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Sibel TERCAN¹, Ümmügülsüm EKİNCİ²
Erdi KAYA³

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¹Akdeniz University Faculty of Sports Sciences, Türkiye, tercansibel08@gmail.com,

 <https://orcid.org/0000-0002-7629-5154>

²Akdeniz University Faculty of Sports Sciences, Türkiye, gulsummekinci@gmail.com

 <https://orcid.org/0009-0007-2938-9784>

³Akdeniz University Faculty of Sports Sciences, Türkiye, erdikaya@akdeniz.edu.tr,

 <https://orcid.org/0000-0002-2042-4674>

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The Effect of Recreational Activities and Education on the Quality of Life of Parents of Individuals with Autism

Sibel Tercan¹, Ümmügülsüm Ekinci², Erdi Kaya³

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ABSTRACT

This study investigates the impact of recreational activities on the quality of life of parents raising children diagnosed with Autism Spectrum Disorder (ASD). Employing a quantitative correlational design, the research sample consists of 154 parents (133 mothers and 21 fathers) affiliated with the Akdeniz Autism Sports Club Association. Data were collected using a demographic information form and the Quality of Life in Autism – Parent Version Scale (QoLA-PV), adapted into Turkish by Özgür, Eser, and Aksu (2017). Statistical analyses included descriptive statistics, independent samples t-tests, ANOVA, Pearson correlation, and simple linear regression. The findings revealed that parental quality of life was at a moderate level and significantly influenced by family and social pressures, as well as by the perceived behavioral challenges of the child with ASD. A negative, albeit small, but statistically significant correlation was found between the severity of ASD-related difficulties and parental quality of life ($r = -.25, p < .01$). Furthermore, parents who reported that their child's ASD condition restricted participation in recreational activities showed lower well-being and higher perceived difficulty levels. The study highlights the critical role of structured recreational engagement in improving the psychosocial resilience of parents and underscores the need for community awareness, inclusive recreational programs, and supportive policies. These findings contribute to the limited literature on autism and recreation by emphasizing the multidimensional benefits of leisure activities for families affected by ASD.

Keywords: Autism Spectrum Disorder, Leisure Participation, Recreation, Parental Well-being, Quality of Life.



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INTRODUCTION

Parents typically begin by preparing themselves for the changes, innovations, and differences that a child will bring to the family throughout their life journey. Throughout the period from pregnancy to childbirth, parents may have countless expectations for the new child joining the family (Ardıç, 2013). The process in which these expectations emerge is referred to as "imagery" (Berger, 2008). Before their child is born, parents consider many details about their child's life, ranging from gender to the school they will attend. When parents expect to have a healthy child but discover that their child has special needs, they are forced to adapt both to the new family member and to the challenges arising from the child's specific diagnosis (Akkök, 2005). However, the birth of a child with special needs shatters all the expectations that parents had formed during the imagery phase (Ardıç, 2013). Moreover, many parents struggle to accept their child's special condition. This emotional struggle is frequently accompanied by elevated stress and reduced well-being, as demonstrated in recent studies on parental burden (Sharma et al., 2023). In addition to this emotional impact, the presence of a child with a special diagnosis significantly affects the roles and responsibilities of all family members. Families often face physical, social, and financial challenges, which can lead to deterioration in family relationships, and many family members struggle to cope with this process (Görgü, 2005). During this process, differences in opinion arise within families, and the family unity is often seen to fragment. As a result of the disruption of family unity, the life of the individual with special needs becomes even more challenging.

Autism Spectrum Disorder (ASD), which has been rapidly increasing in prevalence, is a neurodevelopmental disorder characterized by limited social communication and interaction, as well as repetitive behaviors (American Psychological Association [APA], 2013; Centers for Disease Control and Prevention [CDC], 2008). Recent meta-analytic evidence confirms a consistent global increase in ASD diagnoses over the past two decades, highlighting the growing public health relevance of this disorder (Huang et al., 2023). Considering its mild and severe forms, autism is one of the most common disorders observed in early childhood (Korkmaz, 2000). Autism is 4 to 5 times more common in males than in females; however, in females, it is more likely to be associated with severe intellectual disability (Güleç & Koroğlu, 1998). Children with autism constitute a group among children with special needs in which problem behaviors are significantly observed. Various forms of problem behaviors such as hyperactivity, aggression, self-injury, inappropriate fears, tics, insomnia, tantrums, and eating disorders are commonly reported (Korkmaz, 2004).

Recreation holds a significant role for individuals with autism, who experience serious challenges in interpersonal social relationships, communication, and behavior. Individuals with Autism Spectrum Disorder (ASD) often participate in activities together with their family members. They engage in more limited activities compared to children without special needs. This situation appears to lead individuals with autism into a passive lifestyle (Özen, 2015). Additionally, individuals with special needs who participate in leisure activities such as sports, artistic activities, or nature-based activities experience positive physical and mental development. Structured recreational interventions have been shown to enhance life satisfaction and reduce psychological distress in individuals with ASD (Garcia-Villamizar & Dattilo, 2010). In this regard, recreation plays a crucial role in strengthening interactions between individuals with and without special diagnoses and in fostering awareness. Building on this perspective, "recreation is a multidisciplinary field that encompasses voluntary activities performed during leisure time without causing harm to the environment, aiming to enhance an individual's quality of life" (Eccles, 2005). Additionally, this definition highlights that quality of life is an integral part of the concept of recreation. The fact that parents of individuals with autism often

experience a loss of subjective well-being and difficulties in socialization negatively impacts their quality of life (Karabilgin, 2001). The desire for a long and healthy life encourages individuals to engage in recreational activities that provide physical and mental relaxation (Sağcan, 1986). In this context, on average, people spend one-fourth of their lives engaging in recreational activities. Recreational activities encompass individuals of all ages and abilities, including both healthy individuals and those with special needs, and are designed to align with their tendencies towards a fulfilling and happy life. Building on this perspective, it is possible to emphasize the importance of integrating recreational activities into the lives of individuals with special needs and their parents to enhance their quality of life. In terms of health, recreation is basically evaluated in two ways. The first one is related to recreation services for healthy people. Another one is recreational activities for people with special diagnoses or health problems within the scope of improvement and well-being (Tütüncü, 2008).

In light of all this information, it can be stated that enjoying life is closely associated with participation in recreational activities. In terms of opportunities available to individuals, recreation holds a particularly significant place for everyone, but especially for parents of individuals with autism (Iso-Ahola, 1980). In this context, the aim of the present study is to examine in depth the relationship between the participation of parents of children with Autism Spectrum Disorder (ASD) in recreational activities and their quality of life. Current research emphasizes that participation in recreational and sportive activities enhances parents' emotional resilience and improves their social functioning (Genç, 2019). Within this framework, it can be asserted once again that enjoying life is closely linked to participation in recreational activities. For individual parents with autism in particular, such participation plays a critical role in both the personal and social aspects of quality of life. Recent studies underline that engagement in recreational and sportive activities strengthens emotional resilience and enhances social functioning among these parents (Sharma, Jain, & Meena, 2023). From this perspective, the present study was designed to investigate the relationship between the participation of parents of children with ASD in recreational activities and their quality of life. It is anticipated that this study will further highlight the significance of recreational activities in enhancing the quality of life of these parents. The literature on the factors that improve the quality of life of parents of children with autism remains limited. Therefore, this study aims to explore the impact of participation in recreational activities on the quality of life of parents of children with autism.

The research focuses on activities that may help alleviate negative emotional effects such as stress and social isolation that parents of children with autism often experience in their daily lives. In this regard, by examining the participation of parents of children with autism who are involved in the Akdeniz Autism Sports Club Association, this study seeks to fill a significant gap in the literature.

METHOD

Purpose of Research

The primary aim of this study is to examine the relationship between parents' participation in recreational activities and their quality of life among families of individuals with autism. Specifically, the study seeks to investigate whether and how the frequency and type of recreational engagement are associated with perceived quality of life and the challenges faced by parents. A quantitative correlational research design was employed, as this design enables the investigation of the strength and direction of relationships between variables without manipulation (Creswell, 2014).

Research Design

This study was conducted using a correlational research design, which is commonly applied to investigating the relationships between variables without manipulating them. This approach was selected to examine the association between parents' participation in recreational activities and their quality of life, and to identify the strength and direction of this relationship. Correlational design is particularly well-suited for exploring naturally occurring variations in human behavior and perception, making it appropriate for research involving psychosocial and lifestyle variables such as recreation and well-being (Creswell, 2014). By employing this design, the study aimed to gain a deeper understanding of how engagement in recreational activities relates to the lived experiences and quality of life of parents of children with Autism Spectrum Disorder (ASD).

Population and Sampling

The population of the study consists of parents of children with autism living in the city center of Antalya. The sample group, on the other hand, consists of families of children with autism who are receiving education at the Akdeniz Autism Sports Club Association. The research was conducted using a purposive sampling method. Purposive sampling is a method in which participants possessing certain characteristics relevant to the research purpose are deliberately selected (Baltacı, 2018). In this study, participants were selected from among the parents of children enrolled in the Akdeniz Autism Sports Club Association, as the research aimed to examine the quality of life of parents of children with autism and their participation in recreational activities. Parents from this club were chosen considering that they have a higher level of awareness regarding their children's special needs and that their participation rates in recreational activities may vary. Participants were included in the study based on voluntary participation. A total of 154 parents participated in the research, comprising 133 mothers (86.4%) and 21 fathers (13.6%). In this study, the selection of participants was strictly limited to parents of children with autism. This approach ensured the formation of a sample group appropriate to the purpose of the research and allowed the study to specifically reflect experiences unique to parents of children with autism.

Data Collection Tools

In order to collect the data necessary to achieve the research objectives, a two-part survey form was utilized. The first part consisted of a demographic information form designed by the researcher to obtain participants' socio-demographic characteristics. The second part comprised a standardized measurement tool to assess parental quality of life and perceptions of autism-related challenges.

Demographic Information Form: The demographic section included items related to the parents' age, gender, marital status, educational background, monthly income, place of residence, physical health status, and recreational activity participation with their children. This form was developed by the researcher based on relevant literature to provide a comprehensive profile of the sample.

Quality of Life in Autism Questionnaire – Parent Version: To assess parents' quality of life and their perceptions of autism-related challenges, the "Quality of Life in Autism – Parent Version" (QoLA-PV) was employed. The original version of the scale was developed by Eapen et al. (2014), and it was adapted into Turkish by Özgür, Eser, and Aksu (2017). Validity of the Turkish version was ensured through expert review and factor analysis. The Cronbach's alpha coefficient for internal consistency was reported as .89 in the Turkish adaptation, indicating high reliability.

The QoLA-PV consists of two subscales:

Scale A comprises 28 items rated on a 5-point Likert scale (1 = Not at all, 5 = Very much) and evaluates parents' self-perceived quality of life.

Scale B includes 20 items rated on a 5-point Likert scale (1 = Very problematic, 5 = Not a problem), measuring how problematic parents perceive their children's autism-related behaviors and challenges.

Data Analysis

The data collected for the study were analyzed using IBM SPSS Statistics version 26.0. Initially, the internal consistency of the measurement instruments was assessed using Cronbach's alpha coefficients. Both scales used in the study—the Parental Quality of Life Scale and the Difficulties Experienced by the Child with ASD Scale—demonstrated excellent reliability, with alpha values exceeding .90. To evaluate whether the data met the assumptions of parametric testing, skewness and kurtosis values were examined. The results indicated that all values fell within the acceptable range of -2 to $+2$, suggesting that the distribution of the data was approximately normal (George & Mallery, 2010). Based on this assessment, parametric tests were deemed appropriate for further analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the demographic and contextual characteristics of the participants. Inferential statistical analyses were then employed to examine group differences and relational patterns among variables. Independent samples t-tests and one-way analysis of variance (ANOVA) were conducted to compare differences in the dependent variables across various demographic and categorical predictors. When significant differences were identified in the ANOVA tests, Tukey's Honestly Significant Difference (HSD) post-hoc test was employed to determine the source of these differences. In addition, Pearson product-moment correlation analysis and simple linear regression analysis were conducted to explore the associations and predictive relationships between variables. All statistical analyses were conducted at a 95% confidence level, and a significance level of $p < .05$ was adopted throughout the study.

Table 1

Cronbach's Alpha, Skewness, and Kurtosis Values for Scale Scores

Scale	Cronbach's Alpha (α)	Skewness	Kurtosis
Parental quality of life	0.95	0.67	-0.06
Difficulties Experienced by the Child with ASD	0.94	0.18	-0.93

Upon examining the table, it is observed that both scales used in the study exhibit a high level of reliability ($\alpha > 0.80$). The skewness and kurtosis values examined to determine normal distribution fall within the acceptable range of -2 to $+2$, indicating that the data conform to a normal distribution (George and Mallery, 2010).

One-Way ANOVA and Independent Samples T-Test were used to compare scale scores based on demographic variables. Pearson Correlation Analysis was used to determine the relationship between scale scores, while Simple Linear Regression Analysis was applied to examine the impact of the challenges experienced by children with ASD on parental quality of life.

FINDINGS

This section presents the results of descriptive and inferential analyses conducted to examine parental quality of life and the difficulties experienced by children with Autism Spectrum Disorder (ASD) across various demographic and contextual variables.

Table 2

Frequency and Percentage Distributions of Demographic Information of Participating Parents

Variable	Category	F	%
Parent	Mother	133	86.4
	Father	21	13.6
Age group	22-31 years	18	11.7
	32-41 years	73	47.4
	42-51 years	45	29.2
	51+ years	18	11.7
Marital status	Married	117	76.0
	Child with ASD lives with mother / father separated	34	22.1
	Child with ASD lives with father / mother separated	3	1.9
Education level	Primary school	32	20.8
	Middle school	24	15.6
	High school	58	37.7
	University	40	26.0
Monthly income level	8,500 TL and below	85	55.2
	Above 8,500 TL	69	44.8
Place of residence	City center	109	70.8
	District center	32	20.8
	Village (neighborhood)	13	8.4
Physical health condition	Yes	20	44.6
	No	134	87.0

Upon examining the table, it is observed that 86.4% of the participating parents are mothers of children with ASD, while 13.6% are fathers. Additionally, 11.7% of the participants are in the 21-31 age group, 47.4% in the 32-41 age group, 29.2% in the 42-51 age group, and 11.7% are 51 years or older. Furthermore, 76% of the parents are married, while in 22.1% of cases, the child with ASD lives with the mother, and the father is separated, and in 1.9% of cases, the child with ASD lives with the father, and the mother is separated. Among the participating parents, 20.8% have a primary school education, 15.6% have a middle school education, 37.7% are high school graduates, and 26% have a university degree. Additionally, 55.2% have a monthly income of 8,500 TL or less, while 44.8% earn more than 8,500 TL per month. Among the participants, 70.8% reside in the city center, 20.8% in a district center, and 8.4% in a village (neighborhood). Additionally, 44.6% of the participating parents reported having physical health issues.

Table 3

Frequency and Percentage Distributions of Participating Parents Regarding Their Children with ASD and Recreational Activities

Variable	Category	f	%
Presence of Another Child Diagnosed with Autism	Yes	20	13.0
	No	134	87.0
Institutional Support Status	Non-Governmental Organizations	94	61,0
	Professional Support	60	39.0
Recreational Activities Conducted with the Child with ASD *	Nature Walks	101	65.6
	Picnic	82	53.2
	Exercise	52	33.8
	Exhibition	19	12.3
	We Do Not Participate in Any Activities	16	9.7
Frequency of Participation in Recreational Activities	1-2 times per week	62	44.6
	1-2 times every two weeks	31	22.3
	1-2 times every three weeks	19	13.7
	1-2 times every four weeks	27	19.4
Inability to Engage in Activities Due to Family and Social Pressure in Free Time	Yes	100	64.9
	No	54	35.1
Impact of the Child's ASD Condition on Participation in Recreational Activities	Yes	123	79.9
	No	31	20.1

Among the participants, 13% have another child diagnosed with autism. Additionally, 61% of the participating parents receive support from non-governmental organizations (NGOs), while 39% receive professional support. Among the participants, 65.6% engage in nature walks with their child with ASD, 53.2% go on picnics, 33.8% participate in exercise, 12.3% attend exhibitions, and 10.4% report not engaging in any activities. Among the participants who engage in recreational activities with their child with ASD, 44.6% participate once or twice per week, 22.3% engage once or twice every two weeks, 13.7% participate once or twice every three weeks, and 19.4% engage once or twice every four weeks. Of the parents who participated in the study, 64.9% reported that they were unable to engage in leisure activities due to family and social pressure, and additionally, 79.9% stated that their child's disability related to ASD hindered their participation in such activities.

Table 4

Descriptive Statistics (M, SD, Min, Max) for the Parental Quality of Life and Challenges Experienced by Children with ASD

Scale	N	M	SD	Min	Max
Parental Quality of Life (OYKA-AB, Section A)	154	2.87	0.77	1.00	5.00
Perceived Difficulties of the Child with ASD (OYKA-AB, Section B)	154	3.21	0.90	1.00	5.00

Scores were obtained from the Otizmde Yaşam Kalitesi Anketi – Anne-Baba Sürümü (OYKA-AB), which was adapted into Turkish by Özgür et al. (2017) from the original

instrument developed by Eapen et al. (2014). Section A includes 28 items evaluating parental quality of life on a 5-point Likert scale (1 = never, 5 = very much). Section B includes 20 items assessing the extent to which ASD-related difficulties are perceived as problematic by parents (1 = very problematic, 5 = not a problem). Higher scores indicate higher perceived quality of life and fewer perceived difficulties.

The results presented in Table 4 indicate that both the parental quality of life and the level of difficulties experienced by children with ASD were reported at a moderate level, as reflected by the mean scores on both scales.

Table 5

One-Way ANOVA Analysis Comparing the Quality of Life of Participating Parents and the Level of Challenges Experienced by Their Children with ASD Based on Parents' Educational Backgrounds

Scale	Educational Level	N	M	SD	F	p	Between-Group Difference	η^2
Parental Quality of Life	Primary School	32	2.82	0.73	0.744	0.528	-	0.010
	Middle School	24	2.76	0.77				
	High School	58	2.83	0.75				
	University	40	3.02	0.85				
Difficulties Experienced by the Child with ASD	Primary School	32	3.05	0.79	3.666	0.014	3>4	0.070
	Middle School	24	3.06	0.89				
	High School	58	3.51	0.89				
	University	40	3.00	0.91				

A one-way ANOVA was conducted to examine whether parental quality of life and the perceived difficulties experienced by children with ASD differed according to parents' educational background (primary school, middle school, high school, university). The results indicated that there was no statistically significant difference in parental quality of life across educational levels, $F(3, 150) = 0.744$, $p = .528$, $\eta^2 = .010$. The effect size was small, suggesting that educational background had minimal influence on how parents perceived their own quality of life.

However, a statistically significant difference was found in the perceived level of difficulties experienced by children with ASD across educational groups, $F(3, 150) = 3.666$, $p = .014$, $\eta^2 = .070$. The effect size was moderate. Post hoc comparisons using the Tukey HSD test revealed that parents with a high school education reported significantly higher levels of perceived difficulties compared to those with a university degree ($p < .05$).

Table 6

Independent Samples t-Test Comparing Parental Quality of Life and Perceived Difficulties Based on Family and Social Pressure Status

Variable	Pressure Status	N	M	SD	t	p	Cohen's d
Parental Quality of Life	Yes	100	2.67	0.72	-4.585	<.001	0.77
	No	54	3.23	0.74			
Difficulties Experienced by the Child	Yes	100	3.35	0.90	2.711	.007	0.45
	No	54	2.95	0.86			

*p*values< .001

Group comparison is based on participants' response to the item: "Are you unable to engage in leisure activities due to family and social pressure?" An independent samples t-test was conducted to compare parental quality of life and the perceived difficulties experienced by children with ASD based on whether parents reported being unable to engage in leisure activities due to family and social pressure. The results indicated that parents who reported such pressure had significantly lower quality of life scores ($M = 2.67$, $SD = 0.72$) compared to those who did not ($M = 3.23$, $SD = 0.74$), $t(152) = -4.59$, $p < .001$, Cohen's $d = 0.77$. According to Cohen's (1988) guidelines, this represents a large effect size, suggesting that family and environmental pressure has a substantial negative impact on parental well-being. Furthermore, the same group of parents reported significantly higher perceived difficulty levels for their children with ASD ($M = 3.35$, $SD = 0.90$) than those without such pressure ($M = 2.95$, $SD = 0.86$), $t(152) = 2.71$, $p = .007$, Cohen's $d = 0.45$. This indicates a moderate effect size, implying that family and social restrictions may also elevate parental perception of autism-related challenges.

Table 7

Independent Samples T-Test Results on Parental Quality of Life and the Impact of Children's ASD Condition on Participation in Recreational Activities

Scale	Restriction Status	N	M	SD	T	p	Cohen's d
Parental Quality of Life	Yes	123	2.71	0.70	-5.345	.000	1.054
	No	31	3.48	0.76			
Difficulties Experienced by the Child with ASD	Yes	123	3.37	0.85	4.520	.000	.911
	No	31	2.60	0.84			

An independent samples t-test was conducted to compare parental quality of life and the perceived difficulties experienced by children with ASD based on whether parents reported being unable to participate in leisure activities due to family and social pressure. Results showed that parents who reported such pressure had significantly lower quality of life scores ($M = 2.67$, $SD = 0.72$) compared to those who did not experience this restriction ($M = 3.23$, $SD = 0.74$), $t(152) = -4.59$, $p < .001$, Cohen's $d = 0.77$. This indicates a large effect size, suggesting that family and environmental pressure meaningfully impacts parental well-being. Similarly, the perceived difficulties experienced by children with ASD were significantly higher among parents who reported such pressure ($M = 3.35$, $SD = 0.90$) than those who did not ($M = 2.95$, $SD = 0.86$), $t(152) = 2.71$, $p = .007$, Cohen's $d = 0.45$. This represents a moderate effect size,

indicating that social restrictions also contribute to heightened perceptions of autism-related challenges.

Table 8

Pearson Correlation Between Perceived Difficulties Experienced by Children With Autism Spectrum Disorder and Parental Quality of Life

Variable	1	2
1. Difficulties Experienced by the Child with ASD	—	-.25**
2. Parental Quality of Life	-.25**	—

Note. $N = 154$. $p < .01$. Correlation computed using Pearson product-moment correlation coefficient.

A Pearson product-moment correlation analysis was conducted to examine the relationship between the perceived difficulties experienced by children with Autism Spectrum Disorder (ASD) and the quality of life levels of their parents. The analysis revealed a significant negative correlation, $r = -.25$, $p = .002$, indicating that as the perceived level of difficulty increased, parental quality of life decreased. According to Cohen's (1988) criteria, this represents a small but statistically meaningful association.

Table 9

Simple Linear Regression Predicting Parental Quality of Life From Perceived Difficulties Experienced by Children With Autism Spectrum Disorder

Predictor Variable	B	SE B	β	t	p
Constant	3.548	0.225	—	15.77	< .001
Difficulties Experienced by the Child with ASD	-0.213	0.067	-.25	-3.15	.002

Note. $R = .25$, $R^2 = .06$, $F(1, 152) = 9.36$, $p = .002$. p values < .001 are reported as "< .001" per APA 7 guidelines. Standardized beta is represented by β .

A simple linear regression analysis was conducted to determine whether the perceived difficulties experienced by children with Autism Spectrum Disorder (ASD) significantly predicted the quality of life levels of their parents. The results indicated that the overall regression model was statistically significant, $F(1, 152) = 9.363$, $p = .002$, with an R of .248 and an R^2 value of .055. This suggests that approximately 5.5% of the variance in parental quality of life can be explained by the perceived difficulty levels of their children.

The unstandardized regression coefficient (B) for perceived difficulties was -0.213 (SE B = 0.067), indicating that for every one-unit increase in perceived difficulty, parental quality of life decreased by 0.213 units, holding other variables constant. The standardized beta coefficient was also significant ($\beta = -.248$, $t = -3.151$, $p = .002$). According to Cohen's (1988) criteria, the effect size ($R^2 = .055$) represents a small but statistically meaningful effect.

DISCUSSION AND CONCLUSION

When the research findings are examined, it is observed that the quality of life of the participating parents and the difficulty levels experienced by their children with ASD are at a moderate level. Şekeroğlu (2018), in their study with caregivers of individuals with ASD, found that their quality of life was at a "moderate" level. In the emergence of these results, it can be thought that a number of mental and physical problems that occur in parents with a child with autism affect their quality of life. In our literature review, it has been stated that the physical and psychological changes experienced by families of individuals with autism negatively affect their quality of life (Balkanlı, 2008). In this regard, improving an individual's quality of life, strengthening interpersonal bonds, and encouraging their participation in society are of great importance. Such a situation can be said to also impact the leisure time of families struggling with the challenges of having a child with autism. When parents spend their leisure time in a meaningful and beneficial way, many positive outcomes are reflected in their lives (Eccles, 2005; Güngörmüş et al., 2017; Kim et al., 2018; Serdar et al., 2017). It has been observed that individuals who actively participate in leisure activities experience a positive impact on their life satisfaction, gaining various physical, social, and psychological benefits. Additionally, such participation leads to a reduction in a sedentary lifestyle, increased socialization, and an overall improvement in quality of life (Perrin, 1992).

When examining the education level variable, it was found that parents' quality of life did not differ statistically significantly. However, the perception of difficulties experienced by children with ASD showed statistically significant differences based on the education level of the parents. Kaya (2020), in their study with parents who participated in sports classes, and Shu (2009), in their study with caregivers of individuals with autism, found no significant difference based on education level, which is consistent with the findings of our study. Çam and Özkan (2009) stated that the education level of families with autistic children is higher compared to the parents of undiagnosed individuals. The findings of this study do not align with the results of our research. The education level of parents of individuals with autism affects their quality of life. It is possible to say that parents with a higher education level respond more consciously to the problem behaviors of an individual with autism. The study showed that education level does not directly affect quality of life but rather influences the perception of difficulties. This suggests that education level may have indirect effects on the psychosocial well-being of parents. While parents with higher levels of education may be better able to assess the challenges their children experience, parents with lower education levels may perceive greater difficulties due to limited psychosocial support. Although the impact of education level on quality of life is generally found to be positive in literature, the findings of this study contradict this trend. This indicates that quality of life is shaped not only by education but also by socio-economic factors and social support (Choi and Lee, 2021). According to the variable of being unable to engage in desired leisure activities due to family and environmental pressure, it was found that the quality of life of parents who reported being unable to participate in leisure activities was significantly lower. In contrast, the perception level of difficulties experienced by children with ASD of these parents was significantly higher. It is believed that parents of individuals with autism experience severe stress and anxiety due to their limited or minimal participation in social life and leisure activities, as well as their feelings of not receiving sufficient help and support (Cassidy et al., 2008; Ludlow et al., 2011; Nealy et al., 2012; Woodgate et al., 2008). Obsessive behaviors, which are commonly observed in individuals with autism, are often perceived negatively by society. Many parents experience a sense of not being accepted by society. Parents not only struggle with the challenges that come with autism but also experience a decline in their quality of life due to the societal pressure they face. Consistent with our findings, Savran (2020), in their study with individuals with special needs, found that

those who were unable to participate in leisure activities had significantly lower quality of life. Additionally, it was observed that parents experienced emotions such as stress and sadness. The social adaptation difficulties and stereotypical movements frequently observed in individuals with autism are often met with fear and panic by society. Labeling and social exclusion stemming from the surrounding community distance individuals with autism and their parents from society. Supporting our study, Mengi and Çopuroğlu (2014), in their research with individuals with autism, stated that exclusion due to societal pressure narrows the social environment of individuals with autism and their families, leading to a decline in their quality of life. Therefore, it can be said that raising societal awareness about autism is essential to integrating families and their children into social life. According to the variable of quality of life and the impact of their child's ASD condition on participation in recreational activities, it was found that parents who stated that their child's condition prevents them from engaging in recreational activities had a significantly lower quality of life. In contrast, these parents had a significantly higher perception level of the difficulties experienced by their children with ASD. In our literature review, studies on the recreational activities of parents with special needs children have shown that the majority can only engage in such activities when they are alone. Additionally, they stated that participating in any activity with their child with autism is stressful for them. Since activity programs are organized within the private sector, the associated costs at times can economically impact parents. Consistent with the findings of our study, Alici et al. (2020), in their research with parents of children with autism, found that these individuals with special needs restrict their parents' participation in recreational activities and negatively affect their quality of life. Additionally, parents stated that they mostly prefer to participate in recreational activities with their spouses and friends. Numerous studies have shown that parents' participation in recreational activities enhances social adaptation, helps alleviate anxiety, and contributes to making their lives more meaningful. Studies on the behavioral problems of individuals with autism spectrum disorder have indicated that those who lack appropriate communication skills and exhibit intense problem behaviors hinder their parents' participation in leisure activities (Dattilo et al., 1996; Driver et al., 1999; Lecavalier et al., 2006). As a result, parents tend to seek alternatives such as special education programs or caregiver services for their children. Murphy and Carbone (2008), in their study, stated that another factor preventing participation in recreational activities is financial constraints. It has been stated that participation in recreational activities is hindered due to the lack of facilities and spaces, as well as the higher expenses incurred by parents of children with special needs compared to other parents (Aydın & Sarol, 2014). In their study with families of children with autism, Çam and Özkan (2019) found that parents stated they were unable to participate in any activities because they dedicated most of their time to their children, which negatively affected their quality of life. In his study, Kazak and Marvin (1984) emphasized that the restriction of parents' leisure time increases their stress levels and negatively affects their quality of life. Supporting our study, Heah et al. (2007) stated in their research that individuals with special needs face difficulties in participating in leisure activities due to various barriers (such as social pressure, stigma, and financial constraints), which in turn make their living conditions more challenging.

According to the Pearson correlation analysis conducted to examine the relationship between the difficulty levels experienced by children with autism spectrum disorder and the quality-of-life levels of their parents, a significant negative and low-level correlation was found between the difficulty levels of children with ASD and their parents' quality of life. As a result, it has been determined that as the difficulty levels experienced by individuals with autism increase, the quality of life of their parents decreases. Indeed, our literature review revealed the existence of studies supporting our research, showing that the quality of life of parents of individuals with autism spectrum disorder significantly decreases due to their children's limited social interactions, behavioral problems, and various societal and physical challenges (Balkanlı,

2008). When parents spend their leisure time in a meaningful and beneficial way, many positive outcomes are reflected in their lives. It can be said that active participation in leisure activities positively impacts life satisfaction, providing individuals with various physical, social, and psychological benefits. Additionally, it leads to a reduction in a sedentary lifestyle, promotes socialization, and ultimately enhances overall quality of life.

Recommendations for Future Research

The desired lifestyle for parents of individuals with Autism Spectrum Disorder (ASD) is to engage in appropriate activities with their children without being marginalized by society. Therefore, it is essential to first raise public awareness about autism. Additionally, it is observed that many parents only learn about the definition of autism when a family member is diagnosed with special needs. In this regard, seminars aimed at raising public awareness should be organized.

To address one of the primary challenges faced by individuals with autism difficulty in socialization both individual and educational group activities should be promoted. Nature-based programs, such as outdoor activities and group sports, could help improve parents' physical health while also fostering stronger social bonds with their children. Furthermore, stress-reducing recreational programs, such as yoga and meditation, may enhance parents' psychosocial resilience and strengthen their ability to cope with challenges. Educational interventions are also crucial for improving the quality of life of parents. Through parent education programs, guidance can be provided on stress management and effective communication with their children. In addition, family support programs such as online support groups and local social support initiatives could offer psychosocial support to parents, helping to reduce feelings of loneliness and strengthen social connections. Government-supported respite homes or life and sports centers, where parents can entrust their children during their free time, should be expanded. Moreover, the dissemination of public service announcements themed around autism and the integration of autism-related awareness into the national education curriculum by the Ministry of National Education could ensure that students receive formal education on this topic, thereby increasing overall awareness.

Methodological Limitations

This study has several methodological limitations. First, there is a limitation regarding the sample. The research was conducted only with parents who are members of the Akdeniz Autism Sports Club Association, which resulted in participants being selected from a specific region. This situation limits the generalizability of the findings. Studies involving parents from different geographical areas or diverse cultural backgrounds could enhance the broader validity of the findings. Another limitation is the use of a self-reporting method. The responses provided by parents regarding their quality of life and the challenges faced by their children are based on personal evaluations. This may introduce bias, as participants might evaluate themselves in a more positive or negative manner. Therefore, the use of more objective data collection tools in future research could be beneficial. Finally, the restriction to a single region constitutes another limitation. Since the study was conducted only with parents from a specific region, studies involving participants from different regions could reveal different outcomes regarding quality of life and perceptions. Thus, including a broader sample and participants from various regions in future studies could improve the generalizability of the findings.

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