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BEHAVIORAL ADJUSTMENT OF SIBLINGS OF CHILDREN WITH AUTISM SPECTRUM DISORDER

PRILAGODAVNJE PONAŠANJA BRAĆE I SESTARA DECE SA POREMEĆAJEM IZ SPEKTRA AUTIZMA

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Summary

Introduction. Challenges in the development of a child with autism spectrum disorder require adjustment of the entire family, parents and siblings. So far, the researchers' efforts have mostly been focused on children with autism spectrum disorder or their parents, and less frequently on the siblings living in a family with a child with autism spectrum disorder. The goal of this research was to identify problems in the functioning of siblings of persons with autism spectrum disorder and the relationships of these problems with various sociodemographic and family characteristics. **Material and Methods.** The research was conducted as a cross-sectional study which included thirty children aged 4 to 18 years with a sibling with autism spectrum disorder. The Strengths and Difficulties Questionnaire was used to assess the functioning of siblings of children with autism, while family characteristics were collected through a sociodemographic questionnaire created for research purposes. Statistical package for the social sciences 20.0 software was used for data entry and processing. **Results.** There are no significant differences in the functioning of siblings of children with autism spectrum disorder in relation to their gender, age, family status and the level of functionality of a child with autism spectrum disorder. In most cases, there is a low risk of clinically significant problems (63.3%), in 10% of cases the risk is medium, and in 26.7% of cases it is high. **Conclusion.** Problems in the functioning of siblings of children with autism spectrum disorder do not depend on sociodemographic or family characteristics. Models of support, based on the research findings along with community education, strengthen the siblings through their experience of growing up with a sibling with autism spectrum disorder.

Key words: Autism Spectrum Disorder; Siblings; Adaptation, Psychological; Sibling Relations; Parent-Child Relations; Child; Risk Factors

Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by abnormal and/or altered development which manifests before the age of 3, through qualitative anomalies in social interaction and modalities of communication ac-

Sažetak

Uvod. Izazovi u razvoju deteta sa poremećajem iz spektra autizma (engl. *autism spectrum disorder*) zahtevaju prilagođavanje cele porodice, roditelja i sibilina. Dosadašnji naponi istraživača, najčešće su bili usmereni na decu sa poremećajem iz spektra autizma ili na roditelje, ređe na perspektivu sibilina koji žive u zajednici sa detetom sa poremećajem iz spektra autizma. Cilj našeg istraživanja podrazumeva utvrđivanje problema u funkcionisanju sibilina osoba sa poremećajem iz spektra autizma i odnos ovih problema sa različitim sociodemografskim i porodičnim karakteristikama. **Materijal i metode.** Istraživanje je sprovedeno kao studija preseka, u okviru kojeg je obuhvaćeno tridesetoro dece čiji brat ili sestra imaju poremećaj iz spektra autizma, starosti od 4 do 18 godina. U svrhu procene funkcionisanja sibilina dece sa autizmom korišćen je Upitnik o snagama i teškoćama (*The Strength and Difficulties Questionnaire*), dok su sociodemografskim upitnikom, kreiranim za potrebe istraživanja, prikupljeni podaci o karakteristikama porodice. Za unos i obradu podataka korišćen je programski paket SPSS 20.0. **Rezultati.** Ne postoje značajne razlike u funkcionisanju sibilina dece sa poremećajem iz spektra autizma, u odnosu na pol, uzrast, porodični status i stepen funkcionalnosti deteta sa poremećajem iz spektra autizma. U najvećem procentu slučajeva postoji nizak rizik za postojanje klinički signifikantnih problema (63,3%), u 10% slučajeva rizik je srednji, a u 26,7% slučajeva je visok. **Zaključak.** Problemi u funkcionisanju sibilina dece sa poremećajem iz spektra autizma ne zavise od sociodemografskih i porodičnih karakteristika. Modeli podrške, zasnovani na nalazima istraživanja, zajedno sa edukacijom zajednice, osnaživali bi sibilinge u iskustvu odrastanja sa bratom/ sestrom sa poremećajem iz spektra autizma.

Ključne reči: poremećaji iz autističnog spektra; braća i sestre; psihološka adaptacija; odnosi sa braćom i sestrama; odnosi roditelja i deteta; dete; faktori rizika

companied by a limited, repetitive, and stereotypical repertoire of interests and activities, as well as uneven intellectual development [1]. The prevalence of ASDs has shown a growing trend in the last few years, and according to the literature, the disorder affects one in 68 to 100 children, with 68% of children having some degree of intellectual disability,

Abbreviations

ASD	– autism spectrum disorder
SDQ	– Strengths and Difficulties Questionnaire
SPSS	– statistical package for the social sciences

while 75% of them require lifelong social and educational support [2]. Although there is no clear explanation for this growth, it is probably due to improvement in diagnostic methods [1]. The child's developmental disorder does not necessarily cause family dysfunction [3], although it involves prolonged active parenting, which can increase the level of stress in the family and affect the stages of a typical life cycle [4, 5]. Characteristics and challenges in the development of a child with ASD, such as sensory sensitivity, repetitive stereotyped behavior, difficulties in social interaction and communication, require adjustment of the whole family, both the parents and the siblings [5]. So far, the efforts of researchers and practitioners have mostly been focused on the children with ASD or their parents, and less often on the experiences and perspectives of siblings living in a family with a child with ASD [6]. A powerful sibling relationship is formed during long term physical and emotional contacts in critical periods of life and it can be a model through which the siblings mature sexually, morally, linguistically, and motorically [7]. Considering these facts, over the last few decades there has been a growing interest in assessing the adjustability of siblings of children with disorders, including siblings of children with ASD [8].

Characteristics of the relationships between siblings of typical development and a child with ASD cannot be generalized [9]. The findings of some research studies suggest that the siblings of children with ASD have a lower level of adjustment when compared to the normative group [10]. The negative effects of autism on typically developing siblings are emphasized, reflecting in the feeling of neglect and loneliness, since the parents must attend to the needs of the child with ASD [11]. Therefore, they are at a higher risk of developing depression when compared to the control group, as well as to the siblings of children with other disorders [12]. Physical and verbal aggressive behavior and the unpredictable nature of a child with ASD may lead to lasting anxiety, pressure and instability in a typically developing child, especially in adolescents [13], who react to judging social interactions in relation to their siblings, with already present intense emotions of anger, rage, disappointment, and frustration [14]. However, other studies point out positive effects, including the siblings of children with ASD, who show more warmth and less conflict than typically developing siblings [15]. The experience of growing up with a sibling with ASD can contribute to the development of empathy [16] altruism and tolerance [17], encouraging behavior such as caring for others and stronger self-esteem [13, 6]. It is argued that typically developing siblings develop great patience, understanding, sensibility and awareness of people

from vulnerable groups, often cultivating deep and tender feelings of loyalty and pride towards children from these groups, developing advocacy and self-advocacy skills for them [17].

We can say that the relationship is positive if the siblings understand the disorder, have developed coping skills, and have experienced positive reactions from parents and peers towards children with ASD [18]. The impact of a sibling with a disorder on a typically developing sibling is best seen as a risk factor that may manifest due to sociodemographic factors, individual and family patterns of adjustment and functioning, different sibling characteristics, and the characteristics of the sibling with ASD. Although the literature findings are inconsistent, it seems that it is better when the family is bigger, socioeconomic conditions are better, parents have a positive attitude towards the child with the disability, when the siblings are younger than the child with ASD, when the age difference between the siblings is greater, as well as when the disorder is milder [19].

Researches that focus on the specifics of the sibling relationships and the impact of ASD on these relationships create opportunities for shaping support and reducing possible negative effects. Thus, continuous and organized work with the siblings should be provided, which is still a rarity in the Republic of Serbia. Our research aims to identify problems in the functioning of siblings of children with ASD, and the relationships of these problems with different socio-demographic and family characteristics. In keeping with the objective, we presumed that the siblings of children with ASD exhibit problems in functioning, and that family status, gender, age, and level of functioning of a child with ASD are significantly related to the level of sibling functionality.

Material and Methods

A cross-sectional study included thirty children with a sibling with ASD attending the Schools for Primary and Secondary Education "Milan Petrović" in Novi Sad and "Vule Antić" in Vranje, and the Daycare Center for Individuals with ASD in Novi Sad. The data were collected by using anonymous closed ended questionnaires; written consents of parents/guardians and institutions were obtained; and the approval of the Ethics Committee of the Faculty of Medicine in Novi Sad. The inclusion criterion for participation in the research was a signed consent of the parent/guardian and a sibling of the families of children with ASD.

During the research, the Strength and Difficulties Questionnaire (SDQ) [20] was used to assess the functioning of siblings of children with ASD. It was completed by parents of children without developmental disorders. It consists of 25 items related to the emotional and behavioral problems of children and adolescents in the last six months. The items are divided into five domains (emotional problems, behavioral problems, hyperactivity, peer problems, and prosocial behavior), and the items are scored on a

3-point Likert scale, with the scores in all domains ranging from 0 to 10. There are three versions of the questionnaire: for parents, for preschool teachers/teachers (for children aged 3 – 16), and for adolescents aged 14 – 16. Considering the age of the examinees, the first modality was used in the research. The scale has a good internal consistency ($\alpha = .73$).

The SDQ scoring was performed in two ways. The first provided dimensional values by collecting points within five domains (emotional problems, behavioral problems, hyperactivity, peer problems, and prosocial behavior), and the second established “cut off” scores which may indicate clinically relevant problems. The SDQ scores range from 0 to 40 and point to low risk of clinically significant problems in the functioning of siblings of children with ASD (from 0 to 13), medium risk (from 14 to 16) and a high risk (from 17 to 40).

A sociodemographic questionnaire, created for the purposes of this research, was used to collect data related to family characteristics (family status, gender, age, birth order of a child with/without disorders and parents’ assessment of the functioning and performing activities of daily living of their child with ASD).

Data analysis was performed using the Statistical package for the social sciences (SPSS) software for Windows 20, and descriptive methods to describe the sample through descriptive strategic measures (frequencies and percentages for categorical variables, and arithmetic means and standard deviations for dimensional). At the same time, with-

in comparative statistics, a single-factor analysis of variance with repeated measures and Pearson’s correlation coefficient were used to check the significance of correlations and influences of the examined variables. In the case of individual variables, the limited sample size allowed the use of nonparametric methods, the Kruskal Wallis test (for testing multiple independent samples) and the Chi-square test (χ^2). The p values below 0.05 and 0.01 were considered statistically significant.

Results

The study included thirty children with siblings with ASD aged 4 to 18, with an average age of 10.90 (SD = 4.05). There was an equal gender distribution in the sample. When it comes to the birth order, in one case the siblings were twins (3.30%), 11 respondents were the firstborn child (36.70%), 16 respondents were the second born (53.30%), while in two cases they were the third born child (6.70%). The family climate, which includes the relationship between parents, showed that in 80% of cases both parents took care of the children, in 10% of cases the parents were divorced, while in the remaining 10% of cases the child was raised by a single mother.

Descriptive statistics of measured traits are presented in **Table 1**. To facilitate the interpretation of parents’ assessments of the functionality of children with ASD and the SDQ domain, the values of the scales were divided into categories of low, medium,

Table 1. Descriptive statistics of the measured characteristics

Tabela 1. Deskriptivna statistika izmerenih karakteristika

	N	Minimum <i>Minimum</i>	Maximum <i>Maksimum</i>	Mean <i>Prosek</i>	Standard Deviation <i>Standardna devijacija</i>
Functioning level/ <i>Stepen funkcionalnosti</i>	30	2	8	5.77	1.832
Emotional symptoms/ <i>Emocionalni simptomi</i>	30	0	10	2.57	2.800
Behavioral problems/ <i>Problemi u ponašanju</i>	30	0	6	1.53	1.570
Hyperactivity/ <i>Hiperaktivnost</i>	30	0	10	4.57	3.181
Peer problems/ <i>Problemi sa vršnjacima</i>	30	0	7	2.43	2.501
Prosocial behavior/ <i>Prosocijalno ponašanje</i>	30	1	10	6.83	2.995
Overall score/ <i>Ukupan skor</i>	30	0	27	11.30	7.470

Table 2. The severity of the functioning problems in siblings

Tabela 2. Izraženost problema u funkcionisanju kod braće i sestara

	Low risk <i>Nizak rizik</i>		Medium risk <i>Srednji rizik</i>		High risk <i>Visok rizik</i>		Total <i>Ukupno</i>	
	f	%	f	%	f	%	f	%
Functioning level/ <i>Stepen funkcionalnosti</i>	5	16.7%	13	43.3%	12	40%	30	100%
Emotional symptoms/ <i>Emocionalni simptomi</i>	23	76.7%			7	23.3%	30	100%
Behavioral problems/ <i>Problemi u ponašanju</i>	24	80%	3	10%	3	10%	30	100%
Hyperactivity/ <i>Hiperaktivnost</i>	18	60%	1	3.3%	11	36.7%	30	100%
Peer problems/ <i>Problemi sa vršnjacima</i>	18	60%	3	10%	9	30%	30	100%
Prosocial behavior/ <i>Prosocijalno ponašanje</i>	20	66.7%	1	3.3%	9	30%	30	100%
Overall score/ <i>Ukupan skor</i>	19	63.3%	3	10%	8	26.7%	30	100%

Table 3. The impact of gender on the functioning of siblings of children with autism spectrum disorder
Tabela 3. Uticaj pola na funkcionisanje braće i sestara dece sa poremećajem iz spektra autizma

	Gender Pol	Low risk Nizak rizik	Medium risk Srednji rizik	High risk Visok rizik	Total Ukupno	$\chi^2(2)$	p
Functioning level Stepen funkcionalnosti	Male/Muški	2 13.30%	7 46.70%	6 40%	15 100%	0.277	0.871
	Female/Ženski	3 20%	6 40%	6 40%	15 100%		
Emotional symptoms Emocionalni simptomi	Male/Muški	13 86.70%		2 13.30%	15 100%	1.677	0.195
	Female/Ženski	10 66.70%		5 33.30%	15 100%		
Behavior problems Problemi u ponašanju	Male/Muški	11 73.30%	2 13.30%	2 13.30%	15 100%	0.833	0.659
	Female/Ženski	13 86.70%	1 6.70%	1 6.70%	15 100%		
Hyperactivity Hiperaktivnost	Male/Muški	7 46.70%	0 0%	8 53.30%	15 100%	4.162	0.125
	Female/Ženski	11 73.30%	1 6.70%	3 20%	15 100%		
Peer problems Problemi sa vršnjacima	Male/Muški	8 53.30%	2 13.30%	5 33.30%	15 100%	0.667	0.717
	Female/Ženski	10 66.70%	1 6.70%	4 26.70%	15 100%		
Prosocial behavior Prosocijalno ponašanje	Male/Muški	8 53.30%	1 6.70%	6 40%	15 100%	2.800	0.247
	Female/Ženski	12 80%	0 0%	3 20%	15 100%		
Total score Ukupan skor	Male/Muški	8 53.30%	3 20%	4 26.70%	15 100%	3.474	0.176
	Female/Ženski	11 73.30%	0 0%	4 26.70%	15 100%		

and high degree of functionality of children with ASD that is low, medium, and high risk of clinically significant problems.

Data analysis showed that children with ASD, on average, exhibited medium level of functionality ($M = 5.77$; $SD = 1.83$), while siblings of children with ASD showed a low probability of clinically significant problems of this type, both in the overall score ($M = 11.3$; $SD = 7.47$) as well as in individual domains. The exceptions were the values on the scale that examined peer problems ($M = 2.43$; $SD = 2.5$), which showed that there was an average risk of clinically significant problems. For a better assessment, **Table 2** shows the reference to different risk categories.

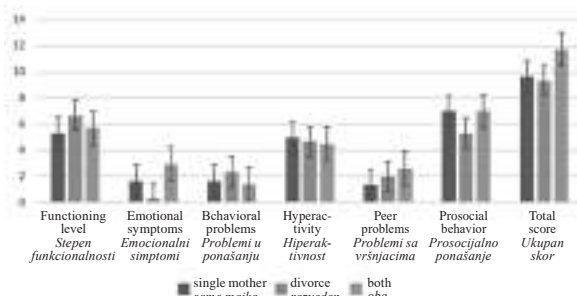
To examine the differences in the functioning of siblings of children with ASD in regard to the family status, we used variance analysis and the obtained results showed no differences in the functioning of siblings of children with ASD related to the family status. The overall score showed that children from two parent

families were at highest risk of clinically significant functioning problems, although the average scores were in the low-risk category, with no statistically significant difference ($p > 0.05$). Statistical significance was not confirmed within the domain categories, but two parent families were at the highest risk in the domains of emotional problems, behavioral, and peer problems. In the domain of hyperactivity, the highest risk was found in families with a single mother, while in the domain of prosocial behavior, families with divorced parents were at the highest risk. **Graph 1** shows the mean characteristic scores by groups.

Table 3 shows the influence of gender on the functioning of siblings of children with ASD, risk categories and proportional comparisons using the Chi square test. The total score showed no statistically significant influence of gender on the functioning of brothers and sisters of children with ASD ($p < 0.05$). The average risk of emotional problems was higher in sisters (33%) than in brothers (13%). Within the domains of behavioral issues and peer problems, brothers were at greater risk than sisters. The risk of developing hyperactivity problems was higher in brothers (53%) than in sisters (20%), while in the domain of prosocial behavior the risk was higher in sisters (20%) than in brothers (40%). Statistical significance was not confirmed in any of the above categories.

Pearson's correlation coefficient was used to determine the relationship between age and the problems in functioning of the siblings of children with ASD (**Table 4**, column 1) as well as the relationship between the level of functionality of the child with ASD and the problems in sibling functioning (**Table 4**, column 2). In both cases, the results showed no statistically significant relationship ($p > 0.05$).

As shown in **Table 4**, a statistically significant correlation was found between the risk of emotional problems and peer problems ($r = 0.619$, $p < 0.00$), as



Graph 1. Influence of family status on the functioning of children with autism spectrum disorder and their siblings
Grafikon 1. Uticaj porodičnog statusa na funkcionisanje dece sa poremećajem iz spektra autizma i njihove braće i sestara

Table 4. Interrelationship of Strengths and Difficulties Questionnaire domains
Tabela 4. Međusobna povezanost domena Upitnika snaga i teškoća

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Age/Uzrast	r 1							
	p							
2. Functioning level/Stepen funkcionalnosti	r 0.187	1						
	p 0.322							
3. Emotional symptoms/Emocionalni simptomi	r -0.201	06	1					
	p 0.286	0.973						
4. Behavior problems/Problemi sa ponašanjem	r 0.090	-0.195	0.086	1				
	p 0.636	0.302	0.652					
5. Hyperactivity/Hiperaktivnost	r -0.212	-0.095	0.071	0.524*	1			
	p 0.261	0.618	0.709	0.003				
6. Peer problems/Problemi sa vršnjacima	r -0.312	-0.060	0.619*	0.194	0.506*	1		
	p 0.093	0.753	0.000	0.305	0.004			
7. Prosocial behavior/Prosocialno ponašanje	r 0.109	0.219	0.077	-0.596*	-0.804*	-0.478*	1	
	p 0.565	0.245	0.684	0.001	0.000	0.008		
8. Total score/Ukupan skor	r -0.257	-0.126	0.635*	0.556*	0.771*	0.818*	-0.606**	1
	p 0.170	0.508	0.000	0.001	0.000	0.000	0.000	

well as between the risk of emotional problems and the total score ($r = 0.635$, $p < 0.00$). Furthermore, a statistically significant correlation was found between the risk of behavioral problems and hyperactivity ($r = 0.524$, $p < 0.003$) with the total score $-r = 0.635$, $p < 0.00$, and the risk of prosocial behavior problems $-r = -0.596$, $p < 0.001$. A significant strong positive correlation was noted between hyperactivity and peer problems ($r = 0.506$, $p < 0.004$), negative with prosocial behavior ($r = -0.804$, $p < 0.000$) and positive with the total score ($r = 0.771$, $p < 0.000$). A statistically significant strong and positive correlation was found between the domains of behavioral problems and prosocial behavior ($r = -0.478$, $p < 0.008$), as well as with the total score ($r = 0.818$, $p < 0.000$). Finally, a significant strong negative correlation was found between problems in prosocial behavior and the total score ($r = -0.606$, $p < 0.000$).

Discussion

A constant increase in the number of children with the diagnosis of ASD also increases the number of siblings who are growing up with them. Regardless of the positive or negative experience of the family situation, all family members share the belief that their lives are different from the lives of families with healthy children [1]. The research findings do not clearly indicate why some sibling relationships are warm and supporting, while others are conflicting [21].

Meyer et al. claim that the overall experience of living with a sibling with ASD is quite negative [11], that the siblings are at higher risk of emotional and behavioral problems because they feel either invisible (if the focus is on the child with ASD) or too visible (if the burden of responsibility and/or expect-

tations is on them) [22]. The family conflicts and dysfunctional patterns of coping with stress within the family contribute to the negative perception of relationships [23].

Hastings reports on a lower degree of adjustment of siblings of children with ASD in relation to the normative group [10] even compared to the siblings of children with other disorders [24]. On the other hand, having a sibling with ASD in the family does not necessarily mean a negative experience and facing the new situation is crucial for acceptance [13, 6]. Also, higher levels of compassion, tolerance and understanding are later noted in siblings of children with ASD in relation to their peers [16].

Examination of factors that may be related to sibling adjustment, such as gender, age, level of functionality of the child with ASD, family structure and socioeconomic status of the family, did not confirm the initial assumptions about the strong influence of these variables on sibling adjustment [10], which has also been confirmed by the results of our research. Although the initial assumption was that siblings have huge problems and that all of these variables have a strong impact [25], in the highest percentage of cases there is a low risk of clinically significant problems (63.3%), in 10% of cases the risk is medium, and in 26.7% it is high.

The demands and challenges faced by parents of children with ASD increase marital dissatisfaction, shape the marital and family life, making them perceive it as an unpleasant experience [26]. In such families, all family members experience the burden of emotional worries and stress, especially siblings of the child with ASD [16]. Considering the complexity of such an experience and the fact that it is a

challenge to maintain family unity in the short and long term [27], it was expected that the family status/climate affects the functioning of siblings of children with ASD, which has not been confirmed. In families of single mothers and divorced parents, the risk of clinically significant problems is low (66.7%), high risk does not exist, while in families with both parents, the risk is low in 62.5%, medium in 4%, and high in 33.5%. There are no statistically significant differences between the measured parameters.

In our study, no statistically significant gender differences were found in the functioning of siblings of children with ASD, but brothers proved to be at somewhat higher risk of hyperactivity issues (53%) in relation to sisters (20%). Furthermore, they are at higher risk for peer problems and prosocial behavior problems. The findings of previous researches indicate pronounced behavioral and hyperactivity problems in male siblings of children with ASD [28] compared to the higher level of emotional problems found in female siblings [29], which has also been confirmed by our findings, in which sisters have shown a higher risk for the manifestation and existence of emotional problems (33%) compared to brothers (13%). These findings are interpreted as high expectations of girls to "care for a child with ASD" [29], while boys generally have a tendency to perform worse on psychological adjustment tests [28]. These issues, however, may also be related to extended phenotype of autism in first-degree relatives, especially in male relatives, which may represent the neurological basis of adjustment [27, 30].

The results of our study do not indicate a statistically significant connection between age and problems in the functioning of siblings of children with ASD. We need to take into consideration the fact that our participants, as well as in a great number of studies on this topic, are in a wide range of ages from 4 to 18 years, from childhood to adolescence, that can lead to conflicting results, given that the understanding and expectations from other family members may be different in regard to the life stage they are going through [8]. During their childhood, siblings of children with ASD may not understand the behavior of their siblings due to the "invisible nature" of autism (which can affect the quality of their relationship) just as adolescent siblings may face social inconveniences due to misunderstanding of the disease. Therefore, it is important to study both groups independently [8].

With regard to the age of siblings of children with ASD, although our findings do not suggest it, a question arises as to why children younger than their siblings with ASD may have more adjustment problems. One hypothesis relies on the fact that older children had a period of building a relationship with their parents before the child with ASD was born, which may act as a protective factor for later adjustments [10]. In the milieu of contradictory results, the given hypotheses need to be tested by future research.

In their study, Xue et al. claimed that due to worry and discomfort caused by the unpredictability of

functioning of the child with ASD, the whole family can be excluded from community activities [31], creating an "autistic family" as a consequence of maladaptation of the child's behavior to the social environment [32], which can undoubtedly affect the sibling's quality of life. In that context, it was to be expected that there was a connection between the level of functionality of the person with ASD and the problems in the sibling functioning, but a statistical significance within these parameters was not found in our research.

Finally, a question arises as to what extent the completed questionnaires reflect the real picture, and to what extent they were shaped by socially desirable norms, given that a small number of parents participated in the survey, compared to the number of parents who were offered to participate. The overall research results, on average, indicate a low risk of problems in the functioning of siblings of children with ASD, which can be interpreted as a possibility that parents who agreed to cooperate have children who, in their opinion have no pronounced issues, and refusal to participate may be associated with the presence of emotional and behavioral problems of siblings of children with ASD. In addition, methodological limitations of the research in terms of sample design, sample size and multidimensionality of diagnoses of children with ASD, can affect the results and prevent the generalization of findings. These assumptions must be the subject of future research in order to determine the factors that influence the existence of clinically relevant problems in the functioning of siblings of children with ASD.

Conclusion

The behavioral, functional and emotional complexities of raising a child with autism spectrum disorder affect all family members. The difficulties and dilemmas faced by the parents of persons with disabilities do not spare their siblings either [33]. Based on the results of our research, we can conclude that the problems in the functioning of siblings of children with autism spectrum disorder do not depend on sociodemographic and family characteristics, which means that all siblings of children with autism spectrum disorder are at the same risk regardless of their gender, age, family status and the level of functioning of the child with autism spectrum disorder. Given the existing models of support to families in Serbia, within which the work with siblings of children with autism spectrum disorder is sporadic and rare, it is necessary to promote this type of research, which will enable modeling the support depending on the needs of siblings, in order to reduce the negative effects these difficulties can cause. Models of support, along with educating the community by raising autism awareness, would enable strengthening the need to maintain quality sibling relationships, but also nurture the need for personal freedom and independence of siblings.

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