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## Functioning of the Family System With an Autistic Child: A Comparative Study Between Poland and California, USA (pp. 321–355)

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### Abstract

**Objectives of the research:** The aims of this research are to conduct a comparison study between the level of communication and flexibility in families with autistic children in two different geographical locations and cultural contexts – California (USA) and Poland (Europe) – to address whether the level of these two dimensions of family functioning are related to the ego-resiliency of the parents, and additionally to discuss the practical implications that can be drawn from the results.

**Research methods:** Communication and flexibility profiles in family functioning were collected in Poland and California from September 2016 to February 2018. Data on the similarities and differences between parents

of children with autism spectrum disorder in Poland ( $n=111$ ) and California ( $n=105$ ) was collected using Olson's FACES-IV. The Ego-Resiliency Scale was also administered in methodologically standardized conditions and was empirically analyzed along with controlled demographic variables.

**A short description of the context of the issue:** Family functioning and ego-resiliency in families with children with autism are analyzed in this research. The richness of interactions and connections within the family system suggests that when explaining the relationships within the family system, the interpretation that is based on linear causality is abandoned and replaced by circular causality, which is the model of analysis utilized in this research project. The main goals of this research were to compare and contrast family functioning in two geographical locations and cultural contexts and to show statistically significant differences between these two groups, in order to better understand cultural variations and differences that may affect family functioning and ego-resiliency and to provide the different groups with adequate, necessary support services.

**Research findings:** The results revealed statistically significant differences in various dimensions of Family Communication and Flexibility between families of autistic children in California and Poland. With respect to both variables, higher scores were found in the California group. The flexibility results in both groups were defined as flexible. However, in regards to family communication, the result of the California group corresponded to higher standardized scores, whereas those of the group from Poland revealed moderate standardized scores.

**Conclusions and recommendations:** Statistically significant positive correlations were found in the variables of Flexibility and Family Communication between Poland and California. The results of this research are critical, not only from the perspective of scientific development (as similar studies have not been conducted), but also for therapeutic and preventive reasons. They suggest concentrating on preventive activities and aspects that are important for the well-being of the parent as a person, as well as the entire family system, especially the dimensions of communication in families with children with autism spectrum disorder and the ego-resiliency of the parents. However, further research is needed to specifically identify the differences

between the groups based on various demographic variables. Additionally, it is important to develop a practical model to support families with autistic children and to address family satisfaction in intervention strategies, as well as to consider the importance of support groups that may improve satisfaction and ego-resiliency within the family system.

**Keywords:** ASD, flexibility and communication in the family system, educational relationships, family-educational institutional relationships

## Introduction

Parenting is one of the most basic social roles in a person's life. However, functioning within the family system is changing due to technological advances and cultural changes. Research that refers to the concept of a systemic understanding of the family has been presented by Olson and Goral (2003) and Margasiński (2011). The family is viewed as a system and any changes within that system affects the whole family. The family system is also dependent on all the elements within it. Thus, when there is a change within an internal or external element, all the family members are forced to adapt to the change. This adaptation is required for optimal functioning in the family.

Ludwig von Bertalanffy (1984), the creator of the General Theory of Systems, added to the 20th-century theoretical construct that a major component of relationships is connecting a set of elements that comprise and affect the whole system. This model proposes that dynamic interactions exist between parts of the system, causing the elements examined in isolation to behave differently than in the whole system that is composed of them.

In the empirical sciences, psychology has accepted the concepts operationalized on the basis of the systems approach and cybernetics. Of particular importance was the change in the perspective of describing the causes of mental disabilities and disorders from linear to relational. The linear perspective was associated with the psychodynamic approach, which assumes that behavior is caused by a specific fact related to the past.

On the other hand, the relational perspective shifts the emphasis from content to process, searching for the cause of the mental disruption or disorder in current, established patterns of interaction instead of in a specific past event or predisposition for dysfunction. Bertalanffy (1984) did not analyze parts of a system separately, but focused on patterns of relationships within the system and interactions between systems. Systems are characterized by comprehensiveness, totality, holism, and form. This means that, as a result of the interaction of individual elements, a state emerges from the system that is more important than the sum of its parts.

A microsystem is a certain pattern of activities, roles, and relationships that a developing individual experiences in a specific environment with specific physical and material properties. For a child, the microsystem is primarily the environment of their family home, but it also includes their peer group and educational team.

A mesosystem is a set of interrelations between various microsystems in which the developing individual actively participates. For a child with autism spectrum disorder (ASD), this system is generally determined by the interactions between the family and the educational system or between the family and educational and rehabilitation institutions. The child's special educational needs may modify the first type of interaction and long-term cooperation with the educational and therapeutic team may transform the meaning and criteria of medical and rehabilitation interventions. A common dilemma for teachers is resolving the issue of priorities, determined by both educational goals verified by external examinations and by developmental and therapeutic goals.

A macrosystem is an extremely important level of the ecosystem, as it determines the possibilities of action and the quality of functioning at lower levels (e.g., it introduces criteria for rehabilitation and education and their assessment). It is rarely the subject of scientific research.

The upbringing and care for a child born with a disorder is determined within the context of the functioning of the family system. Parents generally experience some kind of mourning and grief following a diagnosis due to the child's lost abilities or limited development. In these circumstances, it can be expected that the functioning of family members,

understood as a whole system, changes. Not only are the roles of individual family members modified, but so are their functions and the expectations related to them, which in turn affects the emotional and cognitive bond between members of the whole family system. The people who constitute a source of care and security in the family, most often the parents or primary caregivers, maintain a balance or homeostasis within the family, optimizing the quality of life of the system and its members – assuming that they perform their functions properly. Cultural conditions and various resources, including psychological ones, are important considerations for parents to utilize in order to keep a balance within the family system.

In this study, ASD is understood as a neurological developmental disturbance (Minsheu et al., 2005) that is constitutionally conditioned (Pellicano, 2008) and has biological factors that lead to developmental abnormalities, which may also play an important role (Kishida et al., 2019). Despite many years of research, it is assumed that ASD is an idiopathic neurobiological disorder, the etiological factors of which remain largely unknown. Due to the large diversity within the population of individuals on the autism spectrum, it is not possible to determine specific factors responsible for the degree of functioning or the intensity of symptoms in autistic individuals. Currently, the most popular basis for research on the science of autism is related to the neurodevelopmental hypothesis.

Currently, both the APA (2013) and the World Health Organization (WHO; 2018) report that autism occurs in approximately 1% of the world's population. A review of 71 studies measuring the prevalence of autism spectrum disorder in 34 countries from 2012 to 2022 found an average global ASD prevalence of 1% (Zeidan et al., 2022). A significant upward trend is also observed in a review of studies covering demographic data from 2000 to 2012, in which the rate was 0.62% (Elsabbagh et al., 2012). This observed increase is not indisputably synonymous with an actual increase in the number of individuals on the spectrum, as several cohort studies by Kadesjö Gillberg and Hagberg (1999) on all children born in 1985 and living in Karlstad, Sweden showed that ASD was found in approximately 1.21% of the population. Despite the small sample of 826 children,

the research results may constitute an example of the prevalence of ASD being comparable to current statistical data.

Researchers studying children born in Denmark from 1980 to 1991 have demonstrated a relationship between the increase in the prevalence of the disorder and changes in the diagnostic criteria. According to their results, 60% of the factors responsible for the higher prevalence of ASD in Denmark can be explained by the diagnostic system being updated from the ICD-8 to the ICD-10 and data from discharge papers of individuals using outpatient care being included (Hansen et al., 2015). Changes in diagnostic classifications and greater awareness of the occurrence and characteristics of ASD are among the most frequently mentioned determinants explaining the higher prevalence of ASD in the literature on the subject (Fombonne, 2020; Matson & Kozłowski, 2011).

Contemporary research on the functioning of a family system with autistic children indicates that in autistic individuals, anxiety is the most common co-occurring mental health problem, appearing five times more often than in the general population (Nimmo-Smith et al., 2020). Also, the symptoms of anxiety disorders are more common in those on the spectrum who also have socioemotional and cognitive difficulties (Keefer et al., 2018). A study by Boulter et al. (2014) conducted on children and adolescents with ASD showed that the study group was characterized by a significantly greater intensity of both anxiety and intolerance of uncertainty (IU) than the control group. However, when the influence of IU was taken into account, the difference in anxiety levels between the groups was no longer significant, suggesting that IU may mediate the link between autism and anxiety. Boulter et al. also proposed a causal mediational model in which IU almost entirely mediated the relationship between ASD diagnosis and the higher level of anxiety compared to the general population. The same conclusions were reported in a study by Maisel et al. (2016), which found that IU partially mediated the relationship between autism symptoms and anxiety, explaining 36% of the total effect and serving not only as a predictor of severe anxiety, but also as a mediator between these variables. Autism symptoms and alexithymia were discussed as prognostic factors for IU. The results of another study (Wigham et al., 2015) showed that

both hyper- and hyposensitivity were significantly associated with repetitive motor movements and insistence on identical behavior, with both of these relationships being mediated by anxiety and IU. A later study by Neil et al. (2016), conducted using a control group, replicated the results obtained by the previous Wigham et al. (2015) study, in which IU assumed the role of a predictor for increased sensory sensitivity. These characteristics show the importance of conducting comparative research on family systems in different cultures, because contextual factors may also be important in planning effective forms of therapy for individuals with ASD.

During adolescence, parental stress is generated by the increased burden of the child's difficult behavior, difficulties in providing appropriate education and care, growing fears about the future resulting from the child's constant dependence, problems maintaining the continuity of specialist care, and problems related to sexual maturation. Additionally, in young people with developmental disorders attending mainstream schools (especially high-functioning individuals), another factor that can burden the entire family system is violence from peers.

The challenge for the family involves choosing the child's educational model and establishing the rules and values within the family. During this time, parental tasks are focused on meeting the child's needs and accompanying them in their development. It is important to adapt to many changes and to prepare the child for life in an educational community.

The concept of ego-resiliency referred to in this article comes from the ego-resiliency theory created by Jeanne and Jack Block (1980), though they initially used the term "ego strength." Ego-resiliency refers to the ability of an individual to adapt to difficult situations and traumatic events. It is a permanent resource used by the individual, where a person faced with a difficult situation is able to use previously acquired knowledge and adapt their cognitive patterns to cope with the difficult situation. According to researchers (Siu et al., 2009; Kaczmarek & Aleszczyk, 2013), ego-resiliency has a very significant impact on the level of satisfaction during various periods of a person's life. Mental resilience is defined in the social sciences as a person's ability to adjust the scope of their self-control to the requirements of the situation. This personality feature

plays a fundamental role in the process of effectively coping with the difficulties of everyday life, including struggling with disabilities or abnormalities in a child's development. This understanding of ego-resiliency emphasizes the subjective nature of this concept.

The concept of mental resilience is also associated with another term, utilized by various subdisciplines of modern psychology. It is known as "flourishing," and its popularity in science is related to the development of positive psychology, among other things.

Resilience in the theoretical sense is a process, analyzed in the context of sudden crises/traumatic situations, with variable activation, triggered by resiliency, which activates related resources to cope with a difficult situation. Ogińska-Bulik and Juczyński (2008) also conceptualized resilience as a disposition that is important in the process of coping with everyday stress and traumatic events. The authors emphasize the subjective nature of this concept by using the term *resiliency*.

In the process approach, resilience is a transaction taking place over time between an individual's disposition and the conditions of the situation. A situation that is stressful for an individual means, in cognitive terms, that it is categorized in the process of a primary cognitive assessment as burdening or exceeding their resources and threatening their well-being (Heszen & Sęk, 2007). If the situation involves a coping process, which means effort and coping with the situation, then resiliency determines whether the individual will be able to bear this effort and whether coping with stress will be effective. This approach is closest to the real functioning of resilience. Reality is related to the fact that the individual's dispositions, which include resilience, are revealed when confronted with a specific difficult situation in the coping process. An adequate approach to this process requires measurement over time of both the individual's ownership and the situation, as well as the transactions between them.

Ego-resiliency is associated with a person's disposition and specific skills. These include the ability to positively re-evaluate reality in any temporal aspect, the capacity for gratitude – which is important in considering the past – the ability to enjoy life, and the ability to be optimistic, also in terms of anticipating future difficulties.



## **Purpose and methodology**

The most important aim of this research study was to compare and characterize the functioning profiles of families raising autistic children in California (USA) and in Poland in accordance with the Ego-Resiliency Scale of the parents, along with the demographic and cultural conditions in which they live. Due to the available norms for the population of healthy individuals with which the parents with ASD children were compared, the control group in this study was waived.

A questionnaire was distributed to the parents regarding demographic and cultural variables in addition to Olson's (2000) Flexibility and Cohesion Evaluation Scales-IV (FACES-IV) and the Ego-Resiliency Scale by Block and Kremen (1996).

### **Olson's (2000) Flexibility and Cohesion Evaluation Scales-IV (FACES-IV)**

FACES-IV is based on the theoretical assumptions created by Olson (2000) and is presented as the Circumplex Model of Marriage and Family Systems. It includes three key concepts for understanding family functioning: consistency, flexibility, and communication. The main assumption of the Circumplex Model indicates that balanced levels of consistency and flexibility are conducive to the beneficial functioning of the family. Unbalanced levels of consistency and flexibility (very low or very high) are associated with problematic family functioning. Olson's Circumplex Model is one of the few holistic theoretical concepts of the family to offer tools for measuring its constructs. The main variables that make up the Circumplex Model are consistency, flexibility, communication, and satisfaction in family life.

Olson (2000) also proposes in his model three levels of family cohesion: unbound, balanced coherence, and confusion. The cohesion indicators include mutual emotional closeness, the quality of psychological boundaries between family members, the existence of coalitions, the amount of time spent together, common interests and forms of rest, the size of a circle of mutual friends, and the degree of consultation with other family members regarding decision-making. *Coherence* is defined

as the emotional bond between family members (Olson & Goral, 2003). Family relationships with an extremely high level of coherence express *confusion* of the relationships or are *unbound* when there is non-commitment or relationships without bonds. Members of entangled systems are very emotionally dependent on each other, and the affective states of the individual are often shared by the whole system or, in unbound families, there is no bond. Tangled systems discourage children from spontaneously and autonomously learning about the world and dealing with the natural problems of life, which complicates children's development in all areas.

By analogy, and for consistency, Olson also gives three levels of family flexibility: rigid, balanced flexibility, and chaotic. Flexibility means the quality and degree of changes taking place in systems related to leadership and the roles/principles of mutual relationships and resulting from negotiations between family members. The imbalance of elasticity may manifest itself in the form of extremely high elasticity (defined as *chaotic* family relationships) or extremely low elasticity (classified as *rigid* family relationships).

Olson and Goral (2003) define family communication as the ability of a given partner or family system to communicate positively. Communication in the family is related to the act of familiarizing family members with information, plans, thoughts, and feelings, (i.e., a broad repertoire of phenomena represented by the functioning system). The ability to communicate positively provides a change in the coherence and flexibility of the family system. On the other hand, satisfaction with family life determines the extent to which family members feel happy and fulfilled. Coherence, flexibility, and their dimensions were presented by Olson using the Circumplex Model. However, communication and satisfaction with family life are not graphically reflected in this model.

FACES-IV is a questionnaire composed of 62 items which comprise eight scales. The main scales of the Circumplex Model include two Balanced Scales – Balanced Coherence and Balanced Flexibility – and four Unbalanced Scales: Disengaged, Enmeshed, Rigid, and Chaotic. The remaining scales are Family Communication and Family Satisfaction, which are called evaluation scales.

### **The Ego-Resiliency Scale by Block and Kremen (1996)**

According to the authors of this short, but aptly researched tool, people differ in the extent to which they consciously control their own emotional states and behavior. Block defines ego-resiliency as adaptive flexibility resulting from the ability to adjust the level of control to the situation (Letzring et al., 2005). The higher the ego-resiliency, the greater the ability to modulate self-control depending on the possibilities and needs of a particular situation. This can improve emotional regulation, including the regulation of positive emotions.

### **Research problem and hypotheses**

Based on the analysis of the literature on the subject and taking into account the theoretical assumptions discussed in the introduction, the following research questions were formulated:

1. What is the functioning profile of families of children with autism in California and in Poland? Are there statistically significant differences between the functioning of families with children with autism in California and in Poland?
2. Is there a statistically significant relationship between the functioning profile of families of children with autism and the ego-resiliency of the parents?
3. What practical implications can be drawn from this research project?

Using the research questions, the following hypotheses were formulated:

**Hypothesis 1:** The profile of family functioning in the dimensions of Flexibility and Family Communication among the parents of children with autism in California is more favorable than the results of the Polish group. There are statistically significant differences in these scales between the parents of children with ASD in Poland and in California.

**Hypothesis 2:** The ego-resiliency of the parents in both California and Poland positively correlates with the FACES scales of Flexibility and Family Communication and negatively correlates with the FACES scale of Disengaged.

### **Justification for the hypotheses**

The assumptions of systemic theories (Olson, 2000) indicate that changes affecting one family member affect the functioning of the entire family system. Lewandowska-Walter et al. (2014) examined children with disabilities in terms of the balance of the family system, which also included life satisfaction, well-being, and styles of coping with stress. They concluded that mothers from balanced families perceive the family system as more coherent and flexible than mothers from family systems identified as unsustainable. Mothers from unbalanced systems achieved significantly higher scores on the Unbound, Confusion, and Chaotic FACES scales and presented significantly lower satisfaction with family life than mothers from balanced family systems.

Many researchers (Dempsey & Keen, 2008; Dunst et al., 2014) indicate that parents experience fulfillment in parenting and the development of self-esteem when their child is developing typically. This has also been confirmed by research conducted on various groups of parents of children with disabilities (Gerc, 2009; Gerc & Kuźniar, 2015; Gerc & Jurek, 2015). However, the context of a child's disability modifies the quality of life of the parents, especially mothers, thereby introducing new conditions. The disorder and the therapy process has a functional impact on the child and their family. These hypotheses are also justified in numerous studies (Lemanek, 1994; Pisula, 2007; Wiegner & Donders, 2000).

Families of people with autism often share the experience of isolation from the rest of society. In 2009, at the University of San Diego (California), the Department of Physical Cultural Education, in cooperation with the Autism Tree Project Foundation (ATPF), launched an innovative program that involves university athletes working with children with

autism. The program was developed by the ATPF, which was founded in 2003 in San Diego. The aim of the ATPF is to raise awareness of autism, to help specific families of people with this disorder, and to promote early identification of autism in children. Additionally, the ATPF aims to present the achievements of those people with ASD who seem to have a favorable prognosis for the future. As a result of many services and materials, as well as the work of various organizations, children with ASD in California have the opportunity to participate more freely in cultural and sports events and to express their interests and potential. Validating their abilities rather than their limitations allows them to transcend their own barriers and thereby improve the overall quality of their lives, as well as the quality of life of those who are part of their ecosystem (Novak, 2017).

### **Characteristics of the study group**

For the purposes of this research study, people were randomly and purposefully selected for the study group. After obtaining the appropriate consent from the Research Ethics Committee, the researchers included 105 randomly selected families of children with ASD aged 4–17 years old and under the care of the ATPF and 111 parents of children with ASD in the same age group from southern Poland receiving support from regional public specialist clinics. Approximately 74% of the participants were mothers, with the remaining being fathers of autistic children. In terms of the educational level of the parents in the group from California, 47% of the respondents had an advanced degree and 33% had graduated from college. In terms of their economic resources, 58% earn an annual income of \$100,000 or more. In terms of ethnicity, the majority of the respondents (59%) were white and when it comes to marital status, 71% were married to their first spouse. In the group of respondents from Poland, approximately 60% described their financial status as average, while 8% estimated it as high. All respondents from Poland were white and 82% were married.

## Analysis of results

Percentiles for the study group were calculated and statistical analysis of the results was performed. The results were checked for a normal distribution (Kolmogorov–Smirnov and Shapiro–Wilk tests). After determining the characteristics of the distribution (for a normal distribution, a correlation study was carried out with Pearson’s  $r$  coefficient), the significance of differences between the independent groups in the selected variables was also checked ( $t$ -test). For results without a normal distribution, the Mann–Whitney U test was used to determine the significance of differences between the groups and Spearman’s rho test was used to measure correlations.

## Results

Tables 1 and 2 present the FACES-IV results in both groups, while Table 3 summarizes the profiles of family functioning, representing the converted results.

**Table 1. FACES-IV results of the group of parents with children with autism from California (n=105)**

<i>FACES-IV</i> Dimensions	<i>Mean</i>	<i>SD</i>	Percentile	Results
Cohesion	29.841	4.076	68	<b>Very Connected</b>
Flexibility	26.612	4.313	60	Flexible
Disengaged	13.771	4.234	18	<b>Very Low</b>
Enmeshed	15.267	4.022	24	<b>Very Low</b>
Rigid	19.895	4.457	34	Low
Chaotic	14.925	4.965	20	<b>Very Low</b>
Family Communication	38.733	7.003	61	<b>High</b>
<b>Family Satisfaction</b>	<b>34.906</b>	<b>7.785</b>	<b>35</b>	<b>Low</b>

**Table 2. FACES-IV results of the group of parents with children with autism from Poland (n = 111)**

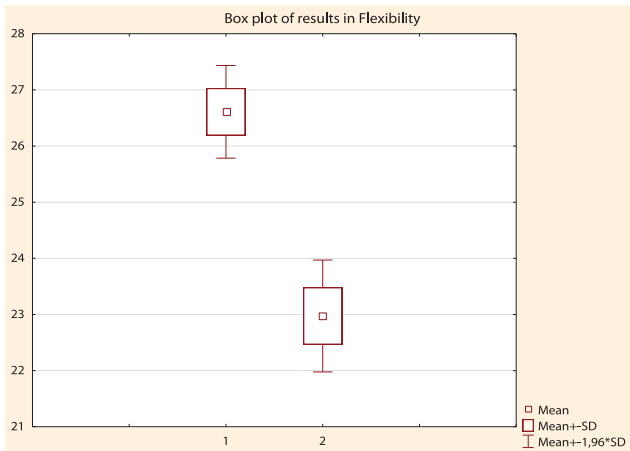
<i>FACES-IV</i> Dimensions	Mean	SD	Percentile	Results
Cohesion	25.901	5.619	58	Connected
Flexibility	22.973	5.357	50	Flexible
Disengaged	21.559	6.432	45	Moderate
Enmeshed	14.703	4.199	24	Very Low
Rigid	18.612	4.454	32	Low
Chaotic	18.595	5.526	34	Low
Family Communication	32.847	9.637	36	Moderate
<b>Family Satisfaction</b>	<b>33.532</b>	<b>8.567</b>	<b>30</b>	<b>Low</b>

**Table 3. Comparative analysis of the converted results (percentiles) of the group of parents with children with ASD in California (n=105) and in Poland (n=111)**

<i>FACES-IV</i> Dimensions	Characteristic Results California	Characteristic Results Poland	Percentile
Cohesion	Very Connected	Connected	68 vs. 58
Flexibility	Flexible	Flexible	60 vs. 50
Disengaged	Very Low	Moderate	18 vs. 45
Enmeshed	Very Low	Very Low	24
Rigid	Low	Low	34 vs. 32
Chaotic	Very Low	Low	20 vs. 34
Family Communication	High	Moderate	61 vs. 36
Family Satisfaction	Low	Low	35 vs. 30

In order to verify the first research hypothesis about the functioning profiles of families in the two study groups, where the results were distributed close to the normal distribution, Student's *t*-test was used; in the case of variables with a non-normal distribution, the Mann–Whitney U test was used. The results of the analysis are illustrated in Figures 1–4. For the dimension of Flexibility, the *t*-coefficient reached the level of a statistically significant difference between the groups ( $t=5.48$ ;  $p<0.0001$ ). Therefore, the existence of a statistically significant difference between the groups in terms of the variable Flexibility was confirmed.

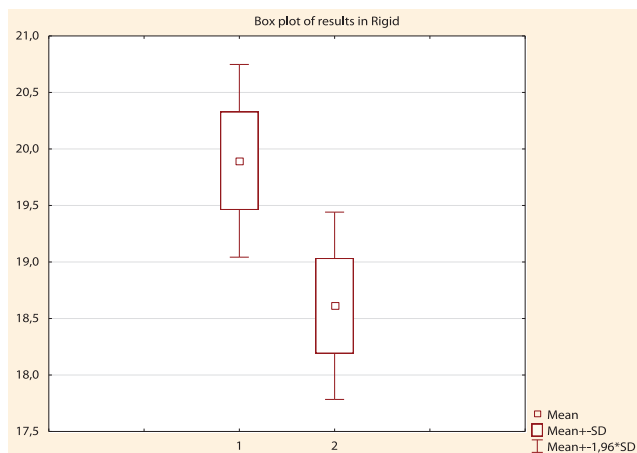
**Figure 1. Comparative analysis of the results for the variable Flexibility of parents of children with ASD in California (n=105) versus those in Poland (n=111)**



The statistical analysis for the dimension of Rigid revealed a statistically significant difference between the groups ( $t=2.11$ ;  $p=0.035$ ), thus confirming the existence of a statistically significant difference between the groups of parents for this variable.

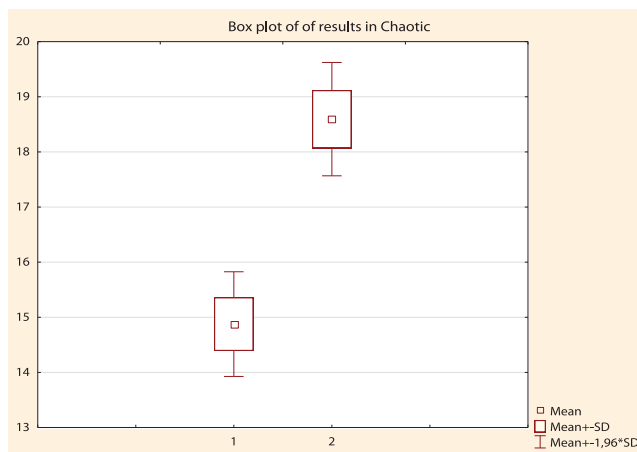


**Figure 2. Comparative analysis of the results for the variable Rigid of parents of children with ASD in California (n=105) versus those in Poland (n=111)**



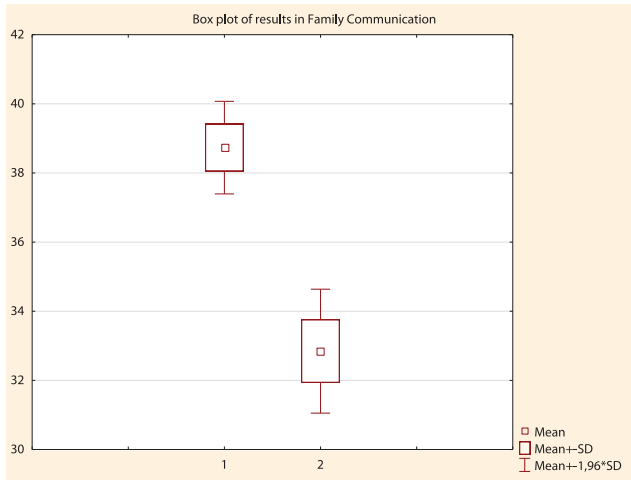
A statistically significant difference was also confirmed for the dimension of Chaotic, where the t coefficient reached the level of statistical significance for the difference between the groups ( $t=-5.19$ ;  $p<0.0001$ ).

**Figure 3. Comparative analysis of the results for the variable Chaotic for parents of children with ASD in California (n=105) versus those in Poland (n=111)**



The  $t$  coefficient also reached the level of statistical significance for the difference between the groups in the dimension of Family Communication ( $t=5.11; p<0.0001$ ).

**Figure 4. Comparative analysis of the results for the variable Family Communication of parents of children with ASD in California (n=105) versus those in Poland (n=111)**



For the dimension of Disengaged, the Mann–Whitney U test coefficient (a non-parametric test) was used due to the lack of a normal distribution of this variable. The value did not reach the level of statistical significance. Therefore, no statistically significant difference between the groups of parents in terms of the variable Disengaged was confirmed.

By confirming the existence of statistically significant differences in the various dimensions of family functioning from the FACES scales of Flexibility, Rigid, Chaotic, and Family Communication between families with children with autism in California and in Poland, the first hypothesis was partially confirmed, as statistical differences were found in the results for the FACES dimensions of Flexibility and Family Communication. However, Hypothesis 1 was not confirmed in relation to the dimension Disengaged.

The results of this study regarding the ego-resiliency of parents of children with ASD in California ( $M = 43.13; SD = 5.69$ ) in comparison to the

available norms for the American population are generally favorable and indicate high results among the respondents. Parents of children with ASD in the California study group were found to have good adaptation and ego-resiliency. It should be noted that the results of the study group from Poland in Ego-resiliency were slightly lower ( $M=35.77$ ;  $SD=4.24$ ).

In the next stage of the statistical analysis, after analyzing the distribution of results in the group of parents from California, the distribution of the variable Ego-resiliency and selected correlated variables related to the FACES-IV scales were confirmed to be normal. In the group of parents from Poland, the distribution of analogous variables in relation to the variables Family Communication and Disengaged be different from normal. The focus was on checking the relationship between the ego-resiliency of the parents of children with ASD and selected dimensions of family functioning (FACES-IV).

In accordance with the second hypothesis, the relationship between the ego-resiliency of the parents in both countries and the variables operationalized by the results of selected FACES subscales (Flexibility, Family Communication, and Disengaged) was verified.

Tables 4 and 5 present the results of the analyzed variables in the two study groups, taking into account the statistical indicators used (Pearson's  $r$  and Spearman's  $\rho$ ), according to the distribution of variables.

**Table 4. Correlation of Ego-resiliency ( $M=43.13$ ;  $SD= 5.69$ )  
of parents in California with selected variables  
operationalized by the FACES-IV scales**

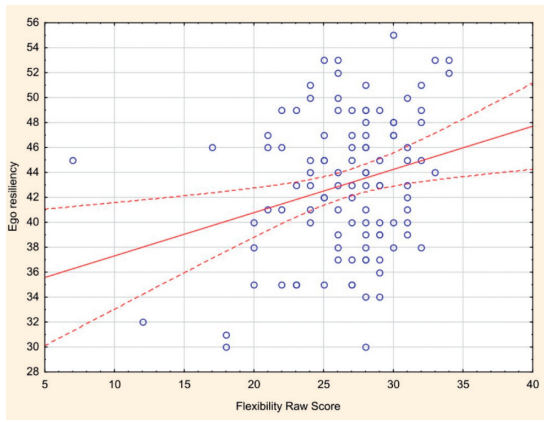
Variable	Value of Pearson's $r$	$p$ -value
Flexibility	0.274	0.005
Family Communication	0.259268	0.008
Disengaged	-1.46	0.14

As shown in Table 4, the parents of children with ASD in California demonstrated a positive relationship between the variables Ego-resiliency, Flexibility, and Family Communication. However, the existence

of a relationship between the ego-resiliency of the parents and the variable Disengaged was not confirmed.

The confirmed statistically significant correlations of Ego-resiliency and selected variables of family functioning in the group of Californian parents are illustrated in Figures 5 and 6.

**Figure 5. Scatterplot of Ego-resiliency in relation to the variable Flexibility among the parents from California**



**Figure 6. Scatterplot of Ego-resiliency in relation to the variable Family Communication among the parents from California**

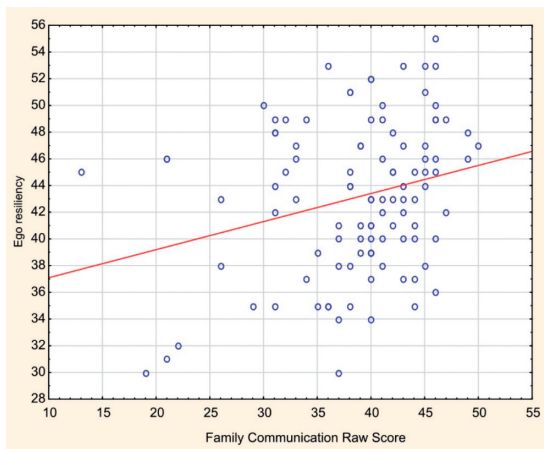


Table 5 presents data relating to the study of the relationships between the variables Ego-resiliency and Flexibility and the dimensions Family Communication and Disengaged in the Polish group.

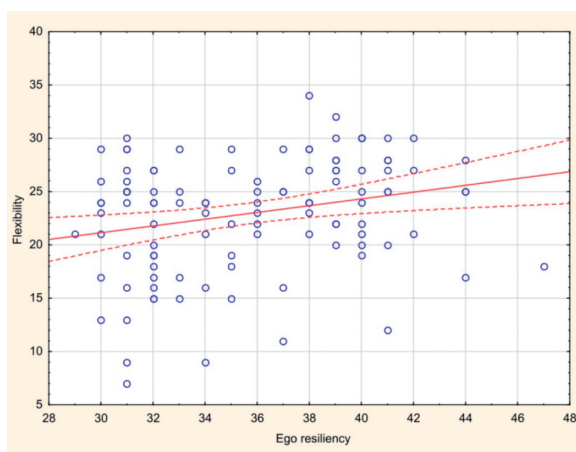
**Table 5. Correlation of Ego-resiliency (M=35.77; SD=4.24) of the parents in Poland with selected variables operationalized by the FACES-IV scales**

Variable	Coefficient Value Correlation	p-value
Flexibility	0.252 <sup>1</sup>	0.01
Family Communication	0.804 <sup>2</sup>	0.0001
Disengaged	-0.448 <sup>2</sup>	0.0001

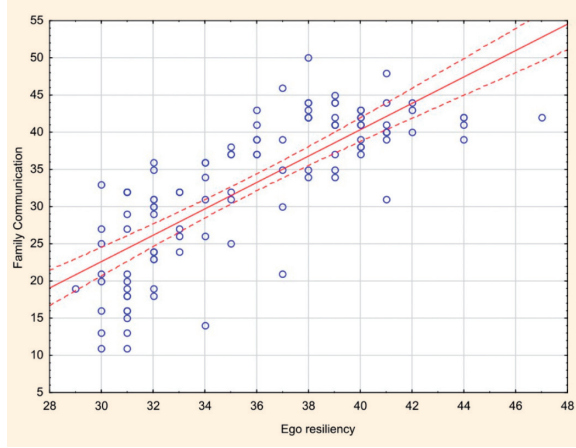
<sup>1</sup> Pearson's r coefficient, <sup>2</sup> Spearman's rho coefficient

As a result of the statistical analysis using Pearson's r, a correlation between Ego-resiliency and Flexibility was confirmed and the Spearman test confirmed the existence of a correlation between the variables Ego-resiliency, Family Communication, and Disengaged. The statistically significant correlations between Ego-resiliency and selected variables of family functioning among the Polish parents of children with ASD are illustrated in Figures 7–9.

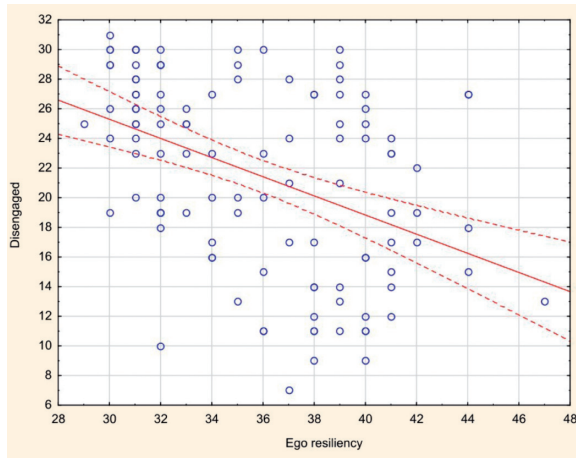
**Figure 7. Scatterplot of Ego-resiliency in relation to the variable Flexibility in the Polish group**



**Figure 8. Scatterplot of Ego-resiliency in relation to the variable Family Communication in the Polish group**



**Figure 9. Scatterplot of Ego-resiliency in relation to the variable Disengaged in the Polish group**



Therefore, the analysis partially confirmed the second hypothesis. Only in the California group was no correlation found between the variable Ego-resiliency and the dimension Disengaged, which characterizes the profile of family functioning.

## Discussion of results

David Olson's Circumplex Model (Olson & Goral, 2003) is helpful in understanding the connection between the relationships between family members and the behavior of individuals in the family system. The model of family functioning used in the research is based on systems thinking, pointing to the three main dimensions of family life: cohesion, flexibility, and communication. The first two are basic aspects of describing a family, while communication is a specific dimension. Cohesion is defined as the emotional bond between family members (Olson, 2011) and includes the amount of time spent together, common interests, the presence of common friends, and the degree to which other members are involved in decision-making. This dimension ranges from unrelatedness on one end, through balanced coherence, to entanglement on the other end (Margasiński, 2015). Flexibility is a dimension that encompasses the ability to adapt to various changes in the family. Flexibility includes scope of leadership, roles taken on by family members, and negotiation skills. Flexibility ranges from rigidity on one end, through balanced flexibility, to chaos on the other end. The third dimension of the model is communication. This area describes the family's ability to communicate effectively. It refers to sharing thoughts, feelings, plans, and information with other family members. Family communication occupies a continuum from poor to very effective. Most importantly, the effectiveness of communication can change family cohesion and flexibility.

This study confirmed the existence of statistically significant differences between selected dimensions of the functioning of families with children with autism in California and Poland on the following scales: Flexibility, Rigid, Chaotic, and Family Communication. The assessment of the family functioning was determined by the dimensions of Cohesion and Flexibility. Despite the differences between the groups of parents from California and Poland, very high or high cohesion and high flexibility were observed. Family relationships in both study groups indicated that the boundaries of the family system are flexible, which favors the changing requirements of the developing family members and creates conditions

for adaptation to external conditions. On the other hand, “rigid” boundaries would imply an impeded flow of information between subsystems and emotional exchange within the system. Additionally, “disengaged” usually coincides with emotional coldness, risking rejection of the child. “Cohesion,” presented in the study by the balanced cohesion subscale and the family cohesion index, facilitates close contact with an autistic child. Due to the fact that accepting a child seems to be adaptive and beneficial for the family system, the families in this study can be considered functional. For example, the majority of parents may perform parental tasks in a manner that is consistent with the cultural role assigned to them. On the other hand, it is worth noting that other researchers (Olson, 2011; Margasiński, 2015) indicate that the most effective families are characterized by moderate cohesion and flexibility with the highest quality of communication. In other words, too little or too much cohesion, as well as too little or too much flexibility, can cause dysfunctions in the family system.

The first hypothesis in this research assumed the existence of differences in the dimensions of Flexibility and Family Communication; this result was confirmed. However, in relation to the dimension Disengaged, it was not confirmed.

The statistical analysis revealed a statistically significant difference between the groups of parents in terms of the variable Rigid. It is worth noting that in both study groups, when converted into standardized units, the overall result was considered favorable. The Rigid dimension is also associated in research with specific personality traits of parents. The functioning of the family system depends on many factors, both social and psychological.

Roskam, Raes, and Mikolajczak (2017) conducted research on parental burnout and developed a scheme for balancing between risk and resources in parenting. They proved that certain factors, such as support, can potentially protect against parental burnout. However, a lack of support, according to the researchers, entails the risk of exhausting the parents’ strength.

In the dimension of Chaotic, the surveyed parents from California obtained a very low result and the Polish group a low result. In this case,



a statistically significant difference was found between the study groups. This also occurred for the dimension of Family Communication, which was found to be high in the California group of parents and moderate in the parents from Poland. As previously mentioned, a high level of communication is particularly beneficial for the effective functioning of the family system. This was not recorded in the group from Poland, which may indicate a certain risk factor for these family systems.

For the dimension of Disengaged, the coefficient in the Mann–Whitney U test did not suggest a statistically significant difference between the groups. Therefore, the existence of a statistically significant difference between the groups in terms of the variable Disengaged was not confirmed. Nonetheless, a difference was noted in the standardized results: very low in the Californian versus moderate in the Polish families.

The results for the ego-resiliency of parents of autistic children in California compared to the current norms for the American population were generally favorable and indicate positive, high results. Although the results of the Polish study group were slightly lower, they were not significantly different. The results for both groups therefore indicate relatively good psychological adaptation among the parents of autistic children from both groups. Ego-resiliency is a personality factor, so even the occurrence of a difficult situation such as a child's disability does not differentiate the intensity of these features in parents of autistic children between the groups.

The results partially confirmed the second hypothesis, regarding the relationship between the ego-resiliency of the parents in California and in Poland. A positive relationship within the results of the Flexibility and Family Communication scales and a negative correlation with the results of the Disengaged scale were expected. The statistical analysis found a positive correlation of ego-resiliency with the dimensions of Flexibility and Family Communication, which was confirmed in both groups of parents. However, in the California group, no correlation was found in relation to the variables of ego-resiliency of the parent or the dimension Disengaged, which characterizes the profile of family functioning. On the other hand, a negative correlation indicated in the second hypothesis was found in the Polish group.

The individual characteristics of parents influence the course of parenting (Olson & Goral, 2003; Pisula, 2007; Margasiński, 2011; Lewandowska-Walter et al., 2014; Dempsey & Keen, 2008; Dunst et al., 2014). Certain features of the family system may also constitute a protective factor. Mikolajczak (2020) showed that parents who strive to be perfect parents or those who use incorrect parenting practices are the most at risk for parental burnout. A study on Finnish families, for example, showed that the higher the level of socially imposed perfectionism, the higher the level of parental burnout (in families with both able-bodied and healthy children). An additional reinforcing factor is self-directed perfectionism (Sorkilla, 2020). Both groups of parents that were studied used a permanent system of professional institutional support and were aware of their personal parental tasks, as well as having access to proven and scientifically confirmed therapeutic methods. This indicates that the quality of support available in both environments may contribute to the relatively favorable results of family functioning in both study groups, and it was found to be more positive among the parents from California. It is also worth noting that Roskam et al. (2021) published the results of a study on parental burnout conducted in 42 countries. Poland was at the forefront of this study, according to which approximately 8% of Polish parents, mainly with normally developing children, experienced complete parental burnout. More severe burnout was observed in younger mothers in comparison to fathers, in nuclear as compared to extended families, and in single-parent families. The reasons for such a high level of parental burnout were related to various features of society and the low availability of personal social support. It can therefore be assumed that the cultural, economic, and political changes in Poland that have taken place over the last 30 years constitute a specific and important context that explains some of the differences confirmed in the FACES-IV results between parents of autistic children in California and Poland.

Social support is sometimes defined as an active interaction between the supporting person and the supported person, and research on the importance of social support indicates that people who have the support of family and friends and/or belong to an organization and are

under its care have better health and well-being. They are able to cope better with stressful situations (Roskam & Mikołajczak, 2017). When analyzing social support, it is important to divide support into structural and functional elements. The structural, quantitative approach assumes that it is beneficial for a person to be able to turn to a group of people. Features of support networks include availability, coherence, homogeneity, prosocial skills, and most importantly, altruism. In the structural approach, the research subject is rather sources of support. One of the classification systems suggests familial sources of support (spouse, children, parents, siblings, and distant relatives), friendly and social sources, and neighbors. Natural sources of support are more effective and beneficial due to their lack of stigma and availability. Other important factors in the effectiveness of help are the similarity of the situation and the problem of the supporter and the supported. This emphasizes the importance of a support group, such as the Autism Tree Project Foundation (ATPF), from which the surveyed parents from California were recruited. The qualitative approach emphasizes the interaction and process of exchanging certain goods. The main goal of such an interaction is to reduce stress and create a sense of security and hope. This support may exist between groups, between a group and an individual, or between a couple (dyad).

The creators of the parental burnout model, Mikołajczak and Roskam (2018), indicated that it is worth looking for situations that would help to maintain balance in the family system by increasing resources or reducing the importance of stressors. It emphasizes, among other things, the need for a high level of communication within the family.

A negative assessment of the family system occurs when parents are unable to perform their parenting role as well as they might have, due to chronic fatigue, parental stress, lack of resources, or lack of support. This aspect was not observed in this study among the groups of parents. The most common type of support experienced by parents of autistic children in this study was emotional support, which involves expressing care and thereby results in improved well-being, higher sense of hope, and higher self-esteem. The informational support they receive regularly involves exchanging information that helps them better understand

difficult situations and share their own experiences. Instrumental support includes behaviors that directly help parents of autistic children solve current problems and meet their specific needs.

There is an awareness of the existence of a division of support according to the criteria for assessing the availability and receipt of support. The issue revolves around perceived social support and received social support. The former is a subjective assessment of the availability of support. It is a matter of feeling loved and appreciated by other people, and therefore the belief that you can count on help from specific people. This aspect was not addressed in this research, but is planned to be included in subsequent studies, verifying whether and how knowledge and belief in the availability of one's support network are related to the functioning of one's family system. It is necessary to decide whether social support has a preventive effect (on the basis of a direct effect), regardless of the level of parental stress, or whether support is an intermediary variable between the situation and its consequences for human health and well-being.

Modern-day parents, including parents of autistic children, should have flexibility and openness when raising a child. It seems that there is no one right model to strive for that can be applied to every child or every situation, including a child with a disability. It is important to carefully adapt individual parenting approaches for the developing child in various social situations. Appelt (2020) proposes calling such an upbringing model developmental parenting, in which development occurs in both the child and the parent. It is often emphasized that the difficulty of parenting in the 21st century stems not only from the lack of standards for a new type of family, but also from the lack of model behaviors for "new" parenting. It involves loss and uncertainty. The expectation of 21st-century parenting is undoubtedly expert parenting. This also applies to parents of children with disabilities. It may be an opportunity, but also can be threatening. Modern parents are looking for answers to the questions and challenges that modern parenting poses to them. It is important that the support they receive is appropriate to their needs in order to ensure educational success. By achieving this type of success, the parent gains a sense of parental competence, which they are deprived of when their

child's behavior differs significantly from what is expected. Satisfaction depends on how the parent evaluates the child's behavior (Vukušić, 2018). This study indicates that cultural differences, although revealed in the characteristics of the family systems of parents of children with ASD in two geographically and economically distant countries, are not associated with negative aspects of the family profile.

### **Results/Conclusions:**

1. The results of the family functioning profiles in the study groups of parents of children with autism are generally positive, especially in the dimensions of Cohesion and Flexibility (Balanced Scales). Statistically significant differences were obtained between various dimensions of Family Communication and Flexibility of families with autistic children in California and Poland. With respect to both variables, higher scores were found in the California group. However, in terms of the Flexibility results, both groups were defined as flexible. With regard to Family Communication, the result of the California group corresponded to standardized high scores, whereas the scores of the Polish group were moderate.
2. The existence of statistically significant relationships (nonparametric testing) in the patterns of functioning in families with autistic children and the ego-resiliency of the parents were confirmed between Poland and California:
  - Cohesion – positive correlation
  - Flexibility – positive correlation
  - Disengaged – negative correlation
  - Chaotic – negative correlation
  - Family Communication – positive correlation

As a result of the above conclusions, it seems apparent that when working with an autistic child, specialists should not focus only on supporting and describing the child's functioning, as the direct subject of their

influence, but also on helping and addressing the needs of the parents/caregivers and the entire family system in which the child is being raised.

The focus of future research on families of autistic children, in terms of family systems, would be to analyze not only the characteristics of ego-resiliency of the parents, but also parental attitudes, parental resources or lack thereof, the personality traits of these parents, and their style of coping with stress. This additional type of analysis would take into account the mediating and moderating role of these variables, which may have a potential relationship with the overall functioning in the family. Also, by adding larger groups of families, the way that specific symptoms and characteristics of an autistic child are related to the severity of the disorder could be investigated.

### **Future implications:**

The following conclusions can be drawn as a result of these suggestions:

1. Analysis of demographic differences in California and Poland should be researched further (additional demographic variables comparison).
2. A practical model regarding the impact of necessary support for families with autistic children should be developed, taking into consideration multicultural differences.
3. Family satisfaction is critical in all cultures and should be addressed in intervention strategies if family members are not feeling happy and fulfilled with each other. Communication may not be enough to provide for family satisfaction, or an improved quality of life.
4. Support groups for families should be considered and a research study should be developed to check whether improved satisfaction decreases stress and, as a result, increases overall happiness within the family system.

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