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Depression-Anxiety Symptoms and Stigma Perception in Mothers of Children with Autism Spectrum Disorder

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ABSTRACT

Introduction: In our study, the effect of autism spectrum disorder (ASD) on the internalized stigma perception, symptoms of depression and anxiety and the quality of life is investigated in the mothers of children with this disorder.

Methods: Our research includes 69 patients who applied to Dicle University Medical School Hospital Child and Adolescent Psychiatry Department polyclinic between April 20-December 25, 2017 and were followed-up at least 6 months with ASD diagnosis. Socio-demographic data form assessing the personal and familial characteristics of the patients were filled out by the clinician. Patients' mothers were applied Beck Depression Scale (BDS), Beck Anxiety Scale (BAS), Internalized Stigma of Mental Illness (ISMI) Scale and Autism Quality of Life Questionnaire - Parent Version (AQoLQPV).

Results: Of the 69 patients participated in the study, 58 patients were boys (84%) and 11 patients were girls (16%) and the mean age was 4,5±1,3 years. Perception of internalized stigma, depression and anxiety symptoms of the patients' mothers were detected as moderate. Patients' mothers' quality of life and life satisfaction score were found to be low. A significant positive relationship was found between the internalized stigma perception and the symptoms of anxiety and depression. A significant positive correlation was detected between the anxiety symptoms and the depression symptoms. A significant negative relationship was found between internalized stigma perception, symptoms of anxiety and depression and mother quality of life sub-scale, sub-scale of how the autism-specific challenges are perceived as problems by the parents and life satisfaction score

Conclusion: With this study it was detected that as the education level of the mothers of the children followed-up with autism diagnosis increased, their internalized stigma perception decreased. It was demonstrated that there was a significant positive relationship between the internalized stigma perception and the symptoms of anxiety and depression in mothers. It was also detected that as the mothers' internalized stigma perception increased, their quality of life decreased. Investigating the internalized stigma perception, symptoms of anxiety-depression and quality of life of the mothers of the children diagnosed with autism, our study emphasizes the necessity for handling these problems.

Keywords: Autism, stigma perception in mother, depression, anxiety

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INTRODUCTION

Autism Spectrum Disorder (ASD) is a congenital neurodevelopmental disorder and its symptoms are observed in early childhood. In addition to deficiencies in social communication and interaction, autism, which has limited-repetitive behavior patterns, starts in the early development phase and causes a significant deterioration in the areas of social functionality (1). A child with autism creates serious anxiety in the family for many reasons, including the uncertainty of the diagnosis, the severity and duration of the disorder, and the child's lack of compliance with social rules (2).

Stigmatization is the act of discrediting other people in the community because they are outside the measures that the society regards as "normal". Stigmatization was introduced for the first time by Goffman, who is an American sociologist (3). Internalized stigma is the adoption of the stigmatizing views of the society by the person who is affected (4). Internalized stigma involves the feelings, thoughts, beliefs and fears that people experience in their lives, and their beliefs that they are dangerous to others or insufficient to manage their own lives. Internalized stigmatization can harm patients greatly either by worsening the symptoms or prolonging the recovery period (5). People who get stigmatized derogate themselves for reasons such as being embarrassed by the disease, feeling insufficient, and avoiding social environments, they experience fear of rejection, despair and lose their self-confidence. ASD has a great effect not only on the individual but also on caregivers (6). Family members of a person with psychiatric illnesses can avoid social environments, spend time and energy to hide their illness, be subjected to discrimination at work or lead a housebound life (7).

Hyperactivity, mood problems, eating and sleeping disorders, obsessions and compulsive behaviors, self-injurious behaviors of children with ASD make the parent-child relationship difficult (8). The family starts to experience conditions such as poor quality of relationship, educational

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problems, financial difficulties and future anxiety among family members due to the care burden of such findings and difficulties. There is a significant relationship between emotional and behavioral problems of children with ASD and their parents' anxiety and depression levels (9). Children's exposure to chronic maternal depression is associated with more cognitive and emotional problems in children as depression interferes with the mother's ability to respond responsibly and consistently over time. Psychological problems in the mother have been shown to be related to non-compliance with both clinically-based and parent-mediated early intervention programs for children with autism. Maternity depression has been shown to be associated with higher rates of child abuse and neglect. Therefore, early diagnosis and timely treatment of depressed mothers is of great importance in improving the overall disease outcomes of both the child and the mother (10). In another study it was stated that parents were avoiding to participate in activities outside the home. As the reason for this, it was shown that parents thought that the attention was always on their child with autism and that others did not understand the child's behavioral problems (11).

Although many studies have been conducted for the symptoms of depression and anxiety in families with ASD, studies on mothers' internalized stigma attitudes and quality of life perception are relatively few. For this reason, this study was conducted to determine the relationships between internalized stigma perception, depression-anxiety symptoms and quality of life of mothers of the children with autism.

METHODS

Study Sampling

Our research includes 69 patients who previously applied to Dicle University Medical School Hospital Child and Adolescent Psychiatry Department polyclinic and were followed-up at least 6 months with ASD diagnosis between April 20-December 25, 2017. Patients were re-evaluated according to DSM-5 diagnostic criteria for the diagnosis of ASD. The mothers of children, whose diagnosis of ASD was finalized as a result of the evaluation, were verbally informed about the subjects such as the purpose of the study and the duration of the interview, in addition, all cases were provided with written informed consent forms and only volunteers were included in the study.

Ethical Approval

Ethics committee approval of the study was approved by the Non-Interventional Clinical Ethics Committee of the Faculty of Medicine, Dicle University, with the decision no.85 dated 17.04.2017.

Data Collection Tools Used in the Study

Along with various sociodemographic information, our study includes four valid and reliable scales to assess internalized stigma, depression, anxiety, and quality of life. In data collection, socio-demographic data form for the individual, family and disease-related characteristics of patients and their parents, Beck Depression Scale (BDS), Beck Anxiety Scale (BAS), Internalized Stigma of Mental Illness (ISMI) Scale and Autism Quality of Life Questionnaire - Parent Version (AQoLQPV) were used.

Sociodemographic Data Form

Sociodemographic Data Form includes a total of 35 questions covering the sociodemographic characteristics of patients and their parents, the history of the patients, co-morbid diseases accompanying the disease, and drug treatments.

Internalized Stigma of Mental Illness (ISMI) Scale

ISMI scale was developed by Boyd-Ritsher et al. (2003) and consists of 29 items. It is a self-report scale that evaluates internalized stigmatization. The scale includes five sub-scales of "alienation" (1,5,8,16,17,21), "stereotype endorsement" (26,10,18,19,23,29), "discrimination experience" (3,15,22,25,28), "social withdrawal" (4,9,11,12,13,20) and "stigma resistance" (7,14,24,26,27). The items on the scale are rated with a four point likert scale: "strongly disagree" (1 point), "disagree" (2 points), "agree" (3 points), "strongly agree" (4 points). The items of the stigma resistance sub-scale are calculated inversely (items 7, 14, 24, 26 and 27). ISMI scale total score varies between 4-9, and there is no scale cut-off score. High scores indicate that the person's internalized stigmatization is higher (12). The validity and reliability of the scale was performed by Ersoy and Varan (2007). As in the study by Zismani-İlani et al. (2013) personal expressions were changed to words such as my daughter or my son. For example, the expression "Having a mental illness ruined my life", has been changed to "My daughter's or son's mental illness ruined my life" (13).

Beck Depression Scale (BDS)

It is a self-report scale that was developed by Beck et al. (1961) with the aim of determining the depression level of the people. It determines the depression risk and symptoms. Consisting of 21 items in total, this scale provides an assessment on a four point likert type. Each item gets an increasing score between 0 and 3, and these scores are added up. A high total score signifies a depression of high severity. The scores that can be obtained from the scale vary between 0 and 63. Scores between 0-9 indicate minimal depression, 10-16 mild depression, 17-29 moderate depression and 30-63 severe depression (14). The validity and reliability was performed by Hisli (1988; 1989). The cut-off score was determined as 17 in this study (15).

Beck Anxiety Scale (BAS)

It was created by Aaron T. Beck. Consisting of 21 elective questions, this test is considered as an internationally valid tool for measuring the severity of anxiety. Each item marked on the Beck anxiety scale has a score. The responses to the questions are evaluated as follows: no 0 point, mild 1 point, moderate 2 points and severe 3 points. The high score obtained from the scale indicates the severity of the anxiety experienced by the individual. Points between 0-7 indicate minimal anxiety symptoms, 8-15 mild anxiety symptoms, 16-25 moderate anxiety symptoms and 26-63 indicate severe anxiety symptoms. The validity and reliability was performed by Ulusoy et al. (1998) in Turkey (16).

Autism Quality of Life Questionnaire - Parent Version (AQoLQPV)

It was developed by Eapen et al. in 2014 to evaluate the quality of life of the parents of the children with ASD. It is scored by the parents of children with ASD between the ages of 2 and 18 according to the 5-point Likert system. The scale consists of two separate sections, A and B, and a scoring section that evaluates life satisfaction at the end. Part A is the quality of life subscale and it questions the parents' quality of life in the past 4 weeks in 28 items. Part B is the sub-scale that evaluates the effects of ASD symptoms on the parent, and it questions how autism-specific difficulties are perceived by the parent as a problem in 20 items. In the life satisfaction section, mothers evaluated life satisfaction between 0 and 10. 0 was determined to be "not satisfied at all" and 10 was determined to be "extremely satisfied" (17). The high score indicates that parents experience fewer problems for their child's ASD-related behavior. The score that can be obtained from the scale is between 48 and 240; however, it is recommended that each section be scored and used separately. The Turkish validity and reliability study of the scale was performed by Gürbüz et al. in 2016 (18).

Research Application

A detailed clinical interview was held with the child and the mother. After the psychiatric examination, the sociodemographic data form was filled by the clinician. Beck Depression Scale (BDS), Beck Anxiety Scale (BAS),

Internalized Stigma of Mental Illness (ISMI) Scale and Autism Quality of Life Questionnaire - Parent Version (AQoLQPV) were provided for the parents. Mothers who could not fill the scales were accompanied by a clinician.

Statistical Analysis of the Data

Statistical analysis of the data was performed using SPSS 24.0 (SPSS Inc., Chicago, Illinois) program. The Kolmogorov-Smirnov test determined whether the numerical variables fit the normal distribution. Normally distributed continuous measurement variables were expressed as mean (standard deviation) and those that did not fit the normal distribution were expressed as median (min-max). Percentages in discrete variables were calculated and given as such. Student T test or Mann Whitnet U test was used when comparing numerical variables between the two groups. Chi-square test was used when comparing categorical data. Whether there is a correlation between the measurement variables was investigated by Pearson's correlation test for those with normal distribution, and Spearman correlation test for those who did not comply with the normal distribution, and the correlation coefficients (r) were calculated. Significance checks were performed. The significance checks of the correlation coefficients were performed with the student's t test. Statistical significance level (bidirectional) was determined as $\alpha<0.05$.

Research Limitations

The fact that the research results could not be generalized to the population due to the low number of samples and the fact that the study was conducted in a single center constitute the limitation of our research. In addition, the expression changes made in accordance with the purpose of the study in the Internalized Stigma of Mental Illness (ISMI) Scale, which is a structured scale, can be effective in scale scores.

RESULTS

Socio-demographics of the Children

Our study was carried out with mothers of 69 children diagnosed with ASD. All of the patients were followed up for at least 6 months for the diagnosis of ASD according to DSM-5 criteria.

The number of patients in the study group was 69. The ages of the patients were between a minimum of 2 and a maximum of 6, and the mean age was 4.49 ± 1.302. When the patients in the study were examined according to their gender; of 69 children, 58 (84.1%) were boys and 11 (15.9%) were girls. The boy/girl ratio was found to be 5.27. It was determined that 35 (50.7%) of the patients did not go to school, 28 (40.6%) went to kindergarten or nursery, and 6 (8.7%) attend primary school. It was found out that 52 (75.4%) of the patients received special education and 17 (24.6%) did not receive special education.

When the sibling characteristics of the patients are examined; it was determined that they have minimum of 1, a maximum of 11 siblings and the average was 4.49 ± 1.3. 18 patients (26.1%) had no sibling, 33 patients (47.8%) had 1 sibling, 10 patients (14.5%) had 2 siblings and 8 patients (11.6%) were younger sibling. It was found out that 16 (23.2%) of the patients in the study received a continuous medication treatment. Of the patients who received medication treatment, 10 (14.5%) were on antipsychotics, 2 (2.9%) were on methylphenidate, 10 (1.9%) were on vitamin and 5 (7.3%) were on another group of medication and received alternative treatment methods.

Socio-demographics of the Patients' Parents

When the ages of the parents of the patients were examined; the age of the fathers is minimum 26, maximum 71, the average was 37.13 ± 6.66; the ages of the mothers were found to be minimum 22, maximum 47, and the average was 32.72 ± 5.69. When the education status of the parents was analyzed, it was found that 3 of the fathers (4.3%) were illiterate, 3 of the fathers (4.3%) were literate, 17 (24.6%) were elementary school graduate, 12 (17.4%) were secondary school graduate, 9 (13.0%) were high school graduate and 25 (36.2%) were university graduate. When the education status of the parents was analyzed, it was found that 12 of the mothers (17.4%) were illiterate, 3 of the mothers (4.3%) were literate, 19 (27.5%) were elementary school graduate, 10 (14.5%) were secondary school graduate, 11 (15.9%) were high school graduate and 14 (20.3%) were university graduate. Of the patients' parents, 25 (36.2%) were relatives, and of those, 16 (23.2%) were first degree relatives, 8 (11.6%) were second degree relatives.

Total Scale Scores

When the scores of the scales were calculated, it was detected that ISMI scale total mean was 58.93 ± 14.067 points, BDS total score mean was 14.41 ± 10.932, BAS score total mean was 13.93 ± 13.120. AQoLQPV Part A (Parent quality of life) total score mean was 90,06±17,580; Part B (how autism-specific difficulties are perceived by the parents as problems) total score mean was 68; 16±17,596 and the mean of the parents' life satisfaction was calculated as 6,17±2,612.

When the ISMI sub-scales were evaluated, it was found out that the mean of the alienation sub-scale score was 11,57±3,692, the mean of the stereotype endorsement sub-scale score was 13,61±4,159, the mean of the discrimination experience sub-scale score was 10,70±3,512, the mean of the social withdrawal sub-scale score was 11,52±4,161 and the mean of the stigma resistance sub-scale score was 12,14±3,145.

When mothers' BDS total scores were evaluated, it was found that 25 (36.2%) had minimal depressive disorder, 21 (30.4%) had mild depressive disorder, 17 (24.6%) had moderate depressive disorder and 6 (8.7%) had severe depressive disorder. When mothers' BAS total scores were evaluated, it was found that 30 (43.5%) had minimal anxiety, 8 (11.6%) had mild anxiety, 24 (34.8%) had moderate anxiety and 7 (8.7%) had severe anxiety. Total scores obtained from the scales were demonstrated in Table 1.

Pearson Correlation Analysis

In the Pearson correlation analysis between the sociodemographic characteristics and ISMI scale, BDS and BAS total scores of the comorbidities of the patient, no significant difference was detected between the patients' age and the mothers' age and the scale total scores (p>0,05). A significant difference was detected between mother's education and ISMI scale total score (r=-0.325**; p= 0.006) while there was no significant difference between mother's education and BAS total score (p>0,05). A significant difference was detected between the situation where patient received special education and ISMI scale total score (r=0.243*; p= 0.045) while there was no significant difference between the situation where patient received special education and BDS and BAS total scores (p>0,05).

In the Pearson correlation analysis of ISMI scale total score and BDS, BAS and AQoLQPV Parts, significant posisitve correlation was detected between BDS total score and ISMI scale total score (r=0.628**; p<0.001) and BAS total score and ISMI scale total score (r=0.400**; p=0.001). Significant negative correlation was detected between AQoLQPV Part A total score and ISMI scale total score (r=-0.463**; p<0.001), AQoLQPV Part B total score and ISMI total score (r=-0.464**; p<0.001) and AQoLQPV life satisfaction score and ISMI scale total score (r=-0.506**; p<0.001).

In the Pearson analysis of BDS and BAS total scores and ISMI scale parts, positive correlation was found between BDS ans ISMI scale Part A total score (r=-0.603**; p<0.001), Part B total score (r=-0.268*; p: 0.026) and

Table 1. Total scores obtained from the scales

		min	max	mean score ± sd
ISMI Scale		36	110	58.93±14.067
BDS		0	56	14.41±10.932
BAS		0	62	13.93±13.120
AQoLQPV	PART A	44	132	90.06±17.580
	PART B	30	98	68.16±17.596
	Life Satisfaction	0	10	6.17±2.612

ISMI Scale, Internalized Stigma of Mental Illness Scale; BDS, Beck Depression Scale; BAS, Beck Anxiety Scale; AQoLQPV, Autism Quality of Life Questionnaire - Parent Version; sd, standard deviation.

life satisfaction score (r=-0.655**; p<0.001). While a positive correlation was detected between BDS and ISMI scale Part A total score (r=-0.591**; p<0.001) and life satisfaction score (r=-0.451**; p<0.001), no significant difference was found between BAS and ISMI scale Part B total score (p>0.05). In the Pearson correlation analysis of BDS total score and BAS total score, a positive correlation was detected between the total scores of the two scales (r=0.689**, p<0.001).

In the Pearson correlation analysis of the AQoLQPV parts, a positive correlation was found between the total scores of Part A and Part B (r=0.313**; p<0.009). A positive correlation was found between Part A total score and life satisfaction score (r=0.640**; p<0.001). A positive correlation was found between Part B total score and life satisfaction score (r=0.498**; p<0.001). Findings were presented in Table 2.

DISCUSSION

In our study, the relationship between the internalized stigma perception, depressive symptom level, anxiety symptoms and quality of life of 69 mothers whose children were diagnosed with ASD were investigated, and it was determined that the mothers of these patients had moderate depression and anxiety symptoms and the level of internalized stigmatization was moderate. It was determined that the quality of life scores were low in most mothers and their life satisfaction scores were also low.

When the demographic data of the patients participating in our study were examined; 58 (84.1%) of 69 patients were boys and 11 (15.9%) were girls. Although it is generally accepted that ASD is seen 3-4 times more in males, similar to the findings of some studies, the rate of boys/girls was found to be higher in our study as 5.27 (19).

In the etiology of autism, the age of the father has recently been emphasized. In meta-analyzes, it was found that the risk of ASD increases with the age of the parent.

According to the data obtained from eleven studies, the risk of ASD in children of the fathers aged between 40-49 years was 1.8 times more than fathers aged 29 years. In another meta-analysis, it was stated that the risk of ASD in children increased by 1.5 times more if the mother was under 30 years of age compared to mothers above 35 years. The results of these two meta-analyzes confirm the findings of previous studies (20). In this study, the average age of fathers is 37.13 and the average age of the mothers was 32.72. As our findings support the previous studies, advanced mother and father age was thought to be a risk in the development of ASD.

Studies have found that stigma perception of parents with higher education levels is lower (21). As a result of our study, it was determined that the perception of stigmatization decreased as the education level of the mothers of the patients increased, supporting the previous research.

In a study conducted by Kinnear et al. with the parents of 502 children with autism, almost all parents reported the stigma processes; most of them were found to have feelings of isolation and exclusion from their friends and families (22). The internalized stigma perception was found to be high in the majority of the mothers in our study, and this result supports the findings of other studies suggesting that stigma remains an important problem.

Regardless of the stigma caused by raising a child with autism, the child's autism-related behaviors have been shown to have a strong and significant effect on the parent's stigma (22). In our study, internalized stigma

Table 2. Pearson correlation analysis between ISMI scale total score and BDS, BAS and AQoLQPV parts

	1	2	3	4	5	6
1-ISMI Scale	-	r=0.628** p<0.001	r=0.400** p<0.001	r=-0.463** p<0.001	r=-0.464** p<0.001	r=-0.506** p<0.001
2-BDS		-	r=0.689** p<0.001	r=-0.603** p: <0.001	r=-0.268* p<0.026	r=-0.655** p<0.001
3-BAS			-	r=-0.591** p<0.001	r=-0.134 p<0.272	r=-0.451** p<0.001
4-AQoLQPV-A				-	0.313** 0.009	r=0.640** p<0.001
5-AQoLQPV-B					-	r=0.498** p<0.001
6-AQoLQPV-LS						-

*p<0.05 **p<0.01

perception and autism-specific difficulties were found to play a major role in making parents' lives challenging. As a result of a study conducted with the parents of 2,649 children and control groups diagnosed with ASD, it was found that the parents of a child with ASD were diagnosed with depression more than the parents of non-ASD children (23). In another study, the prevalence of affective disorders in the mothers of preschool children with ASD was investigated and the frequency of mood disorders was found to be 29.8%. Among these, major depressive disorder was seen as 14.9%, and it was determined that it was the most common psychiatric disorder, followed by adjustment disorder (10.7%) and anxiety disorders (3.3%), respectively (10). Depression symptoms were detected in 63.8% of the mothers of the patients in our study, and this result supports the previous studies.

The first years of childhood is a time period in which developmental difficulties are often noticed for the first time and a complicated process occurs in the diagnosis of ASD. Therefore, preschool period creates a high level of anxiety and depression risk to parents of children with ASD (24). In studies conducted with caregivers, it was reported that the burden of care was associated with the frequency of depression symptoms, and the anxiety experienced by caregivers could increase the depression they might experience (25). Our findings contribute to a large research group documenting high levels of parental anxiety and depression symptoms among mothers of the children with ASD.

Benson et al. reported in their study conducted with 215 parents of the ASD-diagnosed children aged between 3-7 years that anger, anxiety and depressive moods were significantly higher in parents and it was found that the anxiety experienced by the parent was proportional to the symptoms of depression (26). In this study, a significant correlation was found between the anxiety symptoms and depression symptoms of the mothers of the patients, and it was found that the symptoms of depression increased as the level of anxiety increased in the mothers.

Studies generally find a positive relationship between depression, anxiety, and stigma (27). In our study, depression and anxiety symptoms were found to be high in mothers with high internalized stigma perception.

It has been shown that families of the children with autism have higher levels of child care burden, higher probability of leaving work due to child care problems, and less participation in social activities and community services (28). As the quality of life of the mothers in our study decreased, life satisfaction decreased.

Concerning the children with autism, parents who feel overwhelmed by the stigmatizing responses of others are at risk of avoiding supportive groups and programs (29). This situation affects the education of the children. Our study argues that this problem should be addressed in more detail by investigating the internalized perception of stigmatization in mothers of children with autism.

Although stigma research made so far have begun to hold an important place in publications for protecting people with special needs, the literature especially in Turkey has a small number of stigma research on mothers of the children with ASD. Our study emphasizes that these problems should be addressed as a study investigating the internalized stigma perception, anxiety-depression symptoms and quality of life of mothers of children with autism, especially in a society whose sociocultural level is considered to be low.

While it is observed that the stigma associated with ASD is important and widespread, there is a need for a systematic examination of a large ASD family population that evaluates the components and effects of stigma in family life.

CONCLUSION

In this study, internalized stigma perception, depression and anxiety symptoms and quality of life in mothers of 69 patients who applied to Dicle University Medical School Hospital Child and Adolescent Psychiatry Department polyclinic and followed up for at least 6 years with the diagnosis of ASD were investigated.

It was found that the mothers of the patients in our study experienced moderate internalized stigma perception and had moderate depression and anxiety symptoms. Mothers' quality of life scores and life satisfaction scores were found to be low. A significant positive correlation was found between internalized stigma perception, anxiety and depression symptoms. Due to the difficulties specific to autism, the internalized stigma perception level was found high in mothers. When the quality of life of mothers was evaluated, the quality of life decreased as the internalized stigma perception, depression and anxiety symptoms increased. It was determined that mothers whose children had high autism-specific difficulties experienced higher levels of depression and anxiety. It was determined that the quality of life and life satisfaction of mothers decreased when the child had high autism-specific difficulties. A significant positive relationship was found between anxiety symptoms and depression symptoms of the mothers of the patients.

As a result, improving the autism-specific difficulties of children will have a positive effect on children with ASD, and will also provide a basis for relieving parenting anxiety in caregivers. Early intervention approaches that focus on parenting challenges can strengthen the positive coping strategies parents use and can increase parental flexibility. Coping skills can also increase so that parents can take care of children as a result of higher quality of life.

Although there have been many studies for social stigmatization of mental disorders, studies on families' self-stigmatizing attitudes are relatively few. For this reason, our study is important in terms of internalized stigma, depression, anxiety symptoms and quality of life in mothers of children with autism.

The limitations of the study were the low number of patients in our study and the examination of stigma, depression and anxiety symptoms only in mothers, and the fact that the expression changes made in accordance with the purpose of the study in the structured Internalized Stigma of Mental Illness (ISMI) Scale can affect the scale scores. Larger studies are needed in order to examine the stigma perception, depression and anxiety symptoms of all members of a family with a autism-diagnosed member.

This study was presented as a verbal paper at the 28th National Congress of Child and Adolescent Mental Health and Diseases (9-12 May 2018, Istanbul).

Ethics Committee Approval: Ethics committee approval of the study was approved by the Non-Interventional Clinical Ethics Committee of the Faculty of Medicine, Dicle University, with the decision no. 85 dated 17.04.2017.

Informed Consent: Informed consent was obtained from the parents.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - TY; Design - TY, SN, BÖ; Supervision - BÖ, TY, SN; Resource - BÖ Materials - BÖ; Data Collection and/ or Processing - BÖ; Analysis and/or Interpretation - BÖ; Literature Search - BÖ; Writing - BÖ; Critical Reviews - BÖ, TY, SN.

Conflict of Interest: There is no conflict of interest.

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