the mentioned statements on a scale of 7 degrees (1 - I do not agree at all, 4 - neither agree nor disagree, 7 - completely agree). Participant score is determined by summarizing the scores for the respective items of each individual scale with prior recoding of the three items. Points are added together for even items because they relate to the anxiety dimension (fear of rejection or abandonment) and for odd items because they relate to the avoidance dimension (the experience of discomfort due to closeness and dependence on others). The type of attachment of the participant was determined based on their results on the dimensions of anxiety and avoidance. The possible range of results is from 9 to 63 for each scale, where a lower result indicates a less expressed individual dimension of attachment in the respondents. In this study participants

were divided into two categories: secure and insecure. Securely attached participants are those who scored low on both scales, while all other participants were classified as insecurely attached. Therefore, participants with a preoccupied, dismissive, and fearful style belong to the same category of insecurely attached. The reliability of the internal consistency type (Cronbach's alpha) is $\alpha = 0.85$ and for the avoidance dimension $\alpha = 0.76$. This questionnaire was completed by adolescents, separately for their mothers and fathers.

Parental Acceptance/Rejection Questionnaire

The Parental Acceptance/Rejection Questionnaire (PARQ - Rohner RP 2005) is a self-assessment instrument designed to measure individual perceptions of parental acceptance and rejection. In this research a short version of the original questionnaire was used, consisting of 24 items, in two parts, one of which refers to the assessment of the mother (PARQ-Mother Questionnaire), and the other to the assessment of the father (PARQ-Father Questionnaire). Each part of the questionnaire contains a specific description of the mother's or father's behavior towards the respondent. The task of the respondents is to choose one of the proposed answers for each statement on the Likert scale of 4 answers (almost always correct - 1 to almost always incorrect - 4). The questionnaire consists of four subscales that measure the following dimensions: parental warmth/acceptance, parental aggression/hostility, parental indifference/neglect and parental undifferentiated rejection. The result of each respondent can be expressed on an individual subscale, as a total score Acceptance/Rejection Index and as Complex parental rejection. The result of the subjects on each subscale is obtained by summarizing the given estimates for the corresponding items, with inverse coding of individual items. The total score of the respondents is the sum of the results of all four subscales with the previous inverse scoring of the warmth/acceptance subscale to form a measure of perceived coldness/rejection. The respondents' score expresses Complex parental rejection that is obtained by summarizing the items of the subscales aggression/hostility, indifference/neglect and undifferentiated/rejection. The questionnaire has shown good reliability and validity of previous research (Rohner 2005). Cronbach's alpha ranges from 0.81 for the undifferentiated/rejection scale to 0.93 for the warmth/acceptance scale for the assessment of paternal behavior, while for the assessment of maternal behavior the score ranges from 0.72 for the indifference/neglect scale to 0.87 for the warmth/acceptance scale.

STATISTICAL ANALYSIS

Descriptive statistical parameters are presented through arithmetic means and standard deviations. Chi-square test was used to determine the difference in the ratios of secure and insecure attachment. The test was conducted with a previous categorization of a preoccupied, dismissive, and fearful style into an insecure style of attachment to father and mother.

The F-test was used to determine statistical differences between variables while the analysis of variance (one-way ANOVA) was used to determine the relationships between the researched variables. Pearson correlation coefficient was applied to establish relationships between variables investigated. The linear multivariate regression analysis was used to review the predictive importance of attachment dimensions and parental rejection on conduct disorder. The significance level is set at 5%.

RESULTS

There were 1.9 times more adolescents with an insecure style of attachment to the mother in the group of respondents with conduct disorder than those in the control group, while in the control group there were almost 1.3 times more adolescents with a secure style of attachment than adolescents with conduct disorder, so there was a statistically significant difference between the groups ($\chi^2_{1,19}$

= 6.73; $p < 0.01$). Regarding the insecure attachment to the father, there were 1.9 times more adolescents with conduct disorder than in the control group, while in the control group there were 1.4 times more adolescents with a secure attachment style, so a statistically significant difference was found between the groups ($\chi^2_{1,19}$ = 9.92; $p < 0.02$).

The differences in the dimensions of attachment and perception of attitudes towards mother and father in adolescents with conduct disorder compared to the control group are shown in Table 1.

Subjects with CD showed a higher level of avoidant attachment to the mother ($p < 0.01$) compared to subjects in the control group. The results indicated that statistically the adolescents with conduct disorder perceived significantly lower maternal warmth ($p < 0.05$), higher maternal rejection ($p < 0.01$) and maternal neglect ($p < 0.01$) than the adolescents in the control group. Furthermore, subjects with a CD showed statistically a significantly higher level of avoidant attachment to the father ($p < 0.01$), lower father warmth ($p < 0.01$) and higher results of father aggression ($p < 0.01$), father rejection ($p < 0.01$) and father neglect ($p < 0.01$) than adolescents in the control group.

Anxiety and avoidance dimensions of attachment are in positive correlation with aggression, hostility and neglect for both parents in subjects with conduct disorder. The avoidance dimension is in negative correlation with the perceived warmth of both parents. The self-esteem scale was not in a significant correlation with any of the listed variables. (Table 2).

Table 1. Differences in the dimensions of attachment and perception of acceptance/rejection towards mothers and fathers in subjects with and without conduct disorder

Variables	Groups		F	p
	Adolescent with conduct disorder	Control		
	M (SD)	M (SD)		
Anxiety mother	23.00 (10.31)	27.88 (88.93)	0.29	0.59
Avoidance mother	31.04 (11.71)	24.84 (12.27)	12.89	0.00**
Warmth mother	15.07 (2.96)	16.20 (3.99)	4.92	0.03*
Aggression mother	11.31 (3.81)	10.47 (3.69)	2.41	0.12
Rejection mother	10.30 (3.88)	8.36 (3.49)	13.39	0.00**
Neglect mother	9.76 (3.43)	8.11 (2.39)	14.98	0.00**
Anxiety father	59.47 (173.71)	34.08 (112.18)	1.46	0.23
Avoidance father	34.00 (13.11)	26.98 (11.50)	15.25	0.00**
Warmth father	13.46 (3.61)	15.30 (4.20)	10.41	0.01**
Aggression father	11.65 (4.66)	9.71 (3.34)	10.92	0.01**
Rejection father	10.54 (4.49)	8.40 (3.56)	13.28	0.00**
Neglect father	10.51 (3.91)	8.65 (2.93)	13.81	0.00**

Legend: M – arithmetic mean ; SD – standard deviation; ** - $p < 0.01$; * - $p < 0.05$

Table 2. Relationship between the dimensions of attachment, perception of both parents acceptance/rejection and self-esteem in subjects with conduct disorders

	2	3	4	5	6	7
1 Anxiety	,23	-,20	,28**	,23*	,34**	-,14
2 Avoidance		-,49**	,36**	,46**	,44**	,04
3 Parental warmth			-,43**	-,52**	-,51**	-,01
4 Parental aggression				,84**	,78**	-,14
5 Parental rejection					,79**	-,17
6 Parental neglect						-,14
7 Self-esteem						

Legend: *p<0.05; **p<0.01

Table 3. Role of the dimensions of attachment, perception of Complex parental rejection and self-esteem (predictors) in adolescents with conduct disorders on Conduct problems scale

Conduct problems							
Model		B	SE	β	t	p	R ²
1	Anxiety mother	0.01	0.05	0.03	0.20	>0.01	30.5%
	Anxiety father	-0.03	0.05	-0.09	-0.65	>0.01	
	Avoidance mother	-0.02	0.04	-0.05	-0.43	>0.01	
	Avoidance father	0.04	0.05	0.14	0.92	>0.01	
	Complex mother rejection	-0.00	0.04	-0.01	-0.06	>0.01	
	Complex father rejection	0.13	0.04	0.45	3.39	<0.01	
	Self-esteem	-0.06	0.04	-0.15	-1.58	>0.01	
2	Anxiety mother	0.01	0.05	0.03	0.21	>0.01	30.4%
	Anxiety father	-0.03	0.05	-0.09	-0.68	>0.01	
	Avoidance mother	-0.02	0.04	-0.06	-0.44	>0.01	
	Avoidance father	0.04	0.05	0.14	0.93	>0.01	
	Complex father rejection	0.13	0.03	0.45	3.77	<0.01	
	Self-esteem	-0.06	0.04	-0.15	-1.59	>0.01	
3	Anxiety father	-0.02	0.03	-0.07	-0.73	>0.01	30.4%
	Aviodance mother	-0.02	0.04	-0.05	0.43	>0.01	
	Aviodance father	0.04	0.04	0.13	0.91	>0.01	
	Complex father rejection	0.13	0.03	0.46	4.13	<0.01	
	Self-esteem	-0.06	0.04	-0.15	-1.62	>0.01	
4	Anxiety father	-0.02	0.03	-0.06	-0.68	>0.01	30.3%
	Avoidance father	0.03	0.03	0.09	0.83	>0.01	
	Complex father rejection	0.13	0.03	0.46	4.21	<0.01	
	Samopoštovanje	-0.05	0.03	-0.15	-1.71	>0.01	
5	Avoidance father	0.02	0.03	0.07	0.70	>0.01	29.9%
	Complex father rejection	0.13	0.03	0.46	4.23	<0.01	
	Self-esteem	-0.06	0.03	-0.15	-1.66	>0.01	
6	Complex father rejection	0.14	0.03	0.50	5.65	<0.01	29.5%
	Self-esteem	-0.06	0.03	-0.15	-1.64	>0.01	
7	Complex father rejection	0.15	0.03	0.52	5.79	<0.01	27.3%

Legend: B – unstandardized beta; SE – standard error; β – standardized beta; t – t-test; p – probability level; R² - coefficient of determination

To examine the contribution of attachment and perception dimensions of parental rejection in predicting CD on the Clinically oriented scale conduct problems according to the Youth Self Report 11-18 - YSR in the clinical group, a multivariate regression analysis of backward exclusion of predictor variables was performed (Table 3). The model initially included seven predictor variables. The regression model gradually excluded least significant variables.

The variable Complex father rejection proved to be a significant predictor ($p < 0.01$) of conduct disorder. This variable explains a total of 27.3% of the total variability of conduct disorders. Other variables did not prove to be statistically significant predictors of conduct disorder.

DISCUSSION

Our results show differences in the dimension of attachment avoidance towards mother and father. This indicates that adolescents with a conduct disorder have a more expressed rejection of intimacy and distrust to other people, as well as a strong need for independence. Many studies on the mental health of children and adolescents raise great concerns about the relationship between mental health and risk factors for the development of emotional disorders. Mental health is associated with functional deterioration (school, friends, family), suffering (emotional disorders) and inability to cope with problems (Mendo-Lazaro et al. 2019). In this regard, with this research we tried to contribute to the understanding of the role of the development of primary relationships through attachment and the importance of parental acceptance/rejection for emotional and behavioral problems in adolescents.

Adolescents with an avoidant dimension of attachment feel good without a close emotional relationship. This dimension of attachment belongs to the category of insecure attachment, i.e., dismissive attachment style (anxiety avoidance), which partly corresponds to the results of other studies conducted on the study of attachment style in adolescents with conduct disorder (Tomasic 2006). Similar results of insecure attachment have been found in some other studies (Theule et al. 2016). The examination of gender differences in the subjects within the clinical group found that the average score of the female subjects of the clinical group on the dimension of avoidance towards the father was significantly higher than the average score of the male subjects. While they were growing up, adolescents with this style of attachment often encountered rejection from their parents. Therefore, they now modify their behavior to avoid close

relationships and thus reduce the possibility of re-rejection. Some of the subjects (40.72%) in the clinical group in this study had a secure attachment style, suggesting that an insecure attachment style alone does not indicate a conduct disorder. Although attachment plays a major role in the development of relationships with others, there are other factors (genetic, psychological, familial and social) that play an important role in the development of CD (Sabori Moghadam et al. 2017).

The avoidance dimension was shown to be significantly associated with the perception of aggression, rejection and neglect from both parents in subjects with a CD. Starting from the theory of attachment which indicates the importance of primary relationships as a basis for creating security and feelings of love (secure attachment) on the one hand and feelings of insecurity, fear and rejection (insecure attachment) on the other hand, we can conclude that adolescents who developed insecure attachment to their parents perceive them in a more negative way, as more physically or verbally aggressive, disinterested, and less affectionate. Many researchers have tried to elucidate the mechanisms by which risk and protective factors can exert their influence in the prevention of CD but they are not yet fully known (Thomas, 2010). Based on these findings, we tried to explain the role of the researched variables on conduct disorder better. To examine the contribution of attachment dimensions and parental rejection perceptions in predicting conduct disorder in a clinical group, a multivariate regression analysis of backward exclusion of predictor variables was performed. The variable Complex father rejection proved to be a significant predictor of behavioral disorders with a total variability of 27.3%. Our results support the role of an insecure style of attachment to the manifestation of symptoms of a conduct disorder, in which the perception of parental rejection plays a major role, while Complex rejection from the father has been shown to be a significant predictor. Based on our results and literature, it can be concluded that parental attachment may affect adolescents' perception of parental acceptance/rejection in such a way that the avoidant dimension of attachment may contribute to adolescents perceiving their parents in a more negative way, which may result in an expression of conduct disorder symptoms. Findings supporting this conclusion (Chen et al. 1997; Ajduković 1990; Maughan et al. 1995) show that parental rejection tends to precede the development of CD. Evidence in all these studies suggests that paternal love (acceptance-rejection) is often as strongly involved as maternal love in the development of behavioral and psychological problems, as well as in the development of feelings of health (Rohner 1998; Rohner and Veneziano 2001; Veneziano 2003).

During the developmental stage of adolescence, in fact, it is important to promptly identify vulnerabilities and risks in order to create prevention and intervention programs aimed to enhance the adolescent's emotional regulation ability (Sechi at al. 2020). In practical terms, this means implementing therapeutic interventions that are not solely focused on the child or adolescent but actively involve their parents and other significant figures (Vicari at al. 2023; Bachmann at al. 2024).

The results of this study improve the scientific understanding of the influence of the quality of early relationship with the mother and father and the development of conduct disorder.

LIMITATIONS

The main limitation of this study is related to the use of self-evaluation measures that show a subjective assessment of the current state of the subjects. Since the research was conducted on a small sample, the results cannot be generalized, but they can be used for further research. It is recommended that future research includes a larger number of subjects of both sexes.

CONCLUSION

Patients with CD were found to show higher levels of avoidance on attachment dimensions than control subjects. Parental attachment may affect adolescents' perception of parental acceptance/rejection in such a way that the avoidant dimension of attachment may contribute to adolescents perceiving their parents in a negative way,

which may result in an expression of CD symptoms. Subjects with a CD felt less accepted and more rejected by parents compared to control group subjects. Complex father rejection was shown as a significant predictor of CD, which may be a risk factor for more severe symptoms of CD. In adolescents with a CD, a positive correlation was found between the avoidance dimension and the perception of aggression, rejection and neglect by both parents. These findings can be useful to clinicians in their effort to treat adolescents, who are experiencing parental, especially paternal, rejection and consequently suffering from psychological maladjustment and conduct problems. Future research should focus on recommended psychosocial interventions, parent training, multi-component and multimodal treatment approaches.

Ethical Considerations: Does this study include human subjects? YES.

Authors confirmed the compliance with all relevant ethical regulations.

Conflict of interest: No conflict of interest.

Funding sources: The authors received no funding from an external source.

Author's contribution: Ms. Ivana Štrosar – study design, data collection, writing manuscript, statistical analysis, approval of the final version. Prof. Vlasta Rudan – study design, approval of the final version. Dr. Zorana Kušević – data collection, approval of the final version. Dr. Gordan Majić – data collection, approval of the final version. Dr. Zrinka Čavar – data collection, approval of the final version. Mr. Trpimir Jakovina – statistical analysis, approval of the final version. Ms. Mia Antić – data collection, approval of the final version.

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