ORIGINAL ARTICLE

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UDC: 159.922.8:316.6 https://doi.org/10.2298/VSP170117099K

# Parenting and externalising problems in adolescents: results of factor analysis

Roditeljstvo i eksternalizovani problemi adolescenata: rezultati faktorske analize

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## Abstract

Background/Aim. Modern conceptualising of parenting in relation to manifesting adolescence externalising problems is based on parent-child two-way communication, mutual trust and parental involvement. A lot of research reports prove independent contribution of parental variables on expressing externalising problems in middle and late adolescence while data about their mutual relationship are missing. The aim of this study was to determine the relationships of parental variables and variables of externalising problems in a common space. Methods. The study included 507 students, both boys and girls, of Belgrade secondary schools, aged from fifteen to eighteen. Parental monitoring was studied using the Parental Monitoring Scale, affective attachment to parents by the Inventory of Parents and Peers Attachment, parenting practices using the Alabama Parenting Questionnaire and externalising problems by the Achenbach System of Empirically Based Assessment, Youth Self-Report. Results. Factor analysis indicated the existence of 4 factors (components) which together accounted for 65.5% of variance. The first factor (positive parenting and affective

# Apstrakt

**Uvod/Cilj.** Moderna konceptualizacija roditeljstva u vezi sa ispoljavanjem eksternalizovanih problema u adolescenciji bazirana je na dvosmernoj komunikaciji roditelj-dete, međusobnom poverenju i uključenosti roditelja. Obilje istraživačkih nalaza upućuje na dokaze o nezavisnom doprinosu roditeljskih varijabli na ispoljavanje eksternalizovanih problema u srednjoj i kasnoj adolescenciji, dok nedostaju podaci i njihovom međusobnom odnosu. Cilj rada bio je da se ispita odnos roditeljskih varijabli i varijabli eksternalizovanih problema u zajedničkom prostoru. **Metode.** Ispitivanjem je obuhvaćeno 507 učenika beogradskih srednjih škola uzrasta od petnaest do osamnaest godina, oba pola. Roditeljski attachment to mother) accounted for 38.1%, the second (externalising problems and negative parenting) accounted for 11.26%, the third (affective attachment to father) accounted for 8.93% and the fourth (negative discipline and inadequate affective attachment to mother) accounted for 7.22% of variance. The most important discovery arised from matrix correlation was a negative correlation of the second component with the first (-0.539) and the third (-0.481) one. Conclusion. A positive relationship between parents and adolescents except for a positive parenting practices of parents characterize all the subscales of parental monitoring except for the parental control. Compared to fathers, mothers are generally more involved in life of adolescents and have better mutual relationship with them, but in relation to externalising problems the affective attachment to fathers proved to be very significant even independently of their parenting role.

#### Key words:

adolescent; parenting; parent-child relations; parents; psychological tests; surveys and questionnaires.

nadzor je ispitivan putem Skale roditeljskog nadzora, afektivna vezanost za roditelje putem Inventara afektivne vezanosti za roditelje, vaspitni postupci roditelja putem Alabama upitnika o roditeljstvu, a eksternalizovani problemi putem Ahenbahovog sistema empirijski bazirane procene. **Rezultati.** Faktori analiza upućuje na postojanje 4 faktora (komponente) koji zajedno objašnjavaju 65,5% varijanse. Prvi faktor (pozitivno roditeljstvo i afektivna vezanost za majku) učestvuje u 38,1%, drugi (eksternalizovani problemi i negativno roditeljstvo) u 11,26%, treći (afektivna vezanost za oca) u 8,93% i četvrti (negativno disciplinovanje i neadekvatno afektivno vezivanje za majku) u 7,22% varijanse. Najznačajniji nalaz proistekao iz matrice korelacije predstavlja negativno korelisanje druge sa prvom (-0,539) i trećom

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(0,481) komponentom. **Zaključak.** Pozitivan odnos između roditelja i adolescenata, osim pozitivnih vaspitnih postupaka roditelja, opredeljuju i sve podskale roditeljskog nadzora, sem roditeljske kontrole. Majke su, u odnosu na očeve, generalno uključenije u život adolescenata i ostvaruju bolje odnose sa njima, ali se, u odnosu prema eksternalizovanim

## Introduction

Studying family and parenting influences on externalising behavioural problems is mostly associated with childhood and early adolescence. Externalising behavioural problems at a later age are usually interpreted as a consequence of some other environmental or biological factors. Research studies that are investigating risk factors of aggressive behaviour and delinquency have recognised following risk factors as prevalent in middle and late adolescence: parental monitoring, poor involvement of parents, rude and inconsistent discipline, rejection by parents and other below <sup>1–</sup> <sup>4</sup>. Inadequate affective attachment has an impact on externalising problems in middle and late adolescence in combination with other family factors <sup>5, 6</sup>.

Current conceptualisation of affective attachment to parents which is based on self-reporting of adolescents and presumes the assessment of mutual trust, communication and alienation has served as a good foundation for researching the attachment with externalising behavioural problems <sup>7-12</sup>. The trust that adolescents have in their parents and belief that they are obliged to communicate to their parents about their personal problems and relationships with their peers seems to be strongly linked with smaller manifestation of externalising problems in adolescence <sup>10</sup>. Adolescents who communicate more about their personal problems and problems with their peers have more trust in their parents. It is indicative that the withholding the private information does not affect the externalising behavioural problems <sup>10</sup>. It can be noticed that there are no differences in correlation between the affective attachment with independent qualities of externalising problems by aggressive behaviour and rule-breaking behaviour<sup>8, 13</sup>. Namely, research findings confirmed that adolescents who had lower scores on the subscales of trust and communication and higher scores on subscale of alienation, had higher scores in subsequent measuring both in aggressive behaviour and in rule-breaking behaviour. Furthermore, higher scores on the scales measuring aggressive and rulebreaking behaviour had a feedback effect on the weakening of affective attachment at the third point of measuring<sup>8</sup>. It was determined that affective attachment to parents mediates in explaining the influence of parents' negative control on manifestation of externalising problems <sup>14</sup>. Although the mediator significance of affective attachment is being lost at an older age the relationship of positive and negative parenting variables with affective attachment to parents remains relevant in all age groups <sup>14, 15</sup>. In a research conducted on the basis of exploring 218 dyadic relations between mothers and adolescents it was found that the parents' confidence in adolescents can mediate in explaining the influence of child disproblemima, afektivna vezanost za očeve pokazala veoma značajnom i to nezavisno od njihove vaspitne uloge.

### Ključne reči:

adolescenti; roditeljstvo; roditelj-dete odnosi; roditelji; psihološki testovi; ankete i upitnici.

closure, parental solicitation and different strategies of hiding the information with manifestation of rule-breaking behaviour <sup>16</sup>. The authors confirm correlation of affective attachment to parents and parental monitoring even independently of externalising problems confirming that safe patterns of affective attachment to parents influence a more adequate parents' monitoring and better children and adolescents disclosure <sup>15, 17</sup>. Results of the research indicate that affective attachment in the context of delinquency loses its significance with the age in difference to parental monitoring whose relation with delinquency shows stability <sup>18–20</sup>. In regard to this the authors point out a principal idea of the theory of affective attachment meaning that style, that is, quality of affective attachment to parents, mediates between parenting and delinquency <sup>21, 22</sup>.

Research findings indicate that there are differences in manifestations of externalising problems in relation to affective attachment of adolescent to parental figures of different gender. Affective attachment to mother and general affective attachment to father and mother proved significant for externalising problems in adolescents <sup>23</sup>. Research studies in western societies also reported that the adolescents are statistically more significantly attached to mother than to father what can be associated with smaller involvement of father in their upbringing <sup>24, 25</sup>. Regarding the relationship with externalising problems (according to the reports of the teachers) affective attachment to fathers and involvement of fathers explained the highest percent of variance. Furthermore, over 20% adolescents in an American study do not live with their fathers what can have consequences on their less involvement and quality of affective attachment <sup>24</sup>. On a sample of Spanish adolescents it was established that poor affective attachment to fathers influences manifestation of aggressive behaviour in adolescents of both gender <sup>15</sup>. On the other hand, affective attachment to mother was connected with externalising problems according to reports of the adolescents in all age groups <sup>10-19</sup>, while affective attachment to fathers from the age of 12 is gaining significance <sup>14</sup>. According to the reports of adolescents one-way relationships were discovered between externalising problems and affective attachment to fathers on one hand and affective attachment to mothers and adolescents externalising problems on the other  $^{26}$ .

Previously discussed research reports suggest that in order to understand adolescents externalising problems it seems essential to understand the relationship between variables of parental monitoring, affective attachment to parents and parenting practices. By discussing studied constructs in common space we presumably attain a more complete and wider picture of the relationship of studied parental variables and externalising problems. It can, therefore, serve as a basis for further directives in modelling the effects that parental variables can have on externalising problems. Moreover, for affective attachment the gender of parent is important, more than parental monitoring or parenting practices in the context of relationship with externalising problems.

The aim of this study was to determine the mutual correlation between parental variables and variables of externalising problems in common space.

#### Methods

The research was conducted during the second term of the 2013/14 school year. Research participants were the pupils of six Belgrade secondary schools and they were chosen randomly from one class in each grade (from the first to the fourth grade). The research included three secondary schools and three specialised vocational schools. The sample included 507 pupils of both gender aged from fifteen to eighteen. Pupils' average age was 16.69 (standard deviation = 1.119) years. The sample was equalised according to age, gender and type of school. Data were collected from the pupils by a questionnaire. Questionnaire completion was anonymous. The time needed for completing the questionnaire lasted as one school lesson. The pupils were previoulsy instructed orally and in written form how to fill in the questionnaire.

#### Instruments

For the assessment of externalising problems, a part of instrumentarium for assessing the emotional, social and behavioural problems of children and adolescents, the Achenbach System of Empiricaly Based Assessment, Youth Self-Report 27 was used. The version of questionnaire used was standardised to suit the children aged between 11 and 18 years. Prevalence and manifestation forms of externalising problems were studied on the basis of the Scale of Aggressive Behavior and the Scale of Rule-Breaking Behavior. The scales are three grade Likert-type scale where respondents give their answers by choosing one of the replies offered starting from 0 -false, through 1 -partly true, and 3- true. Total score of externalising problems and the scores on the Scale of Aggressive Behaviour and the Scale of Rule-Breaking Behaviour are being obtained by the addition of answers, higher scores implying larger share of externalising behaviour problems. The coefficients of Cronbach's alpha for the Scale of Aggressive Behaviour (0.837) and for the Scale of Rule-Breaking Behaviour (0.824) reflect a good internal consistency and correspond to the findings of other researchers <sup>27</sup>.

The Scale of Parental Monitoring <sup>28, 29</sup> was used for the assessment of parental monitoring. The scale of parental monitoring consists of four sub-scales titled: Parents' Knowledge, Child Disclosure, Parental Solicitation and Parental Control. The coefficients of reliability, according to the results obtained by studying the Sub-scales of Parental Monitoring, are mainly deemed to be good or acceptable, the coefficients of reliability for Subscale of Parents' Knowledge be-

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ing 0.849, Subscale of Parental Control being 0.832, Subscale of Child Disclosure being 0.746, with the exception of Subscale of Parental Solicitation whose reliability is, taking into account the obtained value of 0.676, considered questionable. Compared to the results obtained by some other authors similar values of Cronbach's alpha<sup>29</sup> were established.

The Inventory of Parents and Peer Attachment <sup>30, 31</sup>, the section for assessing the affective attachment to mother and father according to the last amendments made by the author <sup>31</sup>, was used for assessing the affective attachment. The instrument measures the adolescents' perception of positive and negative affective and cognitive dimension of the relationship with parents and close friends – particularly how well they can serve as sources of psychological safety. It was anticipated for ages from twelve to twenty. It contains twenty-five items grouped in three subscales titled: Trust, Communication and Alienation. In conformity with the findings of other authors, a revised version of the Inventory of Parents Affective Attachment used in this research paper, except for the Subscale of Alienation from Mother, has good reliability parameters <sup>32</sup>.

The Alabama Parenting Questionnaire (APQ) measures five parenting dimensions that are relevant for aetiology and treatment of externalising problems, the version intended for six to 18-year old children <sup>33</sup>. It contains 42 items grouped in five subscales in a following way: Parental Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline and Corporal Punishment. The Alabama Parenting Questionnaire <sup>34</sup> has poorer internal consistency as was being reported by some other authors, although within acceptable limits. For the subscales: Positive Parenting of 0.809 and Parental Involvement of 0.792 the value of Cronbach's alpha indicates good, that is, acceptable reliability. However, the coefficients measured for subscales: Corporal Punishment 0.662 and Poor Monitoring/Supervision 0.688, indicate suspicious reliability taken that subscale of Inconsistent Discipline has a poor reliability (0.523).

The scales of parental monitoring, affective attachment to parents and parenting questionnaire are five-grade scales of Likert-type scale, in which the pupils reply by choosing one of the answers offered from 1 - never, 2 - rarely, 3 - occasionally, 4 - often to 5 - almost always. The subscales scores are obtained by addition of the answers, the higher scores on subscales implying a higher share of aforementioned aspects.

#### Statistical analysis

Data were processed by a SPSS statistical programme package. Instruments reliability was examined by means of Spearman-Brown-Kuder-Richardson-Guttman (Cronbach alfa) test. Exploratory data analysis of major components was carried out by the measures standardised by means of Bloom's algorithm. It was applied in order that in mutual space of all examined variables the factors with maximum share in total variance of original variables should be extracted. A parallel analysis was used for determining the number of isolated components.

# Results

Factor analysis of applied instruments was carried out by means of the analysis of the principal components in mutual space of all variables. Random characteristic values with number of variables and a sample size were both generated as parameters by parallel analysis. Randomly generated values were compared to actual ones obtained in the research. The factors with higher internal values than randomly generated ones were retained. Hence, four components whose characteristic values exceed 1 were extracted. Total percent of variance explained by these components was 65.54%, the contribution of the first component being the highest 38.11%, second 11.8%, third 8.93% and fourth 7.24%. The extracted components were then rotated by help of Promax algorithm with Kaiser normalisation (kappa = 4). Table 1 shows the matrix of the structure of extracted components.

#### Table 1

Matrix of the structure of extracted com	ponents (1, 2, 3, 4)
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	Extracted components				
Variables	(randomly generated characteristic values)				
	1	2	3	4	
	(1.328)	(1.264)	(1.212)	(1.170)	
Empirical characteristic values	6.478	1.916	1.519	1.231	
Parental involvement	0.987				
Comunication mother	0.876				
Parental solicitation	0.735				
Trust mother	0.706			-0.354	
Child disclosure	0.671				
Positive parenting	0.660	0.315			
Parental knowledge	0.533	-0.325			
Alienation mother	-0.522			0.371	
Agressiveness		0.813			
Rule-breaking		0.804			
Poor monitoring/supervision		0.709		-0.448	
Inconsistent discipline		0.676			
Trust father			0.903		
Communication father			0.899		
Alienation father			-0.836		
Parental control				0.807	
Corporal punishment				0.511	
Percent of explained variance	38.11	11.26	8.93	7.24	
Total percent of explained variance		65.54			

Extracted components: 1 – positive parenting and affective attachment to mother ; 2 – externalising problems and negative parenting; 3 – affective attachment to father; 4 – negative discipline and inadequate affective attachment to mother.

The first isolated component (positive parenting and affective attachment to mother) integrates subscales of the Alabama Parenting Questionnaire indicating positive parental practices (saturation being 0.987 for the the Subscale of Parental Involvement and 0.660 for the Subscale of Positive Parenting); all the subscales of the Scale of Parental Monitoring (saturation being 0.735 for the Subscale of Parental Solicitation, 0.671 for the Subscale of Child Disclosure and 0.533 for the Subscale of Parental Knowledge), except for the Subscale of Parental Control; and all the subscales of the Inventory of Parents and Peers Attachment in relation to mother (saturation being 0.876 for the Subscale Comunication with Mother, 0.706 for the Subscale of Trust in Mother and -0.522 for the Subscale of Alienation from Mother).

The second component (externalising problems and negative parenting) was dominantly determined by the scales of externalising problems with saturations being 0.813 for the Scale of Aggressive Behaviour and 0.804 for the Scale of Rule-breaking Behaviour, subscales of the Alabama Parenting Questionnaire indicating negative parenting practices with saturations being 0.709 for the Subscale of Poor Monitoring/supervision and 0.676 for the Subscale of Inconsistent Discipline, and negative saturation of the Subscale of Parental Knowledge -0.325 and positive saturation of the Subscale of Positive Parenting of 0.315.

The third component (affective attachment to father) was constituted by all the subscales of the Inventory of Parents and Peers Attachment regarding father (saturation being 0.903 for the Subscale of Trust in Father, 0.899 for the Subscale of Communication with Father and -0.836 for the Subscale of the Alienation from Father).

The fourth component (negative discipline and inadequate affective attachment to mother) was saturated by following subscales: Parental Control (0.807), Corporal Punishment (0.511), Poor Monitoring/supervision (-0.448); Alienation from Mother (0.371), and Trust in Mother (-0.354).

The most significant finding which issued from the matrix of correlation was a negative correlation of the second component with the first (-0.539) and third (-0.481) one (Table 2).

Table 2

Extracted components*	1	2	3
1			
2	-0.539		
3	0.481	-0.481	
4	0.009	0.074	-0.108
	1		

\*For explanation see under Table 1.

#### Discussion

Isolating the constructs that indicate a positive relationship with parents and affective attachment to mother as the first major components represents a significant finding. Positive aspects of relationship with parents including the parents' interest, presence and knowledge about where, who with and how their children spend their free time indicate specificity of the nature of parenting as an active, supporting and two-way process <sup>35, 36</sup>. The results of the research indicate that mothers are generally more involved in the life of adolescents, they accomplish better communication, adolescents have greater confidence in them and self-report to them more about where, with whom and how they spend their time without parental monitoring <sup>10, 37, 38</sup>. Research results support the thesis on differences in affective attachment to father and mother, except in relation to variables of parenting and parental monitoring and manifestation of externalising problems<sup>14, 15</sup>.

Aggressive behaviour and rule-breaking behaviour dominantly saturate second component in such a way that poor monitoring and inconsistent discipline have high positive saturation, what conforms to the findings of other studies on structurising externalising problems in behaviour and main negative aspects of parenting associated with it <sup>19, 34, 39</sup>. Negative saturation of parents' knowledge about children's where-abouts, friends and activities corresponds to the assumptions about the importance of this construct in relation to aggressive behaviour and rule-breaking behaviour, and even greater importance in relation to negative parental practices, like poor monitoring/supervision and inconsistent discipline 4, 40, 41. However, what surprised us was a positive saturation of positive parenting about which rare empiricial evidences can be found <sup>42, 43</sup>. It could be explained by so called reactive parenting when parents after having perceived the problems in adolescents' behaviour are trying to compensate for the lost time  $^{\rm 42,\,44}.$ 

Bearing in mind that there are only few studies that research the affective attachment to father in the context of perceiving the relationships with parents and externalising problems, the research findings that the third component is saturated by trust, communication and alienation from father are thought very significant. The results of sporadically conducted studies indicate utterly different paths in adjustment, origin and maintenance of the problems in behaviour, especially externalising problems in adolescents in whom there are differences regarding variables of relationship to father <sup>15, 24, 45</sup>. Namely, research findings indicate that affective attachment to fathers in relation to expressing externalising problems becomes particularly apparent after the age of 12<sup>14</sup>.

The constructs which saturate fourth component reflect parental practices which indicate strict discipline manifested by corporal punishment, parental control, strict monitoring and supervision with lack of trust and with alienation from mother, what corresponds to the findings of other authors <sup>46-49</sup>. Variables of affective attachment to mother often mediate in explaining the externalising problems by negative parental variables, the link between parental practices and affective attachment being more stable than that which is being realised with externalising problems <sup>14, 15</sup>. The authors dispute about presigns and strength of variables of parental control and relationship with externalising problems in connection thereof <sup>29, 37</sup>. Taking into account that parental control is manifested by limiting freedom by setting rules and restrictions on where the adolescents are allowed to go, how long they are allowed to stay, what activities they can do and so on <sup>28, 29</sup> it can be said that it is about the construct that represents a negative aspect of parental monitoring and discipline what was confirmed in this research as well.

#### Conclusion

A positive relationship between parents and adolescents, except for positive parental practices, determine all subscales of parental monitoring too, except parental control. Mothers, compared to fathers, generally realise better relationship with adolescents, they are more involved in the life of adolescents, offer them more support so that the adolescents disclose their activities to mothers more often. On the other hand, affective attachment to father has an important influence on adolescents externalising problems in contrast to mothers and independently of their parenting role.

#### Acknowledgement

This paper is a result of the project: "Social Participation of Persons with Intellectual Disability", financed by the Ministry of Education, Science, and Technological Development of the Republic of Serbia (No. 179017).

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Received on January 17, 2018. Revised on May 11, 2018. Accepted on May 23, 2018. Online First June, 2018.