

The Relationship between Family Cohesion, Parental Behaviors and Sibling Relationships in Families of Children with Developmental Disabilities

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HOW TO CITE:

Lorena Koštić, Ana Wagner Jakab, Ajana Löw Maštruko (2026). The Relationship between Family Cohesion, Parental Behaviors and Sibling Relationships in Families of Children with Developmental Disabilities. International Journal of Special Education, 41(2s), 59-71.

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ABSTRACT:

The presence of a child with developmental disabilities can significantly influence family cohesion and intrafamily relationships. Strong family cohesion can be a good indicator of connectedness among family members and as a source of support that can significantly reduce stress levels. The aim of this study was to examine the connection between family cohesion, parental behaviors (maternal/parental warmth, acceptance, behavioral control and psychological autonomy/ support) and sibling relationships (positive and negative dimension) among typically developing adolescents with siblings with developmental disability. The study involved 100 adolescents (average age of 13.5 years) who have a sibling with developmental disabilities. Data was collected using a sociodemographic questionnaire, the Sibling relationship questionnaire, the Family cohesion scale and the Parental behavior assessment questionnaire. A regression analysis was conducted—and it suggests that parental behaviors, particularly maternal behaviors and family cohesion significantly influence the formation of positive dimensions of sibling relationships. In contrast, the variables examined were not significantly associated with the negative dimension of sibling relationships with a child with developmental disabilities.

Keywords: family cohesion, parental behaviors, sibling relationship, children with developmental disabilities

1. Introduction

Family cohesion

Family cohesion is a key dynamic of family functioning. It's viewed within the framework of Circumplex model of marital and family systems (Olson et al., 1979). There are three key dimensions of family functioning: cohesion, adaptability and communication. Family cohesion refers to emotional attachment, degree of connection and

closeness, and refers to emotional connection, togetherness and mutual support among family members (Vegas et al., 2022). Empirical evidence shows that strong family connection among family members positively influences children's emotional and social development. Children in highly cohesive families develop more effective coping strategies and adaptation (Cepanec, 2016). However, when discussing factors influencing family cohesion, and

presence of a child with developmental disabilities, studies yield mixed results.

Families with children with developmental disabilities experience unique challenges that influence emotional dynamics and family cohesion (Milić Babić, 2012). Therefore, Vela Llauro et al. (2025) highlight that cohesion in families with children with developmental disabilities is neither better or worse, but different. However, Taylor et al. (2023) compared family cohesion in families with typically developing children and those of children with developmental disabilities from the perspective of parents. Parents of typically developing children reported greater cohesion than parents of children with developmental disabilities. Javadian (2011) also compared family cohesion in families with children with developmental disabilities and families with typically developing children. It was shown that families with children with developmental disabilities experienced greater connection and cohesion. This is likely because family members with children with developmental disabilities help each other more and are considered an important source of support (Beckman, 1991; Milić Babić, 2019). Parents who were satisfied with informal support reported lower levels of stress (Milić Babić, 2019). Therefore, it is not surprising that empirical data indicate that good family cohesion can reduce parental stress (Choi & Yoo, 2015; Taylor et al., 2023). In this context, parents are key carriers of family dynamics, since their behaviors and parenting style play a crucial role in shaping harmony among family members. The presence of a child with developmental disabilities have a major impact on parenting (e.g. Hinek & Tokić Milaković, 2019). Therefore, understanding and supporting parents plays a key role in promoting family dynamics and reducing stressors associated with parenting.

Parental differential treatment

Despite empirical data confirming high cohesion among families with children with disabilities, other data indicate the presence of differential parental treatment that can influence family cohesion undermining emotional connection and sense of unity (Zhou & Wosidlo, 2023). Parental differential treatment is more visible in such families. The reasons for parental differential treatment can be

explained by different characteristics of children, age, gender, character, but also developmental disabilities. It is not unlikely that typically developing children often report feeling neglected by their parents because the parents are more likely to meet the needs of their sibling with developmental disabilities (Baron-Cohen & Bolton, 2000; Hinek & Tokić Milaković, 2019; Koštić et al., 2024). For instance, Pinquart (2013) conducted meta-analysis comparing parenting styles towards typically developing children and their siblings with chronic illnesses. Findings revealed that parents exhibit more protective behaviors and greater control towards children with chronic illness compared to typically developing siblings. Research data also show that contribution factor is (1) generally greater stress experienced by parents of children with disabilities and (2) parent's perception of child's vulnerability. Generally, research focusing on parenting styles and behaviors in families with children with developmental disabilities indicate that parents spend less time with typically developing children (Hinek & Tokić Milaković, 2019). Although typically developing siblings report that are aware of reasons for differential parental treatment, due to complex needs of siblings with developmental disabilities, negative emotions such as neglect, jealousy, guilt still emerge (Baron-Cohen & Bolton, 2000; Deavin et al., 2018; Hinek & Tokić Milaković, 2019). Given these findings, it is not surprising that family cohesion in families with children with developmental disabilities tend to be lower. Siblings of children with developmental disabilities may also experience numerous challenges as family dynamics become more adapted to the needs of the child with developmental disabilities (Múries-Cantán et al., 2022). Some studies show that they are or may feel obligated to help parents in caring for sibling with disability (McClellan et al., 2024; Platt et al., 2014). However, the need and readiness to help parents caring for sibling with developmental disability may depend on parent behaviors. Parents who employ greater control and warmth are more likely to encourage typically developing siblings to help them to care for sibling with disability (Platt et al., 2014). Therefore, parental differential treatment can negatively influence family cohesion fostering

rivalry and emotional distancing due to feelings of typically developing siblings.

Sibling relationship

Many studies confirm that sibling relationships with a child with developmental disabilities differ from those with typically developing siblings. Some studies have shown that this relationship is characterized by less love and more conflicts (Guite et al., 2004; Taylor et al., 2001), other authors state that the relationship is similar to children with typical development (Rum et al., 2024; Walton & Ingersoll, 2015). But there are also reports confirming that due to developmental disabilities, people with typical development have more love for their sister/brother (Ghughe, 2022). Different empirical findings can be explained by different living conditions. Based on the literature review so far, some of the factors that may influence the quality of sibling relationships may be: e.g. (1) developmental disabilities, (2) relationship with parents, (3) social support, (4) understanding of the sibling's developmental disabilities (Bracinnier et al., 2018). Studies examining the connection between sibling relationships and family cohesion are rare. However, some of them show that parents who rated high family cohesion also rated the sibling relationship with their child with developmental disabilities as very high quality. Others report that siblings feel a strong protective concern for their brother or sister (Barr & McLeod, 2010), while some feel embarrassment (Dervishailaj & Murati, 2014). Different impacts of one sibling to another may influence their relationship on positive but also negative way. Positive relationship is based on high scores of warmth but low on rivalry, conflict and dominance and negative relationship is based on high scores of rivalry, conflict and dominance but low of warmth (Jurkin, 2014). Moreover, many empirical findings confirm that the disability of a sibling can be the reason for the appearance of internalizing and externalizing difficulties in persons with typical development (Giallo et al., 2012). The negative impact of a developmental disability on a typically developing sibling also relates to feelings of isolation, guilt about one's own abilities and health, concerns about one's future but also the future of

one's sibling, and feelings of neglect (Meyer & Vadasy, 2000).

Taken together, while sibling relationships are inherently significant, when one child has developmental disability, they may adversely affect the wellbeing of the typically developing sibling. Existing literature makes clear that sibling relationships in such families differ from those among peers. We also know that family dynamics change due to a sibling's developmental disability, which can cause family members to distance themselves from each other and develop emotional or other difficulties.

The aim of this study was to examine the connection between family cohesion, parental behaviors (maternal/parental warmth, acceptance, behavioral control and psychological autonomy/support) and sibling relationships (positive and negative dimension) among typically developing adolescents with siblings with developmental disability. Following the aim of the research, three hypothesis emerged.

H1: Family cohesion is connected with positive sibling relationship.

H2: Parental warmth is connected with positive sibling relationship.

H3: Parental control has negative impact on sibling relationship and family cohesion.

2. Methodology

Participants

Participants of the research were typically developing siblings of children with developmental disabilities. A total of 100 typically developing individuals participated in the research (36 girls and 64 boys) with an average age of 13.5 years. The largest number of participants (67%) attend elementary school, a smaller number (31%) attend high school, one participant completed a three-year high school, and one is a university student. The largest number of participants (92%) have one sister/brother. 8% of participants have more than 1 sibling with developmental disabilities. 73% of the total number of participants have a brother with developmental disabilities, while 29% have a sister with developmental disabilities. The average age of

sisters with developmental disabilities is 12.82 years and brothers 10.86. Multiple types of disability is present in 60% of siblings. Autism spectrum disorders is present in 24% of siblings. Intellectual disability is present in 4 % of siblings. Motor

disability is present in 3% of siblings. Impairment in speech and language communication is present in 5% of siblings. Hearing impairment is present in 3% of siblings and visual impairment is present in 1% of siblings.. The data are shown in Table 1.

Table 1. Sociodemographic data

Characteristics	Category	%	M (SD)
Age	-	-	13.5
Sex	Female	36	
	Male	64	
School	Elementary school	67	1.32 (0.47)
	High school	31	1.69 (0.46)
	Completed high school	1	1
	University	1	1
Number of siblings with developmental disabilities	1	92	1.69 (0.46)
	>1	8	
Who in the family has a developmental disability?	Sister/sisters	29	1.82 (1.05)
	Brother/brothers	73	1.69 (0.46)
Average age of siblings with developmental disability			
	Sister	12.82	
	Brother	10.86	
Type of developmental disability	Visual impairment	1	
	Hearing impairment	3	
	Impairment of speech and language communication	5	
	Motor disabilities	3	
	Intellectual disabilities	4	
	Autism spectrum disorder	24	
	Multiple types of developmental disabilities	60	

Measuring instruments

• Sociodemographic data questionnaire

A Sociodemographic Data Questionnaire, created for the purposes of this research, was used to collect data about the participants and their sisters/brothers with developmental disabilities. Through a total of 11 items, data were collected on age, gender, education, parents' education, socioeconomic status, type of the sister's/brother's disability, birth order, household members, and parents' marital status. Response options varied depending on the question. For example,

participants wrote their age and school grade, but chose options in every other question.

• Sibling Relationship Questionnaire

The sibling relationship was measured using the Sibling Relationship Questionnaire (Jurkin, 2014), the Croatian version of the Sibling Relationship Questionnaire (Furman & Buhrmester, 1985). The questionnaire is divided into four subscales: warmth, conflict, rivalry, and status/power. A total of 45 items is divided into the following dimensions: intimacy (e.g. Do you confide to your brother/sister?), cooperative behavior (e.g.

Brothers/sisters usually do nice things for each other. How much do you and your sister/brother do nice things for each other?), similarity (e.g. Brothers/sisters usually do nice things for each other. How much do you and your sister/brother do nice things for each other?), companionship (e.g. How often do you and your brother/sister do something together (visit the same places...)?), affection (e.g. How often do you and your brother/sister do something together (visit the same places...)?), rivalry (e.g. How much do you argue with your sister/brother?), antagonism (e.g. How often do you and your sister/brother insult each other?), competition (e.g. How much do you compete with your sister/brother?), admiration towards sibling (e.g. How much do you admire sister/brother?), perceived admiration of sibling (e.g. How much does your sister/brother admire you?), dominance of the sibling (e.g. Do you tell your sister/brother what to do?), dominance of the sibling (e.g. Does your sister/brother tell you what to do?), maternal favoritism (e.g. How much, in your opinion does your mother show favoritism towards your sister/brother?), and paternal favoritism (e.g. How much, in your opinion does your mother show favoritism towards your sister/brother?). These dimensions are divided into 4 subscales: warmth ($\alpha = 0,94$), conflict ($\alpha = 0,84$), rivalry (mother favoritism, $\alpha = 0,69$; father favoritism, $\alpha = 0,87$), status/power ($\alpha = 0,70$). Subscales encompass positive (warmth, status/power) and negative dimensions of sibling relationships (conflict, rivalry). This research showed that the questionnaire has high reliability ($\alpha = 0.89$). Similar results were found in previous studies. For example, Begum and Blacher (2011) in their research also showed that the questionnaire has high reliability ($\alpha = 0.85$). It is scored on 5 point Lickert scale (1) almost not at all- (5) a lot. Total score represents the mean value of corresponding items.

- **Parental Behavior Assessment Questionnaire**

The Parental Behavior Assessment Questionnaire (Keresteš, 1999), the Croatian version of the Children's Report of Parental Behavior Inventory (CRPBI; Schuldermann & Schuldermann, 1988), was used to assess parental behaviors. The

questionnaire is primarily divided into two parts. Each part contains 57 items measuring parental behaviors separately for the mother and separately for the father. Parental behaviors are divided into nine dimensions: acceptance (e.g. After talking to my mother/father I feel better.), child-centeredness (e.g. My mother/father always think of things that will cheer me up.), acceptance of individuation (e.g. My mother/father allows me to tell her/him if I think my ideas are better than hers/his.), hostile detachment (e.g. Mother/father doesn't talk to me much.), intrusiveness (e.g. My mother/father always want to know exactly where I am and what I'm doing.), hostile control (e.g. Mother/father always tells me how to behave.), instilling anxiety (e.g. If I break a promise, mother/father doesn't trust me for a long time afterwards.), weak discipline (e.g. Mother/father are lenient on me.), and extreme autonomy (e.g. When I go out, my mother/father doesn't tell me what time I have to come home.). The questionnaire dimensions are grouped into three fundamental bipolar dimensions of parental behaviors: parental acceptance/rejection (acceptance, child-centeredness, acceptance of individuation) (mother dimension, $\alpha = 0,65$; father dimension, $\alpha = 0,80$), parental psychological control/psychological autonomy (intrusiveness, hostile control, and instilling anxiety) (mother dimension, $\alpha = 0,83$; father dimension, $\alpha = 0,86$), and parental behavioral, firm/weak control (weak discipline, extreme autonomy) (mother dimension, $\alpha = 0,72$; father dimension, $\alpha = 0,71$). This research showed that the questionnaire has satisfactory reliability, which is higher for the father ($\alpha = 0.80$) and lower for the mother ($\alpha = 0.72$). Previous research also showed that the questionnaire has satisfactory reliability ($\alpha = 0.67$ to $\alpha = 0.89$) (Keresteš et al., 2012). Participants rated parent behaviors on 3 point scale: incorrect, partially correct and correct. Total score for questionnaire is calculated as sum of each dimension divided by their number.

- **Family Cohesion Scale**

Family cohesion was examined using the Family Cohesion Scale (Bloom, 1985). The five-item scale assesses the connection of family members and the degree of personal autonomy experienced within

the family (e.g. In my family we are all getting along well). Participants rated questions on 4 point scale: (1) doesn't apply to my family, (2) mostly doesn't apply to my family, (3) mostly applies to my family, (4) fully applies to my family. Total score is calculated as sum of all items. Cronbach's alpha shows satisfactory reliability of the scale ($\alpha = 0.83$).

• Data collection procedure

The research was approved by the Ethics committee of the Faculty of education and rehabilitation sciences and University of Zagreb. It was conducted as part of the unpublished doctoral research entitled „Wellbeing of siblings of persons with disability“. The sample was collected after the approval of the Ethics committee. Associations for children with developmental disabilities and rehabilitation centers were contacted in order to collect research participants. Contact persons for associations (typically president or secretary) who were informed about research through researchers information and official mail containing basic research information. They reached out to parents of children with developmental disabilities who have adolescent typically developing sibling. After the parents approved the sharing of contact information, the researcher contacted them. The parent was informed about the aim and procedure of the research. After the parent approved communication with their typically developing child, the researcher contacted the potential participants. The aim and procedure of the research were explained again to typically developing children. They were also informed about anonymity and voluntary nature of participation and possibility of withdrawing from the research at any time. A meeting was arranged after they agreed to participate in the research. Meetings with the researcher were usually held in the afternoon hours and during weekends. Informed written consent for participation was obtained from all subjects involved in the study. For those younger than 14 years old, parents signed informed written consent. Participants who were 14 or older signed informed written consent for themselves. There were no missing data because researcher was present with participants the whole time while completing

questionnaires and checked the completion of each questionnaire at the end of the meeting.

• Data analysis

Following collection, dataset were entered into SPSS. Hypothesis were tested using multiple statistical procedures. Descriptive statistics and reliability test (Chronbach alfa) were measured for all included variables. All hypothesis were tested via multivariate linear regression analysis. Although some variables show deviations from normality, inspection of residuals indicate that assumptions are reasonably met, therefore parametric tests were applied. Although some variables show deviations from normality, inspection of residuals indicate that assumptions are reasonably met, therefore parametric tests were applied. Given the size sample and absence of extreme curtosis or skewnes parametric tests were considered. Moreover, given that observed effect size was moderate to large and supporting the stability of results (Field, 2018).

3. Results

Table 2. shows the basic descriptive statistics of all examined variables. Positive sibling relationships had an average value of 3.81 (SD = 0.71), and negative relationships showed an average of 3.39 (SD = 0.49). The dimensions of parental behavior showed that maternal behavior in the first dimension (warmth and acceptance) had an average of 2.24 (SD = 0.17), while for the father this dimension averaged 2.16 (SD = 0.25). Other dimensions of parental behavior showed similar trends, with moderate variability. Family cohesion had an average of 2.84 (SD = 0.34), with positive skewness observed (Skewness = 0.84).

The results showed deviations from normal distribution in most variables ($p < 0.05$), which indicates the nonparametric character of the data. In particular, the variables of family cohesion and the dimensions of parental behavior showed significant test values, suggesting that nonparametric methods are required in further analyses. The results predominantly indicate a positive sibling relationship and a medium to higher level of parental support and family cohesion.

Table 2. Descriptive data of research variables

Variable	Min	Max	M	SD	SW	KS
Positive sibling relationship	1.75	5.00	3.81	0.71	-0.74	0.29
Negative sibling relationship	2.27	4.62	3.39	0.49	0.20	-0.20
Mother's acceptance	1.72	2.52	2.24	0.17	-0.80	-0.00
Psychological control/autonomy	1.06	2.76	1.79	0.36	0.30	-0.034
Mother's control	1.10	2.90	2.02	0.34	-0.08	0.10
Father's acceptance	1.34	2.55	2.16	0.25	-0.78	0.07
Father's psychological control/autonomy	1.00	2.65	1.63	0.38	0.41	-0.29
Father's control	1.00	2.90	2.06	0.36	0.02	0.26
Family cohesion	2.00	4.00	2.84	0.34	0.84	2.66

Correlation analysis (Pearson) between variables showed several significant associations. A positive sibling relationship was significantly associated with maternal warmth ($r = 0.54$, $p < 0.01$), paternal warmth ($r = 0.55$, $p < 0.01$), and family cohesion ($r = 0.34$, $p < 0.01$). Mother's psychological control/autonomy was negatively associated with mother's control ($r = -0.45$, $p < 0.01$), and father's warmth and control showed significant intercorrelations with the dimensions of parental behavior toward children ($r = 0.31-0.51$, $p < 0.01$).

A negative sibling relationship did not show significant correlations with most variables, suggesting weaker connections with the observed dimensions of parental behavior and family cohesion.

Mother's psychological control/autonomy was

positively correlated with father's psychological control/autonomy ($r = 0.51$, $p < 0.01$), while father's control was negatively correlated with father's management ($r = -0.41$, $p < 0.01$).

These results indicate that parental warmth, especially maternal warmth, significantly contributes to positive sibling relationships and family cohesion, while negative parental behavior patterns and control show weaker, sometimes opposite, links to interpersonal relationships within the family. The results suggest that the quality of parental behavior, particularly emotional warmth and support, may be an important predictor of positive sibling relationships, while negative relationships among children do not appear to be directly related to the perception of parental behavior. Data are presented in Table 3.

Table 3. Pearson correlation coefficient between predictor variables and criterion variables positive and negative sibling relationship

	1	2	3	4	5	6	7	8	9
1. Positive relationship between siblings		0.03	0.54**	-0.07	0.18	0.55**	0.12	0.17	0.34**
2. Negative relationship between siblings			0.05	0.02	-0.14	0.01	0.13	-0.19	0.05
3. Mother's acceptance				-2	0.38**	0.51**	-0.02	0.17	0.07
4. Psychological control/autonomy					-0.45**	-2	0.58**	-0.21*	-0.11
5. Mother's control						0.13	-0.40**	0.51**	-0.12
6. Father's acceptance							0.09	0.31**	0.36**

7. Father's psychological control/autonomy	-0.41**	0.05
8. Father's control		0.07
9. Family cohesion		

* $p < 0,05$; ** $p < 0,01$

Finally, a regression analysis was conducted with the criterion variables of positive and negative sibling relationships. The results show that the first step of the regression analysis was significant ($F(7, 92) = 11.32, p < 0.001$) with a coefficient of determination $R^2 = 0.46$, which means that the predictors explain approximately 46% of the variance in positive sibling relationships. Significant predictors were maternal warmth ($\beta = 0.39, p < 0.01$), paternal warmth ($\beta = 0.24, p = 0.02$), paternal control ($\beta = 0.21, p = 0.04$), and family cohesion ($\beta = 0.19, p = 0.02$). The results suggest that greater parental warmth and a higher level of family cohesion positively influence the quality of sibling relationships. The second step of the regression analysis was not significant ($F = 0.83, p = 0.56$) with a coefficient of determination $R^2 = 0.06$, indicating that the predictors do not explain significant variance in negative sibling relationships. None of the included predictors were statistically significant ($p > 0.05$).

Based on the obtained results, it can be assumed that some other variables, not included in this study, influence the negative dimension of sibling relationships. For example, many empirical findings confirm the negative impact of undesirable behaviors on sibling relationships with a child with developmental disabilities (Koštić, 2025). Although it was shown that the type of disability does not negatively affect the sibling relationship, communication deficits in children with autism have been shown to negatively influence the sibling relationship (e.g., Koštić, 2025). Furthermore, studies emphasize that concern for the future of the sister/brother and feelings of social isolation can also negatively affect the sibling relationship with a sister/brother with developmental disabilities (e.g., Levante et al., 2025).

4. Discussion

Results confirm that parental behaviors, especially the dimension of mother's acceptance and family cohesion, play an important role in shaping a

positive sibling relationship. These findings are consistent with results obtained in previous studies. Some empirical findings confirm that the relationship with the mother can be a moderator of the sibling relationship (Piotrowski, 2024). Studies show that children tend to have warmer relationship with mothers than fathers (Putnick et al., 2012). Results also show that unequal parental treatment by mothers will have more negative impact than from fathers (Li et al., 2025). However, as family traditions and society changes and evolves, fathers actively engage in family dynamics. Although it was traditionally considered that mothers are the primary caregivers in the family (Allison & Campbell, 2020), fathers are increasingly becoming active participants in all family activities. Thus, there are empirical findings that parents in families with children with developmental disabilities share their parental roles. Accordingly, mothers are more dedicated to children with developmental disabilities and fathers to those of typical development (Brown et al., 2011; Kardum, 2021). It is important to emphasize influence of father's behaviors on relationship with children. The fact is that father's are much less included in research focusing families with children with disabilities than mothers, yet their role was shown to be important in relationship with other family members (Jiménez-Iglesias et al., 2017) especially with typically developing children (Gau et al., 2010). Findings in this research suggest that the relationship and acceptance by the mother constitute a significant prerequisite for a positive sibling relationship with children with developmental disabilities.

Considering this research result within the Croatian context, we can say that it is not unexpected. Croatia is still traditional in its understanding of gender relations, so mothers are mostly engaged in taking care of family relationships and caring for children.

In addition to parental warmth, a high level of family cohesion indicates good emotional connection of family members, and it reduces stress.

Cohesive families have stronger emotional connection, providing greater mutual support and sense of feeling safe (Milić Babić, 2012). Aloia & Strutzenberg (2022) examined the impact on family style on family cohesion and personality traits. Results indicate that parenting styles impact family cohesion (even in adult age) and that authoritative parenting style most effectively promotes family cohesion. Parents using authoritative parenting style use warmth and control in most balanced way and promote love and boundaries having positive impact on children wellbeing and mental health (Baumrind, 1966). Empirical findings confirm that parental control can significantly reduce the connection between parents and children. These findings are consistent with studies showing that parental control significantly reduces family cohesion (e.g., Henry et al., 2006). Parents with greater control towards their children undermine their autonomy which all together negatively affects adolescent's mental health and wellbeing (Aloia & Strutzenberg, 2022). Some studies show gender differences. Fathers lack of control may have negative impact on adolescent wellbeing because, they typically spend less time with them than mothers. Some authors explain that as lack of availability from fathers. Mothers tend to practice control as they spend more time with children (Zhou & Woszidlo, 2022). Research linking parenting styles and family cohesion shows that many parents who experience high levels of stress use an authoritarian parenting style characterized by a high level of control (Ueda et al., 2020). Furthermore, family cohesion also moderates sibling relationship. Existing literature so far reveals that differential parental treatment may occur in families with children with disabilities appears due different needs of children, yet it also affects mental health and wellbeing of typically developing siblings. For example, greater difference in parental treatment can promote greater conflict and less supportive behaviors between siblings. Parental differential treatment can also promote less intimacy in sibling relationship (Boll et al., 2003; Zhou & Woszidlo, 2022).

Contrary to expectations, the negative aspects of relationships among children were not related to parental behaviors or the level of family cohesion.

It is possible that these relationships are more a result of individual traits, emotional reactions to stress, or some other specific circumstances related to the child's disability.

Following these results, first hypothesis which states that family cohesion is connected with positive sibling relationships is fully accepted. Results indicate correlation only for positive dimension of sibling relationship. Second hypothesis that states that parental warmth is connected with positive sibling relationship is fully accepted. Third hypothesis which states that parental control has negative impact on sibling relationship and family cohesion is also partially accepted because results indicate correlation between variables but was not confirmed in regression analysis.

Despite the demanding task of collecting the sample and conducting a paper-pencil survey, a limitation of this study is the number of participants. A larger number of participants would mean greater certainty in interpreting and generalizing the results. The largest number of participants was in early adolescence, which limits the interpretation of the results in light of all phases of adolescence. This research did not include a control group, which would certainly contribute to the quality of the results and their interpretation and conclusions.

The contribution of this research is that it deals with a population whose role, significance and needs within the family context have not been sufficiently researched or sufficiently addressed. Furthermore, the academic contribution is an insight into the complex dynamics of family relationships through the connection of parental behaviors, family cohesion and relationships between siblings. The research deals with adolescents, which is a sensitive, formative and important period in a person's life, who are also the siblings of children with disabilities, which means that they are still underrepresented in research.

The results of this research can contribute to practice. Based on these insights, more specific support for families as a community can be planned through education, counseling, creation of support groups. Also, insight into the perspective of siblings of children with disabilities can help create support

that is targeted at them. Informing mothers and fathers about their influence on relationships between siblings can contribute to family relationships. In the Croatian context, where the mother still has a central position in childcare, we consider it important to support fathers to become aware of their influence and importance for the relationship with their children. In this case, especially for their typically developing children.

5. Conclusion

Results report that parent behaviors play important role in shaping positive sibling relationship. Especially mothers warmth was shown to be important for positive sibling relationship. Negative parent behaviors, like control was shown to have negative impact on interpersonal family relationships. Maternal warmth has been shown to have significant impact on family cohesion as well. Family cohesion have major contribution on family intrapersonal relationship and positive sibling

relationship. Higher family cohesion have major contribution on positive sibling relationship.

It would be useful to conduct longitudinal research in the future that would follow participants through all stages of adolescence. It would also be very useful to conduct participatory research in which participants would actively participate in all stages of the research so that the results could be used in planning support much more effectively and according to the participants' needs. The inclusion of a qualitative method would contribute to a deeper understanding of the research problem.

References

- Allison, M., Campbell, M. (2015). Mothers' perceptions of the quality of childhood sibling relationships affected by disability. *The Educational and Developmental Psychologist*, 32(1), 56-70. <https://doi.org/10.1017/edp.2015.8>
- Aloia, L. S., Strutzenberg, C. (2023). Family cohesion in adulthood as a function of parenting style in childhood and enduring personality traits. *The Family Journal*, 31(2), 288-295. <https://doi.org/10.1177/10664807221104139>
- Barr, J., McLeod, S. (2010). They never see how hard it is to be me: Siblings' observations of strangers, peers and family. *International Journal of Speech-Language Pathology*, 12(2), 162-171. <https://doi.org/10.3109/17549500903434133>
- Baron-Cohen, S. Bolton, P. (2000). Autism. *The new cognitive neurosciences*, 1167- 1270. Taken from: https://cbcd.bbk.ac.uk/sites/default/files/cbcd/files/people/scientificstaff/teodora/Gliga___et_al_False_belief_accepted1.pdf
- Baumrind, D. (1966). Effects of authoritative parental control on child behaviour. *Child development*, 887-907
- Beckman, P. J. (1991). Comparison of mothers' and fathers' perceptions of the effect of young children with and without disabilities. *American journal of mental retardation: AJMR*, 95(5), 585-595.
- Begum, G., Blacher, J. (2011). The siblings relationship of adolescents with and without intellectual disabilities. *Research in Developmental disabilities*, 32(5), 1580- 1588. <https://doi.org/10.1016%2Fj.ridd.2011.01.056>
- Bloom, B. L. (1985). A factor analysis of self-report measures of family functioning. *Family process*, 24(2), 225-239. <https://doi.org/10.1111/j.1545-5300.1985.00225.x>
- Boll, T., Ferring, D., Filipp, S.-H. (2003). Perceived Parental Differential Treatment in Middle Adulthood: Curvilinear Relations With Individuals' Experienced Relationship Quality to Sibling and Parents. *Journal of Family Psychology*, 17(4), 472-487. <https://doi.org/10.1037/0893-3200.17.4.472>
- Braconnier, M. L., Coffman, M. C., Kelso, N., Wolf, J. M. (2018). Sibling relationships: Parent-child agreement and contributions of siblings with and without ASD. *Journal of Autism and Developmental Disorders*, 48, 1612-1622. <https://doi.org/10.1007/s10803-017-3393-9>

- Brown, G. L., McBride, B. A., Bost, K. K., Shin, N. (2011). Parental involvement, child temperament, and parents' work hours: Differential relations for mothers and fathers. *Journal of applied developmental psychology*, 32(6), 313-322. <https://doi.org/10.1016/j.appdev.2011.08>
- Cepanec, K. (2016). *Uloga odgajatelja i roditelja u razvoju psihološke otpornosti na stres kod djece predškolske dobi* (Doctoral dissertation, University of Zagreb. Faculty of Teacher Education).
- Choi, E. K., Yoo, I. Y. (2015). Resilience in families of children with Down syndrome in Korea. *International Journal of Nursing Practice*, 21(5), 532-541. <https://doi.org/10.1111/ijn.12321>
- Deavin, A., Greasley, P., Dixon, C. (2018). Children's perspectives on living with a sibling with a chronic illness. *Pediatrics*, 142(2), 1-11. <https://doi.org/10.1542/peds.2017-4151>
- Dervishalaj, E. Murati, E. (2014). Families of children with developmental disabilities: perceptions and experiences of adolescent siblings of children with developmental disabilities. *European Scientific Journal*, 10(2), 129-142
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics 5th ed. UK: University of Sussex.*
- Furman, W., Buhrmester, D. (1985). Children's perceptions of the qualities of sibling relationships. *Child development*, 448-461. <https://doi.org/10.2307/1129733>
- Gau, S. S.-F., Chou, M.-C., Lee, J.-C., Wong, C.-C., Chou, W.-J., Chen, M.-F., Soong, W.-T. Wu, Y.-Y. (2010). Behavioural problems and parenting style among Taiwanese children with autism and their siblings. *Psychiatry and Clinical Neurosciences*, 64(1), 70-78. <https://doi.org/10.1111/j.1440-1819.2009.02034.x>
- Giallo, R., Roberts, R., Emerson, E., Wood, C., Gavidia-Payne, S. (2014). The emotional and behavioural functioning of siblings of children with special health care needs across childhood. *Research in developmental disabilities*, 35(4), 814-825. <https://doi.org/10.1016/j.ridd.2014.01.017>
- Ghuge, S. (2022). Study of feelings, perceived impact amongst siblings of down syndrome. Trends. *Clin. Medi. Sci. Special Issue: Recent Developments of medical and surgical research*, 45-55. <https://doi.org/10.30538/psrp-tmcs2023.si-rdmsr006>
- Guite, J., Lobato, D., Kao, B., Plante, W. (2004). Discordance between sibling and parent reports of the impact of chronic illness and disability on siblings. *Children's Health Care*, 33(1), 77-92. https://doi.org/10.1207/s15326888chc3301_5
- Henry, C. S., Robinson, L. C., Neal, R. A., Huey, E. L. (2006). Adolescent perceptions of overall family system functioning and parental behaviors. *Journal of Child and Family Studies*, 15(3), 308-318. <https://doi.org/10.1007/s10826-006-9051-z>
- Hinek, S. Tokić Milaković, A. (2019). Growing up with a brother diagnosed with autism spectrum disorder: the siblings' perspective. *Croatian Review of Rehabilitation Research*, 55(1), 1-12. <https://doi.org/10.31299/hrri.55.1.1>
- Javadian, R. (2011). A comparative study of adaptability and cohesion in families with and without a disabled child. *Procedia-Social and Behavioral Sciences*, 30, 2625-2630. <https://doi.org/10.1016/j.sbspro.2011.10.514>
- Jiménez-Iglesias, A., García-Moya, I., Moreno, C. (2017). Parent-child relationships and adolescents' life satisfaction across the first decade of the new millennium. *Family Relations*, 66(3), 512-526. <https://doi.org/10.1111/fare.12249>
- Jurkin, M. (2014). *Uloga nekih obilježja obiteljskih procesa u objašnjenju kvalitete odnosa među braćom i sestrama* (Unpublished doctoral dissertation). University of Zagreb.
- Kardum, A. (2021). *Odrednice roditeljskog ponašanja u obiteljima djece s poremećajem iz spektra autizma*. (Doctoral dissertation). University of Zagreb.
- Keresteš, G. (1999). *Agresivno i prosocijalno ponašanje školske djece u kontekstu ratnih zbivanja: provjera posredujućeg utjecaja roditeljskog ponašanja*. (Unpublished doctoral dissertation). Filozofski fakultet u Sveučilišta Zagrebu.
- Keresteš, G., Brković, I., Kuterovac Jagodić, G., Greblo, Z. (2012). Razvoj i validacija upitnika roditeljskog ponašanja. *Suvremena psihologija*, 15(1), 23-41.

- Koštić, L., Wagner Jakab, A., Löw, A. (2024). Parenting styles and behaviours towards typically developing children and children with developmental disabilities: an overview of contemporary insights. *Hrvatska revija za rehabilitacijska istraživanja*, 60(1), 92-118. <https://doi.org/10.31299/hrri.60.1.5>
- Koštić, L. (2025). *Dobrobit sestara i braće djece s teškoćama u razvoju i osoba s invaliditetom* (Doctoral dissertation, University of Zagreb. Faculty of Education and Rehabilitation Sciences).
- Levante, A., Martis, C., Del Prete, C. M., Martino, P., Primiceri, P., Lecciso, F. (2025). Siblings of persons with disabilities: a systematic integrative review of the empirical literature *Clinical Child and Family Psychology Review*, 28(1), 209-253. <https://doi.org/10.1007/s10567-024-00502-6>
- Li, P., Chen, Q., Wang, Y., Jiang, L., Xin, G., Hui, Y., Gao, T., Li, Q., Wang, X. (2025). Parent–child attachment and sibling relationship quality in rural China: Moderating roles of favoritism and gender. *Family Relations*, 74(4), 1871-1888. <https://doi.org/10.1111/fare.13180>
- McClellan, L. S., Fry, C. M., Telzer, E. H., Rogers, C. R. (2024). Exploring Family Obligation as a Buffer Between Parental Differential Treatment and Sibling Hostility. *Journal of Child and Family Studies*, 1-12. <https://doi.org/10.1007/s10826-024-02814-1>
- Meyer, D., Vadasy, P. (2000). *Living with a brother or sister with special needs: A book for sibs*. University of Washington Press.
- Milić Babić, M. (2012). Obiteljska kohezivnost u obiteljima djece s teškoćama u razvoju. *Nova prisutnost: časopis za intelektualna i duhovna pitanja*, 10(2), 207-223.
- Milić Babić, M. (2019). Socijalna podrška i roditeljstvo. *Socijalne teme: Časopis za pitanja socijalnog rada i srodnih znanosti*, 1(6), 13-26.
- Múries-Cantán, O., Giné, C., Brown, R. I., Aguiar, N. B., Schippers, A. P. (2023). Siblings of children with intellectual and developmental disabilities: Quality of life perceptions from Catalonia. *Journal of Policy and Practice in Intellectual Disabilities*, 20(2), 192-204. <https://doi.org/10.1111/jppi.12451>
- Olson, D. H., Sprenkle, D. H., Russell, C. S. (1979). Circumplex model of marital and family systems: I. Cohesion and adaptability dimensions, family types, and clinical applications. *Family process*, 18(1), 3-28. <https://doi.org/10.1111/j.1545-5300.1979.00003.x>
- Pinquart, M. (2013). Do the parent–child relationship and parenting behaviors differ between families with a child with and without chronic illness? A meta-analysis. *Journal of pediatric psychology*, 38(7), 708-721. <https://doi.org/10.1093/jpepsy/jst020>
- Piotrowski, C. C. (2024). Exploring Linkages Between Mother–Child and Sibling Relationship Quality and Prosocial Behavior Between School-Aged and Adolescent Siblings. *Journal of Family Issues*, 45(4), 833-851. <https://doi.org/10.1177/0192513X231162965>
- Platt, C., Roper, S. O., Mandelco, B., Freeborn, D. (2014). Sibling cooperative and externalizing behaviors in families raising children with disabilities. *Nursing Research*, 63(4), 235-242. <https://doi.org/10.1097/NNR.0000000000000046>
- Putnick, D. L., Bornstein, M. H., Lansford, J. E., Chang, L., Deater-Deckard, K., Di Giunta, L., Gurdal, S., Dodge, K.A., Malone, P.S., Oburu, P., Pastorelli, C., Skinner, A.T., Sorbring, E., Tapanya, S., Tirado, L.M.U., Zelli, A., Alampay, L.P., Al-Hassan, S.M., Bacchini, D., Bombi, A. S. (2012). Agreement in mother and father acceptance-rejection, warmth, and hostility/rejection/neglect of children across nine countries. *Cross-Cultural Research*, 46(3), 191-223. <https://doi.org/10.1177/1069397112440931>
- Rum, Y., Zachor, D. A., Armony, Y., Daniel, E., Dromi, E. (2024). Sibling Relationships in Families of Autistic and Typical Children: Similarities and Differences in the Perspectives of Siblings and Mothers. *Journal of Autism and Developmental Disorders*, 1-15. <https://doi.org/10.1007/s10803-023-06222-0>
- Schludermann, S., Schludermann, E. (1988). Notes on the methodological properties of the CRPBI-108. Unpublished manuscript, Department of Psychology, University of Manitoba, Winnipeg, Canada.
- Taylor, V., Charman, T., Fuggle, P. (2001). Well sibling psychological adjustment to chronic physical disorder in a sibling: How important is maternal awareness of their illness attitudes and perceptions?. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 42(7), 953-962. <https://doi.org/10.1017/S0021963001007752>

- Taylor, T. M., Roper, S. O., Woodruff, M., Grow, H. P., Freeborn, D. (2023). Family cohesion and positive sibling relationships in families raising a child with or without a disability. *Exceptionality*, 31(2), 118-134. <https://doi.org/10.1080/09362835.2022.2100391>
- Ueda, M. M., Ding, Y., Blumberg, F., Zhang, C., Yu, Q., Lantier, K. (2020). Maternal parenting style in relation to parenting stress and behavioral outcomes in Japanese children with and without autism. *Journal of Developmental and Physical Disabilities*, 32, 983-1006. <https://doi.org/10.1007/s10882-020-09727-z>
- Vegas, M. I., Mateos-Agut, M., Pineda-Otaola, P. J., Sebastián-Vega, C. (2022). Psychometric properties of the FACES IV package for Spanish adolescents. *Psicologia: Reflexão e Crítica*, 35, 18. <https://doi.org/10.1186/s41155-022-00222-2>
- Vela Llauradó, E., Serrano Fernández, L., Martín Martínez, L. (2025). Analyzing the Cohesion and Adaptability of Families of Children with Intellectual Disability Using the FACES-20Esp Scale. *SAGE Open*, 15(1), 21582440241311143. <https://doi.org/10.1177/21582440241311>
- Walton, K. M., Ingersoll, B. R. (2015). Psychosocial adjustment and sibling relationships in siblings of children with autism spectrum disorder: Risk and protective factors. *Journal of autism and developmental disorders*, 45, 2764-2778. <https://doi.org/10.1007/s10803-015-2440-7>
- Zhou, W., Woszidlo, A. (2024). Young adults' retrospective reports of family cohesion, parental differential treatment, and sibling relationships. *Family Relations*, 73(2), 1067-1085. <https://doi.org/10.1111/fare.12878>