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**SENSE OF LONELINESS IN PARENTS OF CHILDREN WITH AUTISM SPECTRUM
DISORDER AND CHILDREN WITH INTELLECTUAL DISABILITY**

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sense of loneliness
parenthood

Summary

Objectives: The aim of the study was to answer the following questions: What are the main determinants of the sense of loneliness in parents of children with autism and what are they in parents of children with intellectual disability? Is sense of loneliness related to the intensity of specific personality traits in parents of children with neurodevelopmental disorders and to the perceived social support? Do parents of children with autism spectrum disorders differ from parents of children with intellectual disability in terms of perceived loneliness? Are there differences in the sense of loneliness between subjects of different sexes and between subjects bringing up children at different ages?

Methods: The following research instruments were used: Polish versions of the De Jong Gierveld Loneliness Scale (DJGLS), the Ten Item Personality Inventory (TIPI-PL), and the Berlin Social Support Scales (BSSS) as well as the authors' own survey questionnaire, consisting mainly of demographic questions. The participants were 116 parents of children with autism spectrum disorders and 81 parents of children with intellectual disability without symptoms of autism.

Results: No differences were found in the level of the sense of loneliness between groups distinguished according to the type of disorder in the child, the child's age, and the parent's gender, but regression analysis revealed that its predictors connected with social support were different in the cases of parents of children with different neurodevelopmental disorders.

Conclusions: The obtained results may be useful for therapists and social workers supporting parents of children with neurodevelopmental disorders.

Introduction

Raising a child with a disability is a heavy burden for parents [1-3]. So far, most research involving both parents of children with autism spectrum disorder (ASD) and children with intellectual disability (ID) have been conducted in a paradigm of stress [4-6]. These studies have shown, among other results, that parents of children with autism experience greater stress than parents of children with Down syndrome or other neurodevelopmental disorders [7-8]. There are also projects in which variables such as a burnout [9-12], an experience of social stigmatization [13] and sense of quality of life [14-16] have been identified in parents of children with disability. It is difficult to find, especially in Poland, in-depth research on sense

of loneliness in parents of children with developmental disorders. There are only indications that such parents experience loneliness, social isolation and rejection [17]. At the same time, as can be assumed, this is one of the most important aggravating factors, indicating lack of support, especially of informal nature [18].

The sense of loneliness can also be a result of negative attitudes of environment and lack of understanding for unusual behaviours of a child, which contributes to parents avoidance of social contacts and social situations [13, 17]. In addition, necessity of care, participation in therapy and repeating its components at home significantly limits the opportunities for social interaction.

Sense of loneliness has most often been defined as subjective feeling of discomfort resulting from the unsatisfactory state of interpersonal relationships, i.e. the negative assessment of the social relations held in reference to the expected [19-20]. It involves the perceived (and felt) social isolation, not necessarily the confirmation in objective observation [21]. A person can lead a relatively lonely life without feeling lonely and vice versa – he or she can engage in a series of interactions while experiencing loneliness.

Analysis of literature of the subject allows to assume that the important variables influencing the sense of loneliness or lack of it are on one hand the level of social support [22] and, on the other, personality variables [23]. However, there are no studies to verify these relationships in the case of parents with children with autism spectrum disorder and children with intellectual disability. This project is an attempt to fill this gap.

Research issues

The main problem comes down to the following question:

- What are the biggest conditions of sense of loneliness in parents of children with autism spectrum disorder and parents of children with intellectual disability?

The detailed problem is expressed in the following questions:

- Do parents of children with autism spectrum disorder differ from parents of children with intellectual disability in terms of the sense of loneliness?
- Are there differences in terms of sense of the loneliness in different sexes?
- Are parents of grown-up children different from parents of children under 18 years of age in terms of loneliness?

- Is there a link between the intensity of specific personality traits of parents of children with autism spectrum disorder and parents of children with intellectual disability and sense of loneliness?
- Is there a link between perceived available support, the need for it, the search of it, currently received support, and the sense of loneliness in parents of children with autism spectrum disorder and parents of children with intellectual disability?

Method

The following research tools have been used:

1. De Jong Gierveld scale (DJGLS), in Polish adaptation by P. Grygiel and others [24], to diagnose sense of loneliness of parents.
2. Polish adaptation of Ten Item Personality Inventory (TIPI) — TIPI-PL [25], to measure personality traits included in so-called model of The Big Five, i.e. extroversion, emotional stability, agreeableness, conscientiousness and openness to experience [26].
3. Berlin Social Support Scales – BSSS — Polish version [27], which allows to measure perceived support, need for support, support seeking and actually received support¹.
4. The Questionnaire of survey in own elaboration, including questions about sex and age of a parent, education, material status, number of children and age of the child with disability.

Research subjects and procedure

The project received a positive opinion of the Commission on Ethics of Research in the Department of Pedagogy and Psychology of UMCS in Lublin. The study was anonymous and conducted with respect for the dignity of the respondents. The parents of children with autism and children with intellectual disability were asked to complete research tools through institutions supporting development of their children (foundations, associations, schools and kindergartens located in two voivodeships: Subcarpathian Voivodeship and Lublin Voivodeship). Questionnaire sets were provided to the respondents and received from them by therapists and teachers working with their children.

Each set of research tools was in an envelope and contained a written instruction explaining the purpose of the project. Parents were informed about the possibility of leaving the study at any time. Results from 116 parents of children with autism spectrum disorder and

¹ Protective Buffering Scale of BSSS was not used in the study.

81 from parents of children with intellectual disability without autism were obtained. In total, a set of research tools was completed by 197 parents, including 160 by mothers and 37 by fathers (Table 1).

Table 1. Number of parents of children with autism spectrum disorder and intellectual disability, including sex of surveyed parents

Disorder in the child	Mothers	Fathers	In total
Autism	90	26	116
Intellectual disability	70	11	81
In total	160	37	197

The age of the examined parents range from 24 to 66, with a median of 40 years. Age information is provided in Table 2.

Table 2. The number of parents with autism spectrum disorder and intellectual disability, including age

Disorder in a child	Age of a child	
	Until 17 years old	From 18 years old
Autism	103	12
Intellectual disability	46	34
In total	149	46

Nearly 76% of the responders have children in developmental age (until 18 years old), about 23% - grown-up children. Two parents left space for information about age of their children blank.

The studied group is dominated by parents with two children (83 people - 42.1% of the total) followed by parents with one child (57 people - 28.9% of the total), 37 respondents raise three children (18.8 %) and 20 responders have four children (10.2%). 173 parents are in a stable relationship (married or with partner), while 24 are single parents. In this second group, there is one father and 23 mothers. Information on the education of the surveyed parents is summarized below (Table 3).

Table 3. Education of surveyed parents

Education	Parents of children with autism		Parents of children with intellectual disability		Parents in total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Basic education	0	0	4	4.94	4	2.03
Vocational education	11	9.48	25	30.86	36	18.27
Secondary education	43	37.07	24	29.63	67	34.01
Higher education	62	53.45	27	33.33	89	45.18
No data	0	0	1	1.23	1	0.51

Parents of children with autism are better educated (rank-sum = 12853.5) in comparison to parents of children with intellectual disability (rank-sum = 6452.5; The Mann-Whitney $U = 3212.5$; $Z = -3.942$; $p < 0.000$). However, these groups do not differ significantly in assessing the financial situation of their family.

Results

Due to the incomplete filling of the Loneliness Scale, further analysis concerns 188 parents; 111 – parents of children with autism, 77 – parents of children with intellectual disability.

Results obtained on the Scale by parents of children with different neurodevelopmental disorders are presented in Table 4.

Table 4. **Results on the Loneliness Scale obtained by parents of children with autism spectrum disorder and parents of children with intellectual disability**

Parents	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Children with autism	27.95	8.71	-0.224	186	0.823
Children with intellectual disability	27.66	8.93			

No statistically significant differences are found in sense of loneliness between parents of children with autism spectrum disorder and parents of children with intellectual disability. Table 5 summarizes the results on the Scale obtained by mothers and fathers.

Table 5. **Results on the Loneliness Scale obtained by mothers ($n = 152$) and fathers ($n = 36$) of children with neurodevelopmental disorders (autism and intellectual disability)**

Sex	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mothers	28.11	8.95	0.888	186	0.376
Fathers	26.67	8.03			

Regarding the feeling of loneliness again, there are no statistically significant differences between mothers and fathers. Table 6 shows the results of parents of children in developmental age and grown-up children.

Table 6. **Results on the Loneliness Scale obtained by parents of minors ($n = 144$) and adult children ($n = 43$) with neurodevelopmental disorders (autism and intellectual disability)**

Parents of children aged	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
under 18 years	27.68	8.36	-0.360	185	0.719
above or 18 years	28.23	10.22			

The difference is not statistically significant.

In the course of further analysis, statistically significant negative correlations between loneliness and following personality traits are found: extroversion (-0.41 ; $p < 0.01$), emotional

stability (-0.25; $p < 0.01$), reconciliation (-0.24; $p < 0.01$) and conscientiousness (-0.16; $p < 0.05$). Correlations, separately for parents of children with autism spectrum disorder, and parents of children with intellectual disabilities, are summarized in the table below.

Table 7. Correlation of loneliness and personality traits in parents of children with autism spectrum disorder and parents of children with intellectual disability

Personality traits	Sense of loneliness	
	Parents of children with autism	Parents of children with intellectual disability
Extroversion	-0.45***	-0.38**
Emotional stability	-0.29**	-0.20
Agreeableness	-0.31**	-0.15
Conscientiousness	-0.20*	-0.09
Openness to experience	-0.24*	-0.01

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

In the group of parents of children with autism correlations are statistically significant for all of the personality traits. Sense of loneliness correlates negatively with extroversion, emotional stability, agreeableness, openness to experience and conscientiousness. As for parents of children with intellectual disability, the negative correlation is only for extroversion.

In case of parents of children with neurodevelopmental disorders (total), sense of loneliness correlates negatively with the perceived support available (-0.36; $p < 0.01$) and currently received support (-0.30; $p < 0.01$). There are no significant correlations with the need for support or search of it. The corresponding correlations in the two groups of parents are presented in Table 8.

Table 8. Correlation of sense of loneliness with perceived and actually received support in two groups of parents

Support	Sense of loneliness	
	Parents of children with autism	Parents of children with intellectual disability
Perceived	-0.38***	-0.41**
Actually received	-0.34**	-0.31**

** $p < 0.01$; *** $p < 0.001$

With regard to the nature of support, the sense of loneliness is significantly negatively correlated with the perceived (-0.38; $p < 0.01$) and actually received support: emotional (-0.33; $p < 0.01$), informational (-0.38; $p < 0.01$) and instrumental (-0.27; $p < 0.01$). Correlations, separately for parents of children with autism and parents of children with intellectual disabilities, are summarized in Table 9.

Table 9. Correlations of sense of loneliness with different types of perceived and actually received support in two groups of parents

Support	Sense of loneliness	
	Parents of children with autism	Parents of children with intellectual disability
Perceived emotional	-0.36***	-0.40**
Perceived instrumental	-0.36***	-0.13
Received emotional	-0.34**	-0.30*
Received instrumental	-0.24*	-0.31*
Received informational	-0.27**	-0.36**
Satisfaction with support	-0.26*	-0.40**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

In case of parents with autism spectrum disorder, the correlations are statistically significant and negative for all types of support. In turn, in the group of parents of children with intellectual disability, there is no correlation of sense of loneliness with the perceived instrumental support, the other correlations are similar, though (with the exception of emotional support) stronger.

In order to determine the independent variables (predictors) of the sense of loneliness in the examined parents and to remove so-called excess variables [28, p. 596], regression analysis was used in the backward stepwise approach. In case of parents of children with autism spectrum disorder, the model shown in Table 10 was created. It explains nearly 23% of the variation in results obtained by parents in the Loneliness Scale.

**Table 10. Summary of backward stepwise regression for dependent variable *sense of loneliness* of parents of children with autism and its independent variables:
 $r = 0.511$; $r^2 = 0.261$; adjusted $r^2 = 0.226$; $F(4.85) = 7.498$; $p < 0.000$**

Independent variables	<i>B</i>	β	<i>t</i>	<i>p</i>
Free expression	55.793	-	10.385	0.000
Extroversion	-1.531	-0.229	-2.028	0.045
Perceived support	-0.375	-0.229	-2.407	0.018
Agreeableness	-1.068	-0.163	-1.452	0.150
Emotional stability	-0.754	-0.121	-1.038	0.302

Independent variables of sense of loneliness in this group, attaining statistical significance levels, are found to be: extroversion ($\beta = -0.229$) and perceived support available ($\beta = -0.229$). Relationship is inversely proportional, therefore, a low level of sense of loneliness in group of parents of children with autism can be predicted on the basis of high extroversion and high evaluation of available support.

The model obtained for parents of children with intellectual disability is shown in Table 11. It explains 36% of the variance results in the Loneliness Scale.

Table 11. **Summary of backward stepwise regression for dependent variable *sense of loneliness* of parents of children with intellectual disability and its independent variables: $r = 0.645$; $r^2 = 0.416$; adjusted $r^2 = 0.361$; $F(5.54) = 7.6780$; $p < 0.000$**

Independent variables	B	β	t	p
Free expression	62.258	-	8.734	0.000
Perceived support	-0.167	-0.102	-0.676	0.502
Extroversion	-2.431	-0.478	-3.725	0.000
Actually received support	-0.294	-0.377	-2.704	0.009
Need for support	-0.616	-0.171	-1.493	0.141
Agreeableness	1.049	0.135	1.167	0.248

Independent variables of sense of loneliness in this group are: extroversion ($\beta = -0.478$) and actually received support ($\beta = -0.377$). Dependency is inversely proportional: low level of sense of loneliness in this group can be predicted on the basis of high extroversion and a high level of evaluation of currently received support from the closest person.

Discussion

The level of sense of loneliness in parents of children with autism spectrum disorder and parents of children with intellectual disability can be described as moderate. To some extent, it can be assumed that this is due to the fact that the research involved mainly parents related to a particular foundation or association, thus benefiting from social resources. Concerning the intensification of the sense of loneliness, there are no differences between the studied groups, which seems interesting because in case of parents of children with autism spectrum disorder, one might expect slightly higher results. Trying to explain this, it can again be pointed to the use of support of foundations (or associations), which undoubtedly eliminates the feeling of loneliness. It can be also indicated to Broader Autism Phenotype (BAP), diagnosed in some parents of children with autism spectrum disorder [29]. There are interesting reports from studies that suggest a lower level of satisfaction from social relationships in people with BAP [30], and therefore – possibly – also lower levels of social needs, mainly contact with others and sensitivity to frustration in this area.

Regression analysis reveals that independent variables of sense of loneliness in case of parents of children with different neurodevelopmental disorders are slightly different. Among parents of children with autism those were: extroversion and perceived support and as for parents of children with intellectual disability – extroversion and actually received support.

As for personality variables, similar results have been obtained in studies with seniors by M. Long and P. Martin [31] – people with lower extroversion felt more lonely. Extroversion is identified as a predictor of social support, which is noticeable in studies involving different

groups [32-34]. It can be assumed that parents with higher levels of extroversion actively seek social resources and benefit from them, which lowers their sense of loneliness. It is worth mentioning that in case of parents of children with autism, correlation analysis additionally indicates the coexistence of low sense of loneliness with agreeableness, emotional stability, openness to experience and conscientiousness. This constellation of personality traits seems to promote the establishment and maintenance of social relationships, especially romantic relations and friendship [35].

The importance of the perceived support for parents of children with autism spectrum disorder can be explained by higher education of this group compared to parents of children with intellectual disability. It can be assumed that better educated parents of children with neurodevelopmental disorders will have more knowledge and expectations about social support. Another explanation is that autism is a particularly debilitating disorder in the child [36] and in a consequence, more support is needed.

No differences were found in sense of loneliness between mothers and fathers of children with autism and of children with intellectual disability. According to the results of modern studies involving parents with children with developmental disorders, mothers are not always more burdensome than fathers with the consequences of caring for a child with disability [37, 38]. It can be assumed that contemporary fathers, more than a dozen or so decades ago, engage in childcare and education.

There are no differences in sense of loneliness between parents of children in developmental age and grown-ups with developmental disorders. On one hand, parents of grown-up children can experience the consequences of aging and dying of friends and loved ones and the social costs of long-term care for children with developmental disorders (e.g. effects of avoiding specific social situations) [39] but on the other hand they are more experienced in the role of parents. In some children, problematic behaviours impacted by therapy can quit, giving parents the opportunity to participate socially more.

Based on the results obtained, it can be said that a practical postulate is to inform parents of children with autism with available support. What is more, even if the parent does not currently benefit from certain social resources, awareness of their existence and potential accessibility lowers his or hers sense of loneliness. In the context of actually received support, it is important for the parents of children with intellectual disability (and more generally, with neurodevelopmental disorders) to care for the quality of marriage or intimate relationship [40].

While leading support groups for parents of children with neurodevelopmental disorders, it is worthwhile (preferably in the form of a workshop) to realize various possibilities

of using social resources. It is also advisable to strengthen the competencies that influence good quality of close interpersonal relationships (especially marital, but not only – also the friendly ones). Parents, focused on the child and his or her problems, can neglect this important area. Finally, we have to be aware that long-lasting sense of loneliness have negative health consequences, among others contributing to the occurrence of episodes of depression, cardiovascular problems and even premature death [41], which combined with the high levels of stress that parents of children with developmental disorders (especially autism spectrum) creates very bad combination.

References

1. Altieri MJ, von Kluge S. Searching for acceptance: Challenges encountered while raising a child with autism. *J. Intellect. Dev. Disabil.* 2009; 34(2): 142–152.
2. Gallagher S, Phillips AC, Oliver C, Carroll D. Predictors of psychological morbidity in parents of children with intellectual disabilities. *J. Psychiatr. Psychol.* 2008; 33(10): 1129–1136.
3. Mount N, Dillon G. Parents' experiences of living with an adolescent diagnosed with an autism spectrum disorder. *Educational & Child Psychology.* 2014; 31(4): 72–81.
4. Pisula E. *Rodzice dzieci z autyzmem.* Warszawa: PWN; 2012.
5. Smith AL, Ronski MA, Sevcik RA, Adamson LB, Barker RM. Parent stress and perceptions of language development: comparing down syndrome and other developmental disabilities. *Fam. Relat.* 2014; 63(1): 71–84.
6. Peer JW, Hillman SB. Stress and resilience for parents of children with intellectual and developmental disabilities: a review of key factors and recommendations for practitioners. *J. Policy. Pract. Intel.* 2014; 11(2): 92–98.
7. Dąbrowska A, Pisula E. Parenting stress and coping styles in mothers and fathers of pre-school children with autism and Down syndrome. *J. Intellect. Disabil. Res.* 2010; 54(3): 266–280.
8. Bitsika V, Sharpley C, Bell R. The buffering effect of resilience upon stress, anxiety and depression in parents of a child with an autism spectrum disorder. *J. Dev. Phys. Disabil.* 2013; 25(5): 533–543.
9. Pisula E. Zespół wypalania się się u rodziców dzieci autystycznych. *Nowiny Psychologiczne.* 1994; 3: 83–89.
10. Dąbrowska M. *Zjawisko wypalenia wśród matek dzieci niepełnosprawnych.* Kraków: Oficyna Wydawnicza „Impuls”; 2005.
11. Sekułowicz M. *Wypalanie się się rodziców dzieci z niepełnosprawnością.* Wrocław: Wydawnictwo Naukowe Dolnośląskiej Szkoły Wyższej; 2013.
12. Sekułowicz M, Kwiatkowski P. Wypalanie się się rodziców dzieci z niepełnosprawnością – konstrukcja nowego narzędzia badawczego. *Stud. Edukacyjne* 2013; 25: 29–50.
13. Gray DA. 'Everybody just freezes. Everybody is just embarrassed': felt and enacted stigma among parents of children with high functioning autism. *Sociol. Health & Illness* 2002; 24(6): 734–749.
14. Perumal V, Veeraraghavan V, Lekhra OP. Quality of life in families of children with autism spectrum disorder in India. *J. Pharm. Res.* 2014; 8(6): 791–797.
15. Yoong A, Koritsas S. The impact of caring for adults with intellectual disability on the quality of life of parents. *J. Intellect. Disabil. Res.* 2012; 56(6): 609–619.
16. Zasepa E, Wołowicz A. *Jakość życia rodzin z dzieckiem niepełnosprawnością intelektualną.* Warszawa: Wydawnictwo Akademii Pedagogiki Specjalnej; 2010.

17. Banasiak A. Psychospołeczny wymiar jakości życia rodzin dzieci z autyzmem. *Prace Naukowe Akademii im. Jana Długosza w Częstochowie, Seria: Psychologia*. 2008; 15: 5–12.
18. Robinson S, Weiss JA, Lunskey Y, Ouellette-Kuntz H. Informal support and burden among parents of adults with intellectual and/or developmental disabilities. *J. Appl. Res. Intellect. Disabil.* 2016; 29(4): 356–365.
19. Cacioppo JT, Cacioppo S, Adler AB, Lester PB, McGurk D, Thomas JL, Chen Hy. The cultural context of loneliness: risk factors in active duty soldiers. *J. Social & Clinical Psychol.* 2016; 35(10), 865–882.
20. Tian Y, Yang L, Chen S, Guo D, Ding Z, Tam KY, Yao D. Causal interactions in resting-state networks predict perceived loneliness. *PLoS ONE*. 2017; 12(5): 1–15.
21. Hawkey L, Cacioppo JT. Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Ann. Behav. Med.* 2010; 40(2): 218–227.
22. Utz RL, Swenson KL, Caserta M, Lund D, deVries B. Feeling lonely versus being alone: loneliness and social support among recently bereaved persons. *J. Gerontol. Series B, Psychological Sciences And Social Sciences*. 2014; 69(1): 85–94.
23. Atak H. Big Five traits and loneliness among Turkish emerging adults. *Int. J. Behav. Cogn. Educat. Psychol. Sci.* 2009; 1(2): 124–128.
24. Grygiel P, Humenny G, Rębisz S, Świtaj P, Sikorska J. Validating the Polish Adaptation of the 11-item De Jong Gierveld Loneliness Scale. *Europ. J. Psychol. Assess.* 2013; 29(2): 129–139.
25. Sorokowska A, Słowińska A, Zbieg A, Sorokowski P. Polish adaptation of test Ten Item Personality Inventory (TIPI) – TIPI-PL – standard and internet version. Wrocław: WrocLab, Instytut Psychologii, Uniwersytet Wrocławski; 2014.
26. McCrae RR, Costa PT. Personality trait structure as a human universal. *Am. Psychol.* 1997; 52(5): 509–516.
27. Łuszczynska A, Kowalska M, Mazurkiewicz M, Schwarzer R. Berlińskie Skale Wsparcia Społecznego (BSSS): Wyniki wstępnych badań nad adaptacją skal i ich własnościami psychometrycznymi. *Studia Psychol.* 2006; 44(3): 17–27.
28. Francuz P, Mackiewicz R. Liczby nie wiedzą skąd pochodzą. Lublin: TN KUL; 2005.
29. Kose S, Bora E, Erermiş S, Özbaran B, Bildik T, Aydın C. Broader autistic phenotype in parents of children with autism: Autism Spectrum Quotient – Turkish version. *Psychiatr. Clin. Neurosci.* 2013, 67(1): 20–27.
30. Novacek D M, Gooding D C, Pflum M J. Hedonic capacity in the broader autism phenotype: should social anhedonia be considered a characteristic feature? *Front. Psychol.* 2016, 7: 666.
31. Long MV, Martin P. Personality, relationship closeness and loneliness of the oldest old and their children. *J. Gerontol. Psychol. Sci.* 2000; 55B(5): 311–319.
32. Connor-Smith JK, Flachsbart C. Relations between personality and coping: a meta-analysis. *J. Pers. Social Psychol.* 2007; 93(6): 1080–1107.
33. Amirkhan JH, Risinger RT, Swickert RJ. Extraversion: A „hidden” personality factor in coping? *J. Pers.* 1995; 63(2): 189–212.
34. Watson D, Hubbard B. Adaptational style and dispositional structure: coping in the context of the Five-Factor Model. *J. Pers.* 1996; 64(4): 737–774.
35. Harris K, Vazire S. On friendship development and the Big Five personality traits. *Soc. Pers. Psychol. Compass* 2016; 10(11): 647–667.
36. Shobana M, Saravanan C. Comparative study on attitudes and psychological problems of mothers towards their children with developmental disability. *East Asian Arch. Psychiatry* 2014; 24(1): 16–22.
37. Rivard M, Terroux A, Parent-Boursier C, Mercier C. determinants of stress in parents of children with autism spectrum disorder. *J. Autism Devel. Disord.* 2014; 44(7): 1609–1620.

38. Boström PK, Broberg M. Openness and avoidance – a longitudinal study of fathers of children with intellectual disability. *J. Intellec. Disabil. Res.* 2014; 58(9): 810–821.
39. Hines M, Balandin S, Togher L. The stories of older parents of adult sons and daughters with autism: a balancing act. *J. Appl. Res. Intellect. Disabil.* 2014; 27(2): 163–173.
40. Gosztyła T. Marriage satisfaction of parents of children with autism. Introductory exploration of the problem among polish married couples rearing children with autism. *Fides et Ratio.* 2015; 4(24): 228–247.
41. Borawski D. Konsekwencje zdrowotne poczucia osamotnienia. In: Janiszewska M, Żołnierczuk-Kieliszek D, ed. *Wybrane zagadnienia z zakresu chorób cywilizacyjnych*. Lublin: Wydawnictwo Naukowe TYGIEL; 2016, p. 63–74.