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Investigation of Life Satisfaction and Trait Anxiety of Families of Individuals with Down Syndrome and Autism Participating in Recreative Activities

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Abstract: This research aims to investigate the happiness and trait anxiety of families with Down syndrome and autism participating in recreational activities. While the population of the research consists of special education centers in Ankara, Konya, Malatya in 2019-2020, the volunteers who receive education in special education centers in these provinces are mothers and fathers with Down syndrome and autism. A total of 120 people were reached in the study and 17 people were excluded from the data set due to data editing. The Demographic Characteristics Information Form written by the researchers was used for this molding form section, and the Oxford Happiness Scale, a scale developed by Hills and Argyle (2002), and the Trait Anxiety Scale were used to use the happiness levels of the families. Families' stress and anxiety levels were recorded to create. That trait anxiety is interrupted is supported by Spielberger et al. (1970). It was adapted into Turkish by Oner and Le Compte (1974-1977) and validity and reliability studies were conducted. In our study, the reliability coefficients recorded for the "Trait Anxiety Scale" according to the Alpha symptoms are between 0.83 and 0.87. The data obtained from the questionnaire and scale applications aiming to examine the happiness and trait anxiety levels of families with Down syndrome and autism participating in recreational activities were evaluated with SPSS 25 package program. It was tested with the Kolmogorov Smirnov Test that the data with more than 70 observations did not show normal distribution. Since it was understood that the data showed normal distribution and parametric tests were provided, parametric tests were approved in the analyzes. Frequency distributions were calculated according to the gender, age, education level and monthly income levels of the participants. As a result, both in the literature and in our detailed research, it is seen that recreational activities and exercise increase the degree of happiness and trait anxiety in disabled individuals. Based on the worldwide study and many other points, we should contribute to the empowerment of the disabled community and contribute to their orientation towards sports in order to increase their anxiety and strengthen their standards.

Keywords: Keyw recreation, Down syndrome, Autism

Introduction

Recreation is the experience and activities that living beings voluntarily participate in without any coercion in order to fulfill their own demands and desires independently at the most appropriate time for them (Torkildsen, 2005). Sportive recreation refers to activities that are based on physical activity or various sports branches for recreational purposes and constitute the majority of recreational activities (Chase, 1996). Physical activities constitute the basis of the activities of sportive recreation (Zorba & Bakır 2004). Participation in recreational activities contributes to the physical, emotional, socialization and psychological aspects of individuals, increases their happiness levels and positively affects life satisfaction. Physical activities carried out as leisure time

experiences enable children and adults to maintain their lives in a healthy way, socialize, gain self-confidence, become self-sufficient, receive support and eliminate possible physical problems. It is revealed that sportive recreation, which makes significant contributions to the quality of life of society and individuals, also has an important place for individuals with disabilities. All living beings with different abilities have the right to participate in recreational activities to the same extent in order to increase their physical and social potential positively within the scope of the recreation area (Perrin, 1992).

It is known that physical education and sports are effective in all kinds of development processes of disabled children in order to adapt them to society within the framework of special education programs. Recreational activities help the social and psychological development of living beings. Through recreational activities, individuals' feelings of sharing and love increase, aggression is controlled, moral education develops, and applications can be made and systems can be provided with the environment to regulate interpersonal social relations (Ozoglu, 1997). The aim of this study is to investigate the effect of recreational activities on the happiness levels and trait anxiety of the families of individuals with dowm syndrome and autism participating in recreational activities.

Materials and Methods

Type of Research and Study Group

The population of the study consists of special education centers in Ankara, Konya, Malatya in 2019-2020, while the sample consists of volunteer mothers and fathers of individuals with Down syndrome and autism who receive education in special education centers in these provinces. As a result of the data collection studies, 120 questionnaires were applied and the number of usable valid questionnaires was 98. In the data matrix, it was seen that 17 participants did not answer more than 75% of the items in the scales and these people were excluded from the data set. Thus, the research group consisted of 81 people in total, 51 women and 30 men. The number of families with Down syndrome (29 women) (12 men) totaled 41 people. The number of families of individuals with autism (22 women) (18 men) is 40 people in total.

Data Collection Tools

In this study, the data were collected using the Demographic Characteristics Information Form prepared by the researcher for the purposes of the study.

Oxford Happiness Scale (OHS)

The OLS was developed by Hills and Argyle (6) to measure happiness and is a 28-item, 6-point Likert-type scale (1 - Strongly disagree, 6 - Strongly agree). Hills and Argyle reported the internal consistency coefficient (Cronbach's alpha) of the scale as 0.91. As a result of the factor analysis conducted to determine the construct validity of the scale, an 8-factor structure with eigenvalues above 1 was obtained. However, due to the problems in the interpretation and naming of these factors, they concluded that it would be appropriate to use the scale as a single factor.

Trait Anxiety Scale (TAS)

The trait anxiety scale was developed by Spielberger et al. (1970). It was adapted into Turkish by Öner and Le Compte (1974-1977) and reliability and validity studies were conducted. The scale, which is a type of self-assessment, consists of 20 questions and has a 4-point Likert model. Reliability coefficients determined by alpha correlations were found to be between 0.83 and 0.87 for the "Trait Anxiety Scale".

If at least 3 of the questions in the form are not answered, the completed form loses its validity and is not scored. The question options in the Trait Anxiety Scale are designed as (1) Almost never, (2) Sometimes, (3) Very often and (4) Almost always. There are two different meanings in the scales. These meanings can be called (1) direct or straightforward meanings and (2) reverse meanings. Direct meanings mean that the thought is negative, while reversed meanings mean that the thought is positive. When these second type of meanings are subjected to scoring, those with a weight level of 1 are converted to 4 and those with a weight level of 4 are converted to 1.

In direct meanings, answers at the level of 4 indicate a high level of anxiety. In the inverted meanings, answers at the level of 1 indicate that anxiety is high, while answers at the level of 4 indicate that anxiety is low. "I am restless" is an example of direct meaning and "I feel calm" is an example of inverted meaning. In this way, if a 4 weighted option is preferred for the meaning "I feel restless" and a 1 weighted option is preferred for the meaning "I feel calm", the result indicates high anxiety. The number of inverted statements in the trait anxiety scale is 7 and these numbers consist of questions 1, 6, 7, 10, 13, 16 and 19.

Manual scoring: Two different answer sections are organized for each of the direct and reversed meanings. In this way, the total values of the direct meanings in one answer section and the reversed meanings in the second answer section are summed. The overall weighted score for the meanings considered correct is subtracted from the overall weighted score for the reversed meanings. To this result, another previously calculated value that will not change is added. For the trait anxiety scale, the unchanged value is 35. The resulting score is the person's trait anxiety score. The scores to be obtained as a result of answering are theoretically between 20 and 80. A high score indicates high anxiety, a low score indicates low anxiety. The above explanations also apply when interpreting the scores in terms of percentages. In other words, low percentages (1, 5, 10) indicate low anxiety. The average score in the applications varied between 36 and 41.

Data Collection

Data were collected with measurement tools from the families of individuals with Down syndrome and autism who voluntarily participated in the study. It took approximately 10 minutes to fill out the scale forms.

Statistical Analysis of Data

The data obtained from the questionnaire and scale applications to examine the happiness levels and trait anxiety states of the families of individuals with Down syndrome and individuals with autism participating in recreational activities were evaluated in SPSS 25 (Statistical Package for Social Sciences) package program. Since the number of observations was more than 70, Kolmogorov Smirnov Test was used to test whether the data showed normal distribution. Since it was understood that the data were normally distributed and parametric test assumptions were met, parametric tests were used in statistical analysis. Frequency distributions of participants' gender, age, educational status and monthly income levels were calculated.

The significance of the difference between the means of two independent groups in terms of a continuous variable specified by measurement was determined by the Significance Test of the Difference Between Two Means (Independent Sample T Test). The significance of the means of three or more independent groups was tested with One Way Analysis of Variance (One Way Anova), one of the Independent Sample Tests. The statistical analyses used in the study were performed at error levels of 0.05 with a 95% confidence interval.

Findings

In this section, descriptive findings about the participants, findings related to the Oxford happiness scale, and findings related to the trait anxiety scale are presented respectively. Table 1 shows the descriptive statistics of the individuals constituting the sample of the study. Accordingly, 63% (n=51) of the individuals were female and 37% (n=30) were male. When the frequency distributions of the age variable of the individuals are examined, it is seen that 48.1% (n=39) are 40 years old or younger, 16.0% (n=13) are between 41-45 years old, 17.3% (n=14) are between 46-50 years old and 18.5% (n=15) are 51 years old or older. It is seen that 50.6% (n=41) of the sample individuals are university graduates, followed by middle and high school graduates (18.5%; n=15) and primary school graduates (9.9%; n=8).

The rate of individuals who were literate despite not having graduated from any educational institution was 2.5% (n=2). The proportion of individuals with the highest income level (3001 TL and above) was 55.6% (n=45), while the proportion of individuals with the lowest income level (1500 TL and below) was 11.1% (n=9). When the other individuals are evaluated in terms of income level, it is understood that 3.7% (n=3) have an income between 1501-2000 TL, 16.0% (n=13) between 2001-2500 TL and 13.6% (n=11) between 2501-3000 TL.

Table 1. Descriptive statistics about the participants

Variables	**n**	**%**
Gender (n=81)		
Female	51	63.0
Male	30	37.0
Age (n=81)		
40 years and below	39	48.1
41-45 years	13	16.0
46-50 years	14	17.3
51 years and over	15	18.5
Education status (n=81)		
Literate	2	2.5
Primary school grduate	8	9.9
Secondary school graduate	15	18.5
High school graduate	15	18.5
University graduate	41	50.6
Monthly income level (n=81)		
1500 TL and below	9	11.1
1501-2000 TL	3	3.7
2001-2500 TL	13	16.0
2501-3000 TL	11	13.6
3001 TL and above	45	55.6

Table 2 When examined, it is understood that there is no statistically significant difference between female and male participants in terms of trait anxiety according to gender ($p>0.05$).

Table 2. Comparison of participants according to gender in terms of trait anxiety status

Veriables	**Gender**	**n**	**$\bar{X}$**	**Ss±**	**S_{hata}**	**t**	**p**
Trait anxiety score	Female	51	48.4	8.6	1.21	-1.635	0.106
	Male	30	44.9	10.1	1.85		

Table 3 shows that there is no statistically significant difference between the participants in terms of trait anxiety according to age group ($p>0.05$).

Table 3. Comparison of participants according to age group in terms of trait anxiety status

Veriables	**Age group**		**n**	**$\bar{X}$**	**Ss±**	**F**	**p**
Trait anxiety score	1	40 years and below	39	47.8	10.0	0.228	0.877
	2	41-45 years	13	47.6	10.2		
	3	46-50 years	14	46.4	7.01		
	4	51 years and over	15	45.6	9.4		
	5	**Total**	81	47.1	9.3		

When Table 4. is examined, it is understood that there is a statistically significant difference between the participants in terms of trait anxiety according to educational level ($p<0.05$). Accordingly, it can be said that the trait anxiety levels of the participants with higher educational level whose children with Down syndrome and autism participated in recreational activities were lower than the others.

Table 4. Comparison of trait anxiety status of participants according to education level

Veriables	**Education status**		**n**	**$\bar{X}$**	**Ss±**	**F**	**p**	**Difference**
Trait anxiety score	1	Literate	2	50.6	9.4	1.146	0.011*	1(3-4-5)
	2	Primary school grduate	8	49.5	3.5			2(4-5)
	3	Secondary school graduate	15	48.5	8.0			3(4-5)
	4	High school graduate	5	48.1	5.8			4(5)
	5	University graduate	41	45.1	10.			
	6	**Total**	81	47.1	9.3			

As seen in Table 5, there is a statistically significant differentiation between the participants in terms of trait anxiety according to monthly income level. Accordingly, it can be stated that the trait anxiety levels of the participants with higher monthly income levels whose children with Down syndrome and autism participated in recreational activities were lower than the others.

Table 5. Comparison of trait anxiety according to monthly ıncome level of the participants

Veriables	Monthly income level		n	X̄	Ss±	F	p	Difference
Trait anxiety score	1	1500 TL and below	9	55.3	5.03	3.218	0.017*	1(3-4-5)
	2	1501-2000 TL	3	53.3	9.1			2(3-4-5)
	3	2001-2500 TL	13	50.2	10.5			3(4-5)
	4	2501-3000 TL	11	48.0	6.8			4(5)
	5	3001 TL and above	45	44.3	9.0			
	6	**Total**	81	47.1	9.3			

When Table 6 is examined, it is understood that there is no statistically significant difference between female and male participants in terms of happiness level according to gender (p>0.05).

Table 6. Comparison of participants' level of happiness by gender

Veriables	Gender	n	X̄	Ss±	S_{hata}	t	p
Happiness level score	Famale	51	101.8	16.7	2.34	1.838	0.070
	Male	30	108.8	16.6	3.03		

Table 7 shows that there is no statistically significant difference between the participants in terms of happiness level according to age group (p>0.05).

Table 7. Comparison of participants' level of happiness according to age group

Veriables	Age group		n	X̄	Ss±	F	p
Happiness level score	1	40 years and below	39	103.0	16.3	0.222	0.881
	2	41-45 years	13	104.3	19.5		
	3	46-50 years	14	105.7	20.3		
	4	51 years and over	15	106.9	13.8		
	5	**Total**	81	104.4	16.9		

When Table 8. is examined, it is understood that there is a statistically significant difference between the participants in terms of happiness level according to educational status (p<0.05). According to this, it can be said that the happiness levels of the participants with higher education level whose children with Down syndrome and autism participated in recreational activities are higher than the others.

Table 8. Comparison of participants' level of happiness according to educational background

Veriables	Education status		n	X̄	Ss±	F	p	Different
Happiness level score	1	Literate	2	95.8	4.24	1.617	0.012*	1(3-4-5)
	2	Primary school grduate	8	96.0	15.1			2(3-4-5)
	3	Secondary school graduate	15	101.7	14.1			3(4-5)
	4	High school graduate	5	103.5	16.4			4(5)
	5	University graduate	41	108.1	17.9			
	6	**Total**	81	101.2	14.0			

As seen in Table 9, there is a statistically significant differentiation between the participants in terms of happiness level according to monthly income level. Accordingly, it can be said that the happiness levels of the participants with higher monthly income levels whose children with Down syndrome and autism participated in recreational activities are higher than the others.

Table 9. Comparison of Participants' Level of Happiness According to Monthly Income Level

Veriables	Monthly income level		n	X̄	Ss±	F	p	Different
Happiness level score	1	1500 TL and below	9	94.1	13.9	3.371	0.014*	1(3-4-5)
	2	1501-2000 TL	3	94.6	22.0			2(3-4-5)
	3	2001-2500 TL	13	97.4	11.6			3(4-5)
	4	2501-3000 TL	11	100.6	20.1			4(5)
	5	3001 TL and above	45	110.7	16.0			
	6	**Total**	81	104.4	16.9			

Discussion

The descriptive statistics of the individuals constituting the sample of the study are shown in Table 1. Accordingly, 63% (n=51) of the individuals were female and 37% (n=30) were male. When the frequency distributions of the age variable of the individuals are examined, it is seen that 48.1% (n=39) are 40 years old or younger, 16.0% (n=13) are between 41-45 years old, 17.3% (n=14) are between 46-50 years old and 18.5% (n=15) are 51 years old or older. It is seen that 50.6% (n=41) of the sample individuals are university graduates, followed by middle and high school graduates (18.5%; n=15) and primary school graduates (9.9%; n=8). The proportion of individuals who were literate despite not having graduated from any educational institution was 2.5% (n=2). The proportion of individuals with the highest income level (3001 TL and above) was 55.6% (n=45), while the proportion of individuals with the lowest income level (1500 TL and below) was 11.1% (n=9). When the other individuals are evaluated in terms of income level, it is understood that 3.7% (n=3) have an income between 1501-2000 TL, 16.0% (n=13) between 2001-2500 TL and 13.6% (n=11) between 2501-3000 TL.

In the literature studies, it was determined that there was no significant difference between male and female participants in terms of the state of trait anxiety of the parents participating in the study ($p>0.05$). Temel et al (2017) stated that they found that there was no significant difference in aggression levels and social adaptation levels according to the gender of the participants in the study. Kaya et al. (2020), in their study titled Quality of Life Level of Parents of Children with Autism Spectrum Disorder Taking Sports Lessons, stated that parental quality of life scores showed a significant difference according to the parent's regular sports practice ($p<0.05$). It is seen that the level of trait anxiety of parents of children with autism and Down syndrome who participate in sportive or recreational activities decreases (Temel et al., 2017). In the study conducted by İnce (2017), it is stated that parents of children with autism and Down syndrome are willing to direct their children to sports. In a similar study, Sarol (2013) states in his doctoral thesis that the average scores of female and male participants are not different according to the results of the analysis according to the gender of the participants in the study. In our research, although there was no statistically significant difference between male and female participants in terms of trait anxiety according to gender ($p>0.05$), it is seen that women's trait anxiety levels were numerically low Table 2. It is thought that this situation may affect the reduction of anxiety levels of women in recreactive activities in which children participate.

In our study, there was no statistically significant difference between the participants in terms of trait anxiety according to age group ($p>0.05$). In the study of Meral and Cavkaytar (2014) on Family Quality of Life Perceptions of Families of Children with Autism, they stated that age groups had no effect on quality of life. Cokluk et al. (2011) reported that there was no statistical significance according to age distribution in their study.

There are studies indicating that exercise and recreational activities increase happiness in disabled people and reduce anxiety by increasing quality of life. In the PhD thesis of Ilkım (2017), it is statistically stated that the anxiety and happiness levels of the experimental group are higher than the control group. The results of our study (Table -3) and the similarity with the results of the literature show results that support our study.

Altun (2010) stated that there was a statistically significant difference between the sports groups and the sedentary group in terms of trait anxiety level in his postgraduate study. It is thought that the high level of education of the parents participating in the study is effective in the awareness that the participation of their disabled children in exercise or recreational activities is necessary and in the fulfillment and follow-up of these activities (Sarol 2013). In support of this result, it was found that there was a statistically significant difference between the participants in terms of trait anxiety according to the educational status in the study ($p<0.05$). Accordingly, it was seen that the participants with higher educational level whose children with Down syndrome and autism participated in recreational activities had lower levels of trait anxiety than the others, and a large proportion of the participants' families participated in a training program in this direction for the education of their children (Table 4).

In the study conducted by Akdem et al. (2014), it was observed that the quality of life of parents did not differ significantly according to their educational status. In the postgraduate study conducted by Kaya (2019), it was observed that as the level of education increases, parents' level of seeing ASD difficulties as a problem decreases. When Temel et al. (2017) examined their study, it was observed that the lack of a change in the aggression levels and social adaptation levels of the participants according to the educational status of the mother and father did not affect the registration status of the parents. In previous studies, it was reported that the quality of life of parents with autistic and Down syndrome children or their lack of concern about the difficulties in disability differed according to the level of education (Cam & Ozkan, 2009). This may be based on the fact

that parents with higher levels of education have a more constructive attitude towards individuals with autism and Down syndrome.

In the study conducted by Cokluk et al. (2011) to determine the quality of life of athletes playing in the regional wheelchair league, statistical significance was found at the level of education ($P<0.05$). In the study conducted by Softa et al. (2016), which supports this study and our study (Table-4), a significance was found between parents' family burden and life satisfaction ($p<0.05$). As the responsibility of the family increases in the life of disabled individuals, the anxiety in family members increases (Ilkım, 2017). They reduce this increased anxiety by enabling their disabled children to participate in sportive or recreational activities.

In some studies in the literature, it is seen that there are significant differences in the quality of life of parents with Down syndrome and autistic children according to their income levels (Cam & Ozkan, 2009). Altun (2010) reported that there was no significant difference between income levels and anxiety levels in his master's thesis and Sarol (2013) states that family income levels are significant in his doctoral study.

It is thought that income level is important in improving the quality of life of disabled individuals or fulfilling some special standards. In a similar study, Meral and Cavkaytar (2014) report that there is a statistical significance between the income level when it is considered according to the family income level variable. Unlike these studies, Yılmaz et al. (2010) state that there is no significance difference in family income level. The reason for this is that disabled individuals benefit from state-supported special education or public education institutions and efforts to increase family income are envisaged. Similar to the studies of Yılmaz et al, the study conducted by Aznar et al. (2005) and the doctoral study conducted by Ilkım (2017) state that family income level is not an important factor. However, in another study supporting our study (Table -5), Sarol (2013) states that income level is important for individuals to fulfill some private living standards.

When Table 6 is examined, it is understood that there is no statistically significant difference between female and male participants in terms of happiness level according to gender ($p>0.05$). There are many studies on the happiness level and anxiety of parents on the disability status and types of children (Akkok, 1989; Beckman, 1983; Haveman et al., 1997; Sanders & Morgan, 1997). In addition to these studies, there are also studies showing that behavioral problems rather than the type and degree of disability of children decrease parents' life satisfaction and increase their anxiety (Floyd & Gailaugher, 1997; Hodapp et al., 1997). The results of these studies support our study. In addition, Akandere et al. (2009) reported that no significant difference was found between the life satisfaction of parents with disabled children. Among the factors that contribute positively to life satisfaction and reduce anxiety, the culture in which they live, (Cheng & Furhham, 2003), acceptance of the situation they are in, and having a sense of being at peace with themselves and their environment are reported to positively affect life satisfaction (Compton, 2000). In their study, Duman et al. (2011) reported that life satisfaction varies according to gender variable. In a similar study, Tatar (2017) states that there is a statistical significance ($P<0.05$) in gender variables when the relationship between life satisfaction of physically disabled people according to their gender is examined in his master's thesis study. Unlike these studies, when the studies on children with autism were examined according to the gender variable, it was determined that the quality of life of the parents participating in the research and the level of perception of ASD difficulties as a problem did not differ significantly (Kaya, 2019). We can attribute this result to the fact that parents keep their children engaged in sportive or recreational activities. The results of all these studies are similar to the results of our study (Table -6).

When those who participated in exercise and recreational activities were analyzed according to their age groups, it was determined that while the anxiety levels of the parents participating in the study decreased, the levels of happiness increased and the level of perceiving the difficulties they were in as a problem did not differ significantly. In similar studies in the literature, it was reported that the quality of life of disabled children in all age groups in families with autistic children did not differ significantly according to the age group variable (Meral & Cavkaytar, 2014). In another study on disabled individuals, the socialization and life satisfaction of mentally disabled individuals who do sports and disabled individuals who do not do sports were evaluated and it was stated that those who do sports show more social behavior characteristics and life satisfaction than those who do not (Babkes, 1999; Ilhan, 2008). There are studies indicating that exercise and recreational activities increase happiness and improve quality of life by reducing anxiety levels in disabled people. When we look at the anxiety and happiness levels of individuals with autism and Down syndrome participating in recreational activities in our study, we see that the happiness levels of disabled individuals participating in recreational activities are significantly higher (Table-7). These studies, which are similar to our study, show that sports and recreational activities provide positive development in terms of physical, mental development and socialization of disabled individuals and accelerate their integration into society (Eichsteadt & Lavay, 1995).

Due to all these positive effects, sports should be used as a tool to ensure the adaptation of disabled individuals to the society, to accelerate the adaptation process and to contribute to their socialization (Dunn & Fait, 1997). Similar to these studies, Tatar (2017) states in his master's thesis study that doing sports increases the feeling of life satisfaction in the relationship between the life satisfaction of physically disabled people who do and do not do sports according to their age. In a similar study, "It was understood that the program applied with sportive activity in the development of social functionality had an effect on increasing the quality of life of all age groups (Sarol, 2013).

When Table 8 is examined, it is understood that there is a statistically significant difference between the participants in terms of happiness level according to educational status ($p<0.05$). According to this, it can be said that the happiness levels of the participants with higher education level whose children with Down syndrome and autism participated in recreational activities are higher than the others.

It is thought that parents' high level of education will enable them to have access to extensive information about their children's disabilities, to collect information about what they can do about their children's future, and how they can put this information they have collected into practice, thus reducing hopelessness by concentrating on solutions rather than problems. It has been determined that parents with higher levels of education are better at problem solving and are better able to determine their children's adaptation strategies to social life (Quine & Pahl, 1991). Haveman et al. (1997) reported that mothers with low levels of education allocate much more time to child care than they allocate for themselves.

Stein and Book (2003) state that educated families have high levels of happiness that can overcome problems and produce effective solutions, have a high ability to adapt to the problems they face in life, and individuals who can show healthier thoughts and behaviors will also have positive emotional reactions to life. Akandere et al (2009) stated in their study that there was no significant difference between life satisfaction and educational status of parents with disabled children. In a similar study, Duman et al. (2011) stated that there was no significant difference between educational status and self-confidence and life satisfaction in their study on physically disabled athletes ($p>0.05$).

It can be interpreted that parents with higher education levels are more aware of the importance of recreational and physical exercise in increasing the happiness levels of individuals with autism and Down syndrome (Sarol 2013). Kaya (2019) reported in his Master's study that the quality of life of parents with disabled children did not differ significantly according to their educational status. All these studies in the literature overlap with our study (Table 8). In the study of Cokluk et al. (2011) on the quality of life of athletes playing in the regional wheelchair league, the level of education was statistically significant ($P<0.05$). The fact that mothers of disabled individuals have to spend more time with their children and cannot spare time for social life causes an increase in the anxiety and stress they experience (Sarısoy, 2000).

As seen in Table 9, there is a statistically significant differentiation between the participants in terms of happiness level according to monthly income level. Accordingly, it can be said that the happiness levels of the participants with higher monthly income levels whose children with Down syndrome and autism participated in recreational activities are higher than the others.

When it is considered in terms of trait anxiety and happiness status according to family income level, it is seen that families with high income levels have low levels of trait anxiety and high levels of happiness, as well as parents' perception of their children's disability difficulties as a problem is less than parents with low income levels (Kaya, 2019). Considering that income level is important in increasing happiness levels or fulfilling some special needs, it can be stated that high income level is significant (Table-9) as in our study (Sarol, 2013).

It is envisaged that educational institutions should be utilized in the care and integration of disabled individuals into the society and studies should be carried out to increase the income levels of families in this sense (Yılmaz et al. 2010). Increases in income level and improvement in socioeconomic level are thought to remove families from constant anxiety and increase their happiness levels (Meral & Cavkaytar, 2014). In the study conducted by Akandere et al. (2009), it is stated that there is a significant difference between families with low income level in favor of families with high income level. In the study conducted by Campbell et al. (1976), it is stated that the perception that income level increases the quality of life is anxiety levels and life happiness depending on the satisfaction of individuals from this income rather than the amount of income.

In a study conducted on the quality of life of mothers of children with different disabilities, it is thought that the low education and income levels of parents have an important effect on the low levels of trait anxiety and

happiness in individuals with disabilities (Topuz et al., 2014). In literature studies, it is seen that sportive and recreational activities provide great benefits especially in the socialization of disabled individuals and recreational and sportive exercise therapies used in the rehabilitation of disabled individuals provide rehabilitation and multidimensional development (spiritual, emotional, social, psychological and motor skills) (Atalay & Karadag, 2011).

Conclusion

As a result, both in the literature and in our research, it is seen that recreational activities and exercise increase the level of life happiness in disabled individuals and their parents. The fact that we obtained similar results in our study, we should contribute to the integration of disabled individuals into society and to increase their dignity and to reduce the anxiety of parents, to increase their happiness and to contribute to their orientation towards sports in order to increase the quality of life standard.

Scientific Ethics Declaration

* The authors declare that the scientific ethical and legal responsibility of this article published in EPESS journal belongs to the authors.

* Ethics Committee Approval for this study was obtained from Konya Selçuk University, Faculty of Sports Sciences Ethics Committee.

Notes

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***** This study is derived from Tugba YESILCUFA's master's thesis with the same title.

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