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The Experience of Stress in Parents of Children with ASD in the Context of the Pattern of Temporal Perspectives and Subjective Sense of Social Support

Doświadczenie stresu u rodziców dzieci z ASD w kontekście wzorca perspektyw temporalnych i subiektywnego poczucia wsparcia społecznego

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Abstract

Aim. The aim of the study was to determine the relationship between the levels of stress experiencing by parents of children with ASD and their time perspective pattern and subjective social support. Zimbardo time perspective theory is crucial to exploring both the predictors of positive health outcomes and stress-related mental health problems.

Methods and materials. The study group consisted of three equal groups of parents (parents of children with ASD, *N*=30; parents of children with Down Syndrome, *N*=30; parents of children with typical development, *N*=30). The following questionnaire measures were used: the Perceived Stress Scale (PSS-10), the Multidimensional Social Support Scale (MSPSS), and the Zimbardo Time Perspective Inventory (ZTPI).

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Results and conclusion. The results of the study showed that (1) parents of children with ASD experience higher levels of perceived stress compared to other parents, and (2) there was a statistically significant difference in the three time perspectives between parents of children with ASD and parents of children with typical development. It was proved that the level of perceived stress in parents of children with ASD correlates negatively with perceived social support. Perceived stress in parents of children with ASD was related to the specific time perspective pattern (negative past perspective and fatalistic present perspective correlated positively with stress, while positive past perspective and hedonistic present perspective correlated negatively). Higher levels of stress were experienced by parents of children with ASD who have negative beliefs about their past and a pessimistic attitude towards their present experiences.

***Keywords*:** stress, Autism Spectrum Disorders, Down Syndrome, time perspective pattern, social support

Abstrakt

Cel. Celem badania było określenie związku pomiędzy poziomem stresu doświadczanego przez rodziców dzieci z ASD a ich wzorcem perspektyw temporalnych oraz subiektywnym poczuciem wsparcia społecznego. Perspektywa temporalna stanowi ważny zasób regulujący zarówno pozytywne doświadczenia zdrowotne, jak i występowanie stresozależnych problemów zdrowia psychicznego.

Metody i materiały. Grupę badaną tworzyły trzy równe podgrupy rodziców (rodzice dzieci z ASD – $N = 30$, rodzice dzieci z zespołem Downa – $N = 30$, rodzice dzieci o typowym przebiegu rozwoju – $N = 30$). Zastosowano następujące narzędzia kwestionariuszowe: *Skalę postrzeganego stresu* (PSS-10), *Wielowymiarową skalę wsparcia społecznego* (MSPSS) oraz *Inwentarz perspektywy czasowej* autorstwa Zimbardo (ZTPI).

Wyniki i wnioski. Wyniki badania wykazały, że (1) rodzice dzieci z ASD doświadczają wyższego poziomu stresu w porównaniu do pozostałych podgrup rodziców oraz (2) istnieje statystycznie istotna różnica w trzech perspektywach czasowych pomiędzy rodzicami dzieci z ASD a rodzicami dzieci o typowym rozwoju. Udowodniono, że poziom odczuwanego stresu u rodziców dzieci z ASD koreluje ujemnie z postrzeganym wsparciem społecznym. Stres postrzegany przez rodziców dzieci z ASD był powiązany z występowaniem specyficznego wzorca perspektyw temporalnych (negatywna perspektywa przeszłościowa i fatalistyczna perspektywa teraźniejsza korelowały dodatnio ze stresem, pozytywna perspektywa przeszłościowa i hedonistyczna perspektywa teraźniejsza korelowały natomiast ze stresem ujemnie). Większy poziom stresu odczuwali rodzice dzieci z ASD, którzy mają negatywne przekonania na temat swojej przeszłości i pesymistyczne nastawienie do aktualnie występujących doświadczeń.

Słowa kluczowe: stres, zaburzenia ze spektrum autyzmu, Zespół Downa, wzorzec perspektyw temporalnych, wsparcie społeczne

Introduction

Stress in Parents of Children with ASD

Parents of the children with disabilities and chronic illnesses encounter substantial obstacles in the realm of raising and caring for their children, regardless of the causes and symptoms of impaired development and functioning. Because of their children's qualitative deficiencies in social communication, behaviour patterns, and imagination, parents of children with autism spectrum disorders (ASD) face particular difficulties (American Psychiatric Association, 2013). In order to overcome these challenges, parents require expert assistance and specialised knowledge (Altiere & von Kluge, 2009). Parents of children with ASD encounter particular difficulties, regardless of gender (Dijkstra-de Neijs *et al*., 2024). However, the health outcomes, which encompass decreased immunity and quality of life, as well as increased chronic fatigue, anxiety, and depression, may be influenced by the parental gender (Adams *et al*., 2020; Al-Farsi *et al*., 2016; Rezendes & Scarpa, 2011). According to Hastings (2003) and Burrell *et al*. (2017), mothers are more stressed than fathers regarding their child's independence, behaviour patterns, and physical development. Mothers spend more time with their children than do fathers, which may be the reason for this. The majority of men do not resign from their jobs and continue to be the "breadwinners" of the family, which means that women are responsible for the care of their children in the man's absence.

Meta-analyses (Barroso *et al*., 2018; Hayes & Watson, 2013) that look at the relationship between parental stress and the type of developmental disorder in children show that mothers of children with ASD typically have higher stress levels than mothers of children with other developmental disorders and health conditions, such as intellectual disability (Masulani-Mwale *et al*., 2018; Miranda *et al*., 2019; Peer & Hillman, 2014; Recio *et al*., 2020), Down syndrome (Banasiak, 2017; Dąbrowska & Pisula, 2010; Nahar *et al*., 2022; Pisula, 2007), or other neurodevelopmental disorders (Smith *et al*., 2014). The stressors that mothers of children with ASD are more likely to experience are as follows: (1) developmental limitations and symptoms of varying severity in autistic children, such as social communication impairments, behavioural problems, and lack of imagination (Baker *et al*., 2002; Yorke *et al*., 2018); (2) the absence of emotional gratification and satisfaction from parenting and negative emotions (Olechnowicz, 2004); and (3) the necessity for consistent parental or institutional care for the child and limited opportunities to obtain family, social, and systemic support at the national health system and social welfare level (Banasiak, 2017; Rivard *et al*., 2014).

According to the theories of Lazarus and Folkman (1984) and Hobfoll (2006), parents of children with ASD describe their lives as "stressful" because of the many difficulties they encounter as the lack of equilibrium between individual resources and the environmental challenges. This imbalance could be interpreted as the significant disparity between stressors and parental resources that support health maintenance and adaptive stress management, which often exceed their adaptive capabilities. Conversely, the Stress Model in Families of Children with Developmental Disabilities by Perry (2005) posits that parental stress is directly correlated with the degree to which specific aspects of the child's functioning (such as child traits or disorder symptoms) are perceived and comprehended by others, as well as with other stressful events in the child's life that are not directly related to the child. Support from outside the immediate family, such as informal social support and healthcare, as well as family resources, such as the parents' own personal and family system resources, assist parents in managing the stresses they encounter. These issues are a significant source of stress for the closest caregivers, particularly mothers (Pisula, 2011).

Time Perspective as an Internal Parental Resource

The passage of time affects human beings at every stage of their development. In contrast to objective time, which is shared by all living things, subjective time is a concept that allows people to view their lives uniquely to give particular values and significance to the experiences they have had. People may concentrate on the past, present, or future, contingent upon their subjective perception of time. People exhibit an individualised unconscious attitude — a time perspective — in relation to time and the process of dividing the continuous flow of existence into temporal categories. This perspective provides human existence with order, coherence, and meaning (Boniwell & Zimbardo, 2004; Zimbardo & Boyd, 1999, 2009).

The attitude of time perspective can be analysed as either a state, which is the current focus on one of the three elements of the time horizon (past, present, future) in the ongoing process of shaping an individual's present experience, or as a relatively stable personality trait that reflects stable habitual tendencies to focus on a specific time perspective, a learned attitude towards events and experiences, which takes on the character of a relatively permanent disposition, or a personality trait regulating human functioning (Stolarski *et al*., 2018).

Therefore, from a processual standpoint, time perspective can be seen as a relatively stable mental state that is susceptible to situational changes and impacted by particular situational elements that are involved in the socialisation process, or it can be seen as a permanent mental state. Consequently, the time perspective functions as a regulatory mechanism and affects all facets of an individual's life, such as their thoughts, emotions, behaviours, emotional states, and experiences, which are situated in different regions

of the temporal continuum (past, present, or future). It also influences human choices, occupation, financial status, achievements and setbacks, social interactions and interpersonal relationships, as well as stress management (Boniwell & Zimbardo, 2004).

Based on the time horizon criterion, Zimbardo and Boyd (1999), the fathers concept of time perspectives, differentiate between three basic time perspectives: past, present, and future. Because thinking about events that occurred in a specific time period triggers particular emotional response patterns, each of the three fundamental time perspectives has an evaluative component (positive *vs*. negative) in addition to cognitive, emotional, and social components. This conceptualisation was put into practice by Zimbardo and Boyd (1999), who developed a five-factor model that included the following time perspectives: past negative, past positive, present fatalistic, present hedonistic and future. Different time perspectives' proportion and balance have a big impact on the unique ways that people think, feel, and act. The intensity of traits linked to personal viewpoints can be depicted on a scale from low to high intensity. Moreover, qualitative analysis can be implemented to interpret specific positive or negative behavioural implications that arise from the activation of dispositional and processual consequences of the triggered mechanism. An individual's functioning may be permanently impacted by a single time perspective. The benchmark for predicting the present and future, as well as determining the appropriate course of action to achieve specific objectives, is the component of the experience that is dominated by specific emotions (positive versus negative).

Optimal Time Perspectives Pattern as the Core Fundament of Life Fulfilment

The pattern is made up of measurable indicators: a high intensity of positive past, hedonistic present, and future perspectives combined with a low intensity of negative past and fatalistic present perspectives (Boniwell & Zimbardo, 2004; Zimbardo & Boyd, 2009). In situations where the intensity of negative past and fatalistic present perspectives is high, depressive and anxiety symptoms are frequently observed, while the intensity of present hedonistic and future perspectives is low (Zimbardo & Boyd, 1999; Lefèvre *et al*., 2019). This perspective pattern is characterised by a high allostatic load, necessitating a substantial utilization of metabolic energy to preserve the equilibrium of internal physiological mechanisms in the presence of distractors (Bourdon *et al*., 2020), which not only activates the body's defences but also increases the probability of stress-related conditions, including burnout, PTSD, anxiety, and alcohol abuse (Papastamatelou *et al.*, 2018). It also lowers happiness, well-being, and life satisfaction (Koc-Kozłowiec, 2016; Furmańska *et al*., 2019).

Undoubtedly, time perspectives are a critical individual resource that is associated with behavioural control and self-regulation. Therefore, it is crucial to recognise the distinctive manner in which humans interpret their timeline issues in terms of time,

and take actions that are either beneficial or detrimental. It makes sense to investigate this phenomenon in connection with experiences related to ASD since contemporary psychology studies the fundamental mechanisms of the time perspective and its relationship to existential human experiences.

Finding resources (Stolarski *et al*., 2015), mentally travelling to find solutions (Suddendorf & Corballis, 2007; Zimbardo & Boyd, 2009), regulating mood and lowering anxiety (Papastamatelou *et al*., 2015), focusing on a task without worrying about how it will turn out (Zajenkowski *et al*., 2016), and lowering the severity of post-traumatic stress following trauma exposure (Stolarski & Cyniak-Cieciura, 2016) are all areas where adaptive time perspective patterns are clearly helpful for stress management. According to the studies cited, mothers of children with ASD may also be regulated by time perspectives because they are more vulnerable to stress-related illnesses (Smith & McQuade, 2021), parental burnout (Sekułowicz, 2000, 2013), and parental stress (Bonis, 2016; Pisula, 2012). In the past, the few studies that have investigated the relationship between stress phenomena and time perspectives in parents of children with ASD have been predicated on this assumption (Kossewska & Wojciechowska, 2017).

Social Support as an External Resource for Parents of Children with ASD

Social support is an essential external resource and protective factor in improving mental health and quality of life (Drageset, 2021). It can take various forms, both structural and functional. Structural social support could be defined as "[…] social networks that are objectively existing and accessible and that are distinguished from other networks by the presence of bonds, social contacts, and belonging, which enable them to fulfil a supportive role for individuals in challenging circumstances" (Sęk & Cieślak, 2004, p. 14).

Additionally, functional social support is defined as "[…] a social interaction that is initiated by one or both participants in a critical, stressful, difficult, or problematic situation" (Sęk & Cieślak, 2004, p. 18).[1]

Insufficient support that parents of children with ASD frequently experience is related to feelings of abandonment, isolation, and misinterpretation by others (Kuru & Piyal, 2018; Wong & Shorey, 2022). Nevertheless, research has demonstrated that effective social support can mitigate, or even eliminate, adverse effects on individuals and families in crisis, including depression, behavioural and emotional issues, and enhance life satisfaction in parents of children with ASD (Nahar *et al*., 2022; Yorke *et al*., 2018;). Additionally, it can enhance an individual's mental and physical well-being (Uchino, 2009). Furthermore, Hassanein *et al*. (2021) contend that social support is an appropriate predictor of family quality of life, a stress-reduction mechanism or buffer by meeting the fundamental need for belonging.

[1] Author's own translation.

In both formal and informal contexts, social networks can be beneficial (Sęk, 2003). Institutions, associations, and professional groups are examples of formal sources; friends, life partners, family, peers, and social groups are examples of informal sources. The objectives of supportive social interaction are to reduce stress, provide assistance during a crisis, foster a sense of community, provide security, and assist in the resolution of the issue and the surmounting of obstacles.

Formalised social support is a critical component of support for families with children diagnosed with ASD. Parents in both developed and developing nations promptly recognised symptoms and subsequently sought assistance from the appropriate healthcare organisations. Nevertheless, the process of obtaining assistance was detrimentally affected by the absence of expertise in the field of ASD within specialised organisations (*e.g.*, insufficient healthcare resources or medical staff that did not specialise in specific areas; Gao & Drani, 2025; Hosseinpour *et al*., 2022; Smith-Young *et al*., 2022). This is why it is imperative that institutions that have been established for this purpose offer this type of support. As a result, parents establish non-governmental organisations to coordinate and endeavour to improve the quality of life of their own, and other, children with ASD, as well as to organise professional support groups (Banasiak, 2013). Being a member of an organisation assists parents of autistic children in adapting, becoming more independent and resourceful, and experiencing less stress and anxiety.

Informal social networks are crucial to fulfil social needs and empower the vital energy in parents of children with ASD; however, the time and effort required to meet childcare responsibilities force parents to spend less time with their peers. This decline in friendships undermines an essential source of emotional support and exacerbates the sense of isolation experienced by parents (LaRoche & Des Rivieres-Pigeon, 2022). According to Wilson *et al*. (2018), siblings and peers continue to be important members of the social network because they help parents of children with ASD, which improves their mental health and happiness and affects the decisions they make about raising their kids.

The purpose of the presented study was to determine whether the stress levels of parents of children with ASD were correlated with their subjective perceptions of social support and time perspective. The subject literature analysis mentioned above led to the formulation of the following four research questions: 1) Compared to parents of typically developing children and parents of children with Down syndrome, how stressed out are parents of children with ASD?; 2) How do the time perspectives of parents of children with ASD differ from those of parents of typically developing children and children with Down syndrome?; 3) Does a correlation exist between the perceived stress level and the level of social support among parents of children with ASD?; 4) Are the perceived stress levels of parents of children with ASD higher in relation to their time perspectives?

Method

Group Characteristics

In the study, parents were carefully split into three groups: parents of children with ASD (R-ASD) were 30 parents (M=9, F=21) aged 25 to 41; parents of children with Down syndrome ASD (R-DS) were 30 parents (M=10, F=20) aged 23 to 45; and parents of children with typical development (R-TD) were 30 parents (M=12, F=18) aged 24 to 44. The average age of the children was 7 years, and their ages ranged from 2 to 15 years. Regarding the education level, the majority of respondents (41) were in the secondary education (40) and primary/vocational education (9) categories. Of the parents, 17 were from towns with more than 100,000 people, 46 were from villages, and 27 were from towns with up to 100,000 people. The study, which used the paper-and-pencil method, was voluntary and anonymous.

Method

The study was conducted using a questionnaire methodology. Three questionnaires were used, along with a demographic survey that asked about the parents' gender, age, level of education, and habitation. Questions about the children, such as their age and health conditions were also asked.

The stress levels of parents were evaluated by Juczyński and Ogińska-Bulik (2009) using the Polish adaptation of the Perceived Stress Scale PSS-10, which was developed by Sheldon Cohen and colleagues in 1983. The PSS-10 scores indicate how stressed out a person has been about their personal life over the past month. It comprises ten inquiries regarding personal emotions that are associated with events, behaviours, problems, and coping strategies. The reliability of the Polish adaptation was 0.90 and 0.72, respectively in two studies.

Buszman and Przybyła-Basista (2017) employed the Multidimensional Scale of Perceived Social Support (MSPSS), which was developed by Gregory Zimet and colleagues in 1988, to quantify the scope of their social support. 12 statements regarding the source of social support received, including friends, family, and other significant individuals, comprise the scale. The instrument's reliability is satisfactory, as evidenced by Cronbach's α=0.89.

Przepiórka (2011) translated the Zimbardo Time Perspective Inventory (ZTPI) into Polish. The positive past, negative past, hedonistic present, fatalistic present, and future are the five subscales (temporal factors) that are defined by 56 statements. By employing the internal consistency method, the reliability of the TPI was assessed. The ZTPI's validity was estimated by factor analysis, which confirmed its 5-factor structure (the total scale's percentage of explained variance was 32.07). The coefficients of Cronbach's α fall between 0.61 and 0.83.

Results

Statistical analyses were performed using IBM SPSS Statistics 25.

Table 1 presents the basic descriptive statistics and the analysis of the conformity of the distributions of the measured quantitative variables.

Table 1

Basic descriptive statistics with the Shapiro-Wilk test of measured indicators from the ZTPI, MSPSS, and PSS-10 research tools

	M	***Mdn***	***SD***	***Sk.***	***Kurt.***	***Min.***	***Maks.***	***W***	***p***
ZTPI									
Past positive perspective	3.55	3.56	0.67	-0.59	0.51	1.44	4.89	0.97	0.064
Past negative perspective	2.82	2.80	0.78	0.07	-0.37	1.20	4.50	0.98	0.330
Present hedonist perspective	3.07	3.13	0.54	-0.23	0.72	1.67	4.80	0.97	0.038
Present fatalist perspective	2.75	2.72	0.67	0.05	-0.70	1.22	4.33	0.98	0.160
Future perspective	3.74	3.77	0.53	0.03	-0.30	2.46	5.00	0.99	0.538
MSPSS									
Subjective social support	64.24	68.00	15.19	-0.97	0.72	13.00	84.00	0.93	< 0.001
PSS-10									
Perceived stress	17.97	18.00	5.82	0.20	-0.59	5.00	32.00	0.98	0.287

The Shapiro-Wilk test yielded statistically significant results for a number of the variables that were measured. This suggests that there is a substantial deviation from the standard distribution. Despite the statistical significance of the Shapiro-Wilk test result, the skewness value for all variables does not exceed the standard absolute value of 1. The distributions are therefore less asymmetrical than the normal curve. Consequently, parametric tests were implemented.

Stress Experienced by Parents in the Context of Child Neurodevelopmental Differences

The stress levels of parents changed depending on the child's developmental outcome. Table 2 illustrates the results of the one-way ANOVA.

Table 2

Level of stress experienced by parents as a function of the type of disorder in the child

	R-ASD (*n*=30)		**R-ZD (*n*=30)**		**R-RP (*n*=30)**		***F***	***p***	**η^2**
	M	***SD***	***M***	***SD***	***M***	***SD***			
Perceived stress	20.77_a	6.43	16.17_b	4.58	16.97_b	5.40	5.94	0.004	0.12

Note. Means not sharing a letter index differ from each other at the $p < 0.05$ level. NIR test.

The NIR test was introduced under the presumption of homogeneity of variance. Parents of children with ASD, and those of children with Down syndrome, and typically developing children, exhibited statistically significant differences, according to the findings. In comparison to parents of children with Down syndrome, and typically developing children, parents of children with ASD demonstrate a statistically significant increase in perceived stress, as evidenced by the moderately strong differences in the eta-squared coefficient.

Social Support Perceived by Parents in the Context of Child Neurodevelopment Differences

The subsequent research question allowed us to determine whether there are statistically significant differences in the perceived social support that parents receive in relation to the type of disorder in their child. Table 3 displays the findings of the one-way ANOVA. To investigate the repercussions, post-hoc tests were implemented.

Table 3

Level of perceived social support among parents as a function of the type of disorder in the child

	R-ASD (*n*=30)		R-ZD (*n*=30)		R-RP (*n*=30)		F_{Welch}	*p*	η^2
	M	*SD*	*M*	*SD*	*M*	*SD*			
Perceived social support	57.73_{a}	18.12	$65.00_{a,b}$	14.44	70.00_{b}	9.62	5.58	0.006	0.11

Note. The means not sharing the same letter index differ from each other at the $p < 0.05$ level. Games-Howell test.

The absence of variance homogeneity led to the implementation of the Games-Howell test, which revealed statistically significant differences between parents of children with ASD and those of typically developing children. As indicated by the eta-squared coefficient, the perceived social support of parents of children with ASD is statistically significantly lower than that of parents of typically developing children.

Time Perspective Pattern by Parents in the Context of Child Neurodevelopment Differences

To determine whether there are statistical distinctions in the time perspectives that parents disclosed in relation to the type of disorder in the child, a third, analogous one-way ANOVA was implemented. Table 4 illustrates the findings.

Table 4

Parents' temporal perspectives as a function of the type of child's disorder

	R-ASD		R-ZD		R-RP		*F*	*p*	η^2
	M	*SD*	*M*	*SD*	*M*	*SD*			
Past positive perspective	3.39_{a}	0.85	3.41_{a}	0.45	3.86_{b}	0.53	7.03*	0.002	0.11
Past negative perspective	2.94	0.90	2.85	0.61	2.66	0.80	1.02	0.365	0.02
Present hedonist perspective	2.88_{a}	0.57	3.03_{a}	0.57	3.30_{b}	0.40	5.07	0.008	0.10
Present fatalist perspective	2.98_{a}	0.73	$2.76_{a,b}$	0.63	2.51_{b}	0.58	3.87	0.024	0.08
Future perspective	3.83	0.60	3.72	0.54	3.66	0.45	0.77	0.468	0.02

Note. Means not sharing a letter index differ from each other at the $p < 0.05$ level. NIR and Games-Howell tests; * Welch's statistic.

The Games-Howell test was implemented due to the fact that the "perspective passed" variable did not satisfy the homogeneity of variance assumption. The statistical significance of the test result suggests that parents of children with ASD, and those with Down syndrome, encounter a statistically significantly lower level of positive past perspective and hedonistic perspective than parents of typically developing children. These disparities are moderately robust. Moreover, parents of children with ASD demonstrate a statistically significant increase in their current fatalistic perspective when contrasted with those of children with typical development.

The purpose of the following research question was to examine the relationship between parents of children with ASD's perceived stress level and their degree of social support.

Table 5

Pearson's correlation between perceived social support and perceived stress in parents of child with ASD

		Perceived stress
Perceived social support	*r* Pearson	-0.68**
	p	< 0.001

Note. * $p < 0.05$; ** $p < 0.001$; *** $p < 0.0001$

Pearson's correlation coefficient suggests that this is a robust negative correlation, and the relationship was established through the execution of Pearson's correlation analysis, which produced statistically significant results. It proves that parents of children with ASD feel more stressed the less social support they get.

An analogous Pearson's *r* correlation analysis was performed for the ZTPI and PSS-10 instruments in order to examine the relationships between time perspectives and perceived stress in parents of children with ASD.

Table 6

Pearson's r *correlation between temporal perspectives and perceived stress in parents of children with ASD*

Variables		Perceived stress
Past positive perspective	*r* Pearson	-0.60**
Past negative perspective	*r* Pearson	0.71**
Present hedonist perspective	*r* Pearson	-0,65**
Present fatalist perspective	*r* Pearson	0.58**
Future perspective	*r* Pearson	-0.07 (n.s.)

Note. * $p < 0.05$; ** $p < 0.001$; *** $p < 0.0001$

The research yielded statistically significant results for four of the five time perspectives. Perceived stress and positive past perspective are strongly correlated negatively (r =-0.60, p<0.001), so if a parent of a child with ASD has a lower positive past perspective, they will have a higher perceived stress score. Perceived stress and the negative past perspective exhibit a substantial positive correlation (r=0.71; p<0.001). This implies that as the degree of a specific perspective increases, so does the perceived stress level. It was found that observed hedonistic perspectives are strongly and negatively linked to perceived stress (-0.65, p<0.001). As a result, the parent's perceived stress increases when the time perspective score decreases. Perceived stress and the fatalistic present perspective exhibit a robust positive correlation (r=0.58, p<0.001). This suggests that the parent's perceived stress level increases in conjunction with the fatalistic present perspective.

Predictors of Parental Stress Depending on the Child's Neurodevelopmental Diversity

To identify the predictors that statistically significantly explain the variations in the stress levels experienced by parents of children with disorders, stepwise linear regression analyses were employed. The conclusions of these analyses are assessed in the subsequent paragraphs. The following factors were added to the model as predictors: future perspective, hedonistic present perspective, fatalistic present perspective, positive past perspective, negative past perspective, and perceived social support.

The dependent variable was selected as the perceived stress level. Three parent groups — children with ASD, children with DS, and children with typical development — were subjected to separate regression analyses. The results are shown in table 7.

Table 7

Predictors of perceived stress in parents of children with ASD

Model		*B*	*SE*	*β*	*t*	R^2	ΔR^2	F_{change}
Parents of children with ASD								
1	Intercept	5.74	2.91		1.97	0.51	–	29.02***
	Past negative perspective	5.10	0.95	0.71	5.39***			
2	Intercept	22.72	6.14		3.70***	0.61	0.13	9.27**
	Past negative perspective	3.74	0.95	0.52	3.96***			
	Present hedonist perspective	-4.51	1.48	-0.40	-3.04**			
Parents of children with DS								
Model		*B*	*SE*	*β*	*t*	R^2	ΔR^2	F_{change}
1	Intercept	6.66	3.44		1.94	0.22	–	8.04**
	Present fatalist perspective	3.44	1.21	0.47	2.84**			
Parents of children with typical development								
Model		*B*	*SE*	*β*	*t*	R^2	ΔR^2	F_{change}
1	Intercept	38.57	6.25		6.17***	0.30	–	0.30**
	Perceived social support	-0.31	0.09	-0.55	-3.49**			

Note. *B* – unstandardized coefficient; *SE* – standard error; *β* – standardized beta coefficient; R^2 – coefficient of determination; ΔR^2 – change in the coefficient of determination; *F* – ANOVA result; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The predicted stress of parents of children with ASD is affected by two statistically significant variables. In conjunction, they accounted for 61% of the variance. The initial perspective is the negative past perspective, which has an unstandardized B coefficient of 3.74. According to this coefficient, perceived stress rises by 3.74 units for every unit of increase in the degree of negative past perspective. The *β* coefficient indicates a positive relationship between the predictor and the dependent variable.

The current hedonistic beliefs are the second statistically significant predictor. As indicated by the unstandardized B coefficient (-4.51), a one-unit increase in the current hedonistic perspective results in a 4.51-unit decrease in perceived stress. A negative correlation exists between the predictor and the dependent variable in this case.

A fatalistic present perspective was the sole statistically significant predictor identified in parents of children with Down syndrome, accounting for 22% of the variance. When the level of fatalistic present perspective increases by one unit, the unstandardized coefficient B, which is 3.44, indicates that the level of perceived stress will increase

by 3.44 units. The *c* coefficient suggests that there is a positive correlation between the predictor and the dependent variable. Assuming that the stress levels of parents of children with DS are influenced by variables that are not accounted for in this model, it is reasonable to assume that the fatalistic present perspective accounts for only 22% of the variance.

In a linear regression analysis of parents of children with typical development, only one statistically significant predictor was found. 30% of the variance was independently attributed to this predictor. B, the unstandardized coefficient, is -0.31, which suggests that the level of perceived stress decreases by 0.31 units when the level of perceived social support increases by one unit. The β coefficient suggests that the dependent variable and the predictor are negatively correlated.

Discussion

Parents of children with ASD are significantly exposed to stress associated with child rearing, according to the research conducted thus far (Gray, 2002; Pisula, 2012). Furthermore, research indicates that parents of children with autism experience higher levels of stress compared to parents of children with Down syndrome or typically developing children (Pisula, 2007; Pisula & Noińska, 2011). Compared to mothers of children with Down syndrome and mothers of typically developing children, mothers of children with ASD perceive them as having more physical development limitations and as being more dependent on care. Chronic stress and emotional exhaustion are made worse by the stresses of raising a child and the ongoing exhaustion that parents of children with ASD endure (Sekułowicz, 2013). The diverse and distinctive behaviour patterns of children present parents with a perpetual stream of failures and concerns, *as per* Błeszyński (2011). The unique and stereotypical behaviours, incomprehensible communication style, and lack of intimacy of children with ASD cause a great deal of stress for parents. The results of the study that have been presented are supported by the research of other authors in the same field. It offers evidence of a statistically significant difference in the stress levels of parents of children with ASD in comparison to other groups, as these parents experience higher levels of stress. However, there was no statistically significant difference in the level of stress experienced by parents of children with Down syndrome compared to parents of children with neurotypical development. Parents of children with Down syndrome may report feelings of reduced stress as a result of the genetic mutation that is the aetiology of the condition. Individuals who comprehend the objective cause of their child's disorder refrain from attributing it to themselves. Additionally, children with Down syndrome are more emotionally expressive and candid with their parents, which may alleviate their stress.

Along with illustrating the variations in perceived stress levels among the three parent groups, it was determined to investigate whether there is a connection between the perceived stress and perceived social support among parents of children with ASD. The investigation discovered that the perceived stress levels of parents of children with ASD are contingent upon their perceived social support. It is evident that stress levels are diminished for parents of children with ASD when they perceive that their family, friends, and society are supportive. In contrast, their stress levels are elevated when they perceive the support they receive as insufficient. Furthermore, Boyd (2002) showed a strong negative relationship between parental stress and life satisfaction, as well as a negative correlation between stress levels and perceived social support in parents of children with ASD. Additionally, perceived social support can regulate and moderate the relationship between stress and other variables (Lu *et al*., 2018; Masa'Deh *et al*., 2025).

Social support is an essential external resource for parents who are tasked with the challenging task of caring for a child with ASD. Consequently, a study by Banasiak (2013) found that parents of children with ASD who attend support groups report feeling less stressed than those who do not. It can be less stressful to discuss similar experiences of parenting a child with ASD. In addition, it is imperative to recognise the possibility of receiving support in the care of a child with ASD, as this can lead to increased emotional and mental well-being. Parents of children with ASD are less likely to experience stress and health issues when they are confident that they can rely on their loved ones for assistance during difficult times. According to Ekas *et al.* (2010), social support is indispensable for parents of children with ASD. Research has demonstrated that mothers with multiple children with ASD experience less stress and negative emotions when they have greater informal social support from their friends, family, and partner. Mothers who thought they had more social support also had better mental health, were happier with their lives, and were more optimistic. Smith, Greenberg, and Seltzer (2012) achieved comparable outcomes, positive correlation between positive affect and social support levels and was found as well as negative correlation between social support levels and depressive symptoms were found.

Parents of children with Down syndrome, and parents of children with ASD, exhibit significantly lower past positive and present hedonic perspectives than parents of typically developing children when the time perspectives of the three parent groups are compared. Additionally, the current fatalistic perspective is considerably more prevalent among parents of children with ASD than it is among parents of typically developing children. Parents of children with disorders such as ASD have a more negative perspective on their experiences and fewer positive memories than those of typically developing children, according to these findings. In addition, they are less concerned with providing themselves with entertainment and enjoyment in the present

than parents of typically developing children. They prioritise their current personal needs that bring them joy and pleasure, in contrast to the parents of children in the third group. Furthermore, parents of children with ASD are more likely to surrender their lives to fate and demonstrate a reduced sense of personal agency than those of typically developing children. Regarding their children's developmental neurodiversity, the only survey on parents' time perspectives found that parents of children with ASD place more value on bad experiences and have a more fatalistic outlook on the present than parents of children with DS (Kossewska & Wojciechowska, 2017). The study found that parents of children with ASD had significantly lower results for these variables than parents of children with DS. This suggests a statistically significant differentiation between the two groups in terms of positive past and future perspectives. The other studies did not show a statistically significant distinction in time perspectives between the group of parents of children with ASD and the group of parents of children with DS, as the results of this study did. Nevertheless, the group of parents of children with ASD, like those in the other studies, exhibited a significant amount of fatalistic present-day views and negative past perceptions. This validates the notion that parents of children with ASD possess an inadequate time perspective, which may result in adverse health outcomes

The presented study forms the basis for further investigation into ASD-related issues. The stress experienced by both parents could be further investigated through additional research. The acquisition of data regarding the variations in the level of perceived stress, perceived social support, and time perspective patterns among parents from specific marriages would be facilitated by this.

Conclusion

Several critical conclusions may be drawn from the investigation:

1. It is statistically significant that parents of children with ASD feel more stressed than parents of children with DS or children who are developing normally.
2. A specific pattern of time perspectives is exhibited by parents of children with ASD. This pattern is characterised by high scores on the negative past and fatalistic present perspectives, as well as low scores on the positive past, hedonistic present, and future perspectives.
3. A significant difference between parents of children with ASD and parents of children with typical development was found by the present fatalistic perspective, as well as by the past positive and present hedonistic perspectives. Parents of children with ASD expressed a significantly lower level of present hedo-

nistic and past positive perspective and a significantly higher level of present fatalistic perspective.

4. A significant negative correlation was observed between the perceived level of social support and the stress level of parents of children with ASD.
5. Stress intensity and time perspectives were discovered to be significantly correlated in the parents of children with ASD. In fact, there was a negative correlation between a hedonistic present perspective and a positive past perspective, and a positive correlation between a fatalistic present perspective and a negative past perspective. Pessimistic perspectives regarding their current experiences and negative beliefs regarding their past increase the stress levels of parents of children with ASD.
6. The results of this study show that parents of children with ASD still perceive less social support than parents of children with Down syndrome and parents of children with normative development, even though there are more facilities and centres supporting people with ASD.
7. Based on the investigation, the dysfunctional temporal pattern of parents of children with ASD may be a risk factor for the development of stress-related disorders. As a result, it is advisable to examine the potential of time perspective balancing therapy to transform the negative pattern into an optimally balanced one. This methodology is referred to as time perspective balancing therapy (Zimbardo *et al.*, 2013). This therapy has been demonstrated to be beneficial for individuals with PTSD, so it is logical that it would also be beneficial for parents of children with autism and individuals with ASD who are exposed to high-intensity stress.

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