

## Examination of the Relationship Between the Mental Status and Social Support of Parents of Children with Epilepsy

Nigar Özdemir<sup>1</sup>, Mualla Yılmaz<sup>2</sup>

<sup>1</sup>Department of Bone Marrow Transplant, Mersin University Hospital, Turkey

<sup>2</sup>Department of Psychiatric Nursing, Mersin University Faculty of Nursing, Turkey

### Abstract

**Background:** Epilepsy is a chronic disease where child and the family are stigmatized; financial damage occurs; family relationship and roles change; the stress levels increase and the relationships between siblings are deteriorated.

**Aim:** This study was conducted to determine the relationship between the mental state and social support of parents of children with epilepsy.

**Methods:** The population of the study consists of all parents of children followed up for epilepsy in a Child Neurology Clinic, and the sample consists of 147 parents who meet the inclusion criteria of the study. The data were collected with The Personal Information Form, The Brief Symptom Inventory, and The Multidimensional Scale of Perceived Social Support (MSPSS). In the evaluation of the data, Student *t*-test, ANOVA, and Post-Hoc tests were used.

**Results:** In the current study, the mean scores of depression, negative self, somatization, hostility, and the brief symptom inventory of the single individuals were higher than those of the married individuals. The somatization mean scores of mothers were found to be higher than those of fathers. The family subdimensions mean scores of MSPSS and the total MSPSS mean scores of the single individuals were lower than the married individuals.

**Conclusions:** In this study, it was found that as the family support of parents of children with epilepsy decreased, their levels of anxiety, depression, and negative self increased. It can be said that as the social support of the parents decreases, their mental problems increase.

Therefore, it could be recommended to organize social projects for these parents in order to increase their social support and support their mental state.

**Keywords:** Epilepsy, parents, children, social support, mental status, nursing

### Introduction

Epilepsy is a chronic disease that results from the increased stimulability of the nerve cells in the brain and causes the child and the family to be stigmatized, financial damage, family relationship and roles to change, the stress levels to increase, and the relationships between siblings to deteriorate.<sup>1</sup> Epilepsy seizures are different from other chronic diseases in that they occur in an unexpected way. That's why, epilepsy has an extremely negative effect on the physical and psychological functions of the children and parents, which affects the disease management adversely.<sup>2</sup> In a study conducted, it was determined that parents, whose children were diagnosed with epilepsy, suffered from a great deal of stress and their divorce rates were higher.<sup>3</sup> According to the study Fazlıoğlu et al.<sup>5</sup> carried out, it was stated that parents felt deeply sad when their children were diagnosed with epilepsy. When the disease is first diagnosed, parents' first reactions were denial, shock, disappointment, misery, and feeling of mourning and depression.<sup>4,5</sup> Parents' witnessing the epilepsy seizures of their children is an extremely worrisome situation, in which they feel desperate. As a result of this, they exhibit overprotective and overfond behaviors toward their children.

In another study performed, it was emphasized that parents of the children with epilepsy suffered from stress as the future of the children (marriage, career, etc.) would be affected adversely due to the prognosis of the disease and the effects and side effects of the medicine.<sup>6</sup> It was determined that children with epilepsy had more difficulty in establishing a relationship with their parents and teachers at school than patients with rheumatoid arthritis and stated that they felt lonely.<sup>7</sup> In a study carried out with teachers, it was stated

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Corresponding author: Mualla Yılmaz  
E-mail: mualley69@gmail.com

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that children with epilepsy thought they might cause some troubles in the classroom during their education.<sup>8</sup> The uncertain nature of epilepsy is a reason that worries parents.<sup>2</sup> Furthermore, paying for children's training costs and the upkeep causes stress and emotional problems for parents.<sup>9</sup> In this respect, it is vital that parents have social support. In a study, it was observed that parents of the children with epilepsy needed social support and this support reduced the negative effects of stress and made it easier for mothers to accommodate themselves to the social life.<sup>10</sup> How much parents and all the family members support each other and the harmony in the family is of considerable importance.<sup>11</sup>

In our country or abroad, studies that assessed the relationship between social support and the mental states of parents of children with epilepsy together are restricted. In this context, it has been intended to determine the relationship between parents' mental status and social support in this study.

## Method

### Type of Research

This study is a descriptive research type. The population of the research is composed of all the parents of the children who applied to the Pediatric Neurology Clinic in a faculty of medicine research and application hospital for epilepsy between November 15, 2016, and February 15, 2017. Whether there was a linear relationship between the selection of sample in research and scales to be used in research (The Brief Symptom Inventory and The Multidimensional Scale of Perceived Social Support) was calculated by an analyst. In this context, according to Mukuka's study, the least clinically significant correlation coefficient was found as  $r=0.30$ .<sup>12</sup> Since the least 30% correlation between the brief symptom inventory and the multidimensional scale of perceived Social Support was found, statistics was calculated as 50 parents so that it could be significant according to e-picos. Accordingly, the number of samples in this research was determined as at least 50 mothers and 50 fathers. Between November 15, 2016, and February 15, 2017, 147 parents who met the inclusion criteria of the study comprised the sample of this research.

### Inclusion Criteria

- Parent who has been diagnosed their child with epilepsy for at least before 6 months
- Parent who had not psychiatry diagnosis before or after their child being with epilepsy
- Parent who has Turkish literacy
- Parent who volunteers to participate in the research

### Data Collection

The data were collected using The Personal Information Form, The Brief Symptom Inventory, The Multidimensional Scale of Perceived Social Support by face to face in a outpatient clinic. The process of data collection lasted for approximately 15–20 minutes. Every day, the researcher stayed half-day and talked to the 5–6 parents on average face to face. Data were collected in an empty and quiet outpatient clinic. The researcher works as a pediatric nurse at the same time in the hospital where data were collected.

### The Personal Information Form

The personal information form was prepared based on literature and was made up of 11 questions containing socio-demographic characteristics such as age, gender, occupation, marital status, educational status, income status, health insurance, and family characteristics.

### The Brief Symptom Inventory

The validity and reliability studies of the scale of the brief symptom inventory, which was developed by Derogatis to scan the mental symptoms in 1992, were performed by Sahin and Durak in Turkey in 2002. Brief symptom inventory (BSI), composed of 53 items, is a four-point Likert scale. It is made up of five subscales such as anxiety, depression, negative self, somatization, and hostility. The fact that the scores obtained from the scale were high demonstrated that the mental symptoms of the individual were increasing and in three different studies, it was stated that Cronbach alpha internal consistency coefficients obtained from the total score of the scale ranged from 0.96 to 0.95 and the coefficients obtained for subscales varied between 0.55 and 0.86.<sup>13</sup> In this study, Cronbach alpha values were found to be between the least 0.55 (hostility) for subscales and the highest 0.86 (negative self).

### The Multidimensional Scale of Perceived Social Support

Developed by Zimet and his friends in 1988, the validity and reliability studies of the scale were performed by Eker and Arkar<sup>14</sup> in Turkey. The scale is made up of total 12 questions regarding family, friend, and significant other subscale dimensions. In the validity and reliability studies performed, it was stated that Cronbach alpha coefficients were seen to be between 0.80 and 0.95. The fact that the scores obtained were high means that perceived Social support was high.<sup>14</sup> In the study, Cronbach alpha values were found 0.91.

### The Ethical Aspect of the Research

Written ethics committee approval (date/number 20.08.2016/330) and institutional permission of were received from Mersin University Clinical Research Ethics Committee. After the written and oral approvals had been received from the parents who agreed to take part in the study, data collection forms were filled by them.

### Evaluation of Data

The evaluation of the data was made using MedCalc®v11.0.1 package program. Shapiro-Wilk test was used to check whether the normal distribution of the data was suitable or not. In the evaluation of the data, Student's *t*-test was used to compare mean scores of two groups, ANOVA test for the mean scores more than two groups and with the aim of determining the difference with ANOVA, Tukey was used as post hoc test. Pearson correlation test was used to determine the relationship between the two continuous variables.

### Results

In total, 37.4% of the parents of children with epilepsy were 41 years old and over and their average age was  $37.4 \pm 8.6$ ; 61.9% of the parents were mothers, 89.8% of them were married, and 61.9% of them

were primary education graduates. It was determined that while there was a kinship in 68.7% of the parents of children with epilepsy, 68.7% of the parents had another child with a chronic disease in the family. Furthermore, it was found that 68% of the parents had a nuclear family.

BSI sub-dimension mean scores of the parents of children with epilepsy participated in the study were  $11.29 \pm 12.50$  for anxiety,  $13.88 \pm 14.39$  for depression,  $9.20 \pm 8.12$  for negative self,  $7.19 \pm 6.22$  for somatization, and  $7.01 \pm 4.88$  for hostility. It was determined that the three Global Index mean scores were  $1.71 \pm 0.58$  for Positive Symptom Distress Index (PSDI),  $0.92 \pm 0.72$  for Global Severity Index (GSI), and  $26.43 \pm 18.22$  for Positive Symptom Total (PST).

The MSPSS family support, the friend's support, the significant other support sub-dimension and total MSPSS mean scores of MSPSS of the parents of children with epilepsy were  $20.21 \pm 6.16$ ,  $16.72 \pm 6.3$ , and  $14.4 \pm 7.01$ ,  $51.34 \pm 16.43$ , respectively (Table 1).

While the somatization mean scores of the mothers of children with epilepsy were higher than the fathers of those with epilepsy ( $8.01 \pm 5.65$ ), the difference between the groups was found to be statistically significant ( $P < .05$ ). Whereas depression, negative self, somatization, and hostility mean scores of the parents of children with epilepsy were the highest for the single individuals ( $28.86 \pm 30.24$ ), ( $13.4 \pm 9.58$ ), ( $11.2 \pm 8.17$ ), and ( $9.8 \pm 5.04$ ), the difference between the groups was found to be statistically significant ( $P < .05$ ).

Table 1. Mean Scores on the Brief Symptom Inventory and Multidimensional Scale of Perceived Social Support of Parents with Children with Epilepsy (n=147)			
BSI	Possible Lower and Upper Values	X ± SS	Received Lower and Upper Values
Anxiety	0-52	$11.29 \pm 12.50$	0-106
Depression	0-48	$13.88 \pm 14.39$	0-127
Negative Self	0-48	$9.20 \pm 8.12$	0-34
Somatization	0-36	$7.19 \pm 6.22$	0-28
Hostility	0-28	$7.01 \pm 4.88$	0-24
Global Severity Index	0-4	$0.92 \pm 0.72$	0-3.77
Positive Symptom Total	0-53	$26.43 \pm 18.22$	0-151
Positive Symptom Distress Index	0-4	$1.71 \pm 0.58$	1-3.75
MSPSS	Possible Lower and Upper Values	X ± SS	Received Lower and Upper Values
Family Support	4-28	$20.21 \pm 6.16$	4-28
Friend Support	4-28	$16.72 \pm 6.3$	4-28
Significant other	4-28	$14.4 \pm 7.01$	4-28
MSPSS Total Score	12-84	$51.34 \pm 16.43$	12-84

According to Table 2, it was determined that there was not a statistically significant difference in the BSI sub-dimensions and mean overall scale scores in terms of age, educational status, social security of the parents of the children with epilepsy, whether they are relatives or not, whether there was another child with chronic disease in the family or not, and family-type variables.

It was determined that when examined the marital status of the parents of children with epilepsy and the mean scores of MSPSS, family sub-dimension of MSPSS, and mean overall scale scores of the single individuals ( $17 \pm 6.24$ ) were lower than the married ones ( $43.1 \pm 6.21$ ) and a statistically significant difference between the groups was found ( $p < .05$ ). It was determined that the family sub-dimension of MSPSS, significant other sub-dimension, and mean overall scale scores were the lowest ( $15.25 \pm 5.86$ ) ( $13.16 \pm 6.73$ ), ( $48.13 \pm 14.97$ ) for the individuals with certificates of primary education and there was a statistically significant difference between the groups ( $P < .05$ ). Tukey test was performed to identify by which group the difference between family sub-dimension of MSPSS, significant other sub-dimension, and mean overall scale scores was caused. According to Tukey test, the significant difference between the family sub-dimension of MSPSS, significant other sub-dimension, and mean overall scale scores was due to the difference between "high school graduate" and "university graduate" ( $P < .05$ ). It was determined that the parents of children with epilepsy and family sub-dimension of MSPSS, friend sub-dimension, and mean overall scale scores were the lowest ( $19.11 \pm 6.42$ ), ( $15.5 \pm 6.08$ ), ( $48.16 \pm 16.65$ ), respectively, for lower-income individuals and there was a statistically significant difference between the groups ( $P < .05$ ). Tukey test was performed to identify by which group the difference between the family sub-dimension of MSPSS, friend sub-dimension, and mean overall scale scores was caused. According to Tukey test, the significant difference between the family sub-dimension of MSPSS, friend sub-dimension, and mean overall scale scores was caused by the difference between the balance of income and expenses and "income less than expenses."

It was determined that there was not a statistically significant difference in the sub-dimensions of the MSPSS and mean overall scale scores according to age, educational status, social security of the parents of children with epilepsy, whether they are relatives or not, whether there was another child with chronic disease in the family or not, and family type variables (Table 3).

The correlation of the total and sub-dimensions scores of BSI and MSPSS of the parents of children with epilepsy is shown in Table 4. It was determined that there was a low-level and negatively significant relationship between the subscale dimensions of BSI—namely, anxiety, depression, negative self, somatization—and variables of GSI and PST and Perceived Family Support, which is the sub-dimension of the MSPSS ( $P < .05$ ). It can be said that as the family support of the parents dwindles, the levels of anxiety, depression, and negative self increase.

It was determined that there was a low-level and negatively significant relationship between the total scale score of MSPSS and anxiety and negative self and GSI ( $P < .05$ ).

### Discussion

The relationship between the mental state of the parents and their social support was examined in this study. It was determined that

Table 2. Comparison of Brief Symptom Inventory Scores According to Socio-Demographical Characteristics of Parents with Children with Epilepsy

Variables	n	Anxiety	Depression	Negative Self	Somatization	Hostility
		Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD
<b>Age</b>						
18-22 year	2	16 $\pm$ 2.82	19 $\pm$ 5.65	14.5 $\pm$ 3.53	11 $\pm$ 2.82	10.5 $\pm$ 2.12
23-30 year	40	11.05 $\pm$ 9.36	15.9 $\pm$ 21.19	9.3 $\pm$ 9.01	8.92 $\pm$ 7.40	7.45 $\pm$ 4.76
31-40 year	50	11.46 $\pm$ 9.57	14.24 $\pm$ 10.2	10.74 $\pm$ 7.75	6.58 $\pm$ 4.17	7.52 $\pm$ 4.61
41 year and above	55	11.14 $\pm$ 16.5	11.90 $\pm$ 11.4	7.54 $\pm$ 7.67	6.34 $\pm$ 6.73	6.10 $\pm$ 5.19
<i>P</i> **		0.99	0.56	0.18	0.15	0.29
<b>Marital status</b>						
Married	132	10.78 $\pm$ 12.7	12.18 $\pm$ 10.2	8.72 $\pm$ 7.83	6.73 $\pm$ 5.82	6.67 $\pm$ 4.78
Single	15	15.8 $\pm$ 9.5	28.86 $\pm$ 30.2	13.4 $\pm$ 9.58	11.2 $\pm$ 8.17	9.8 $\pm$ 5.04
<i>P</i> ***		0.14	<b>0.05*</b>	<b>0.03*</b>	<b>0.008*</b>	<b>0.02*</b>
<b>Parent</b>						
Mother	91	11.76 $\pm$ 8.74	15.03 $\pm$ 10.4	9.95 $\pm$ 8.1	8.01 $\pm$ 5.65	7.39 $\pm$ 4.27
Father	56	10.51 $\pm$ 16.9	12.01 $\pm$ 19.1	7.98 $\pm$ 8.06	5.85 $\pm$ 6.9	6.39 $\pm$ 5.71
<i>P</i> ***		0.56	0.22	0.15	<b>0.05*</b>	0.23
<b>Educational status</b>						
Primary school graduate	91	11.62 $\pm$ 14.2	12.82 $\pm$ 10.9	9.252 $\pm$ 8.37	7.35 $\pm$ 6.23	6.47 $\pm$ 4.69
High school graduate	32	10 $\pm$ 8.02	13.62 $\pm$ 9.59	8.34 $\pm$ 6.63	6.96 $\pm$ 5.46	7.93 $\pm$ 4.19
University graduate	24	11.75 $\pm$ 10.3	18.25 $\pm$ 26.4	10.16 $\pm$ 9.09	6.87 $\pm$ 7.29	7.83 $\pm$ 6.17
<i>P</i> **		0.81	0.26	0.71	0.92	0.23
<b>Kinship status of parents</b>						
Yes	46	13.04 $\pm$ 17.8	12.30 $\pm$ 11.1	9.021 $\pm$ 7.32	7.26 $\pm$ 6.32	6.89 $\pm$ 4.80
No	101	10.49 $\pm$ 9.12	14.60 $\pm$ 15.6	9.28 $\pm$ 8.49	7.15 $\pm$ 6.21	7.06 $\pm$ 4.94
<i>P</i> ***		0.25	0.37	0.86	0.93	0.84
<b>Presence of another child with chronic disease in the family</b>						
Yes	20	11.9 $\pm$ 13.11	14.5 $\pm$ 13.19	10.5 $\pm$ 10.15	8.35 $\pm$ 7.15	6.5 $\pm$ 5.052
No	127	11.19 $\pm$ 12.4	13.78 $\pm$ 14.6	9.07 $\pm$ 7.79	7.00 $\pm$ 6.07	7.094 $\pm$ 4.87
<i>P</i> ***		0.82	0.84	0.62	0.37	0.62
<b>Family type</b>						
Nuclear family	100	11.42 $\pm$ 13.6	13.94 $\pm$ 15.9	9 $\pm$ 8.1	6.96 $\pm$ 6.26	6.92 $\pm$ 5.21
Extended family	39	10.79 $\pm$ 10.2	12.48 $\pm$ 10.5	9.05 $\pm$ 8.52	7.92 $\pm$ 6.50	6.71 $\pm$ 3.76
Broken family	33	15.33 $\pm$ 0.57	28.66 $\pm$ 1.52	18.33 $\pm$ 6.65	8.66 $\pm$ 4.50	13 $\pm$ 4.35
Other	55	10.2 $\pm$ 8.10	14.8 $\pm$ 7.85	9 $\pm$ 2.54	5.2 $\pm$ 4.08	7.6 $\pm$ 4.92
<i>P</i> **		0.94	0.32	0.28	0.72	0.19

\**P* < .05; \*\*ANOVA; \*\*\*Student's *t*-test.

Table 3. Mean Scores on the Multidimensional Scale of Perceived Social Support According to Socio-Demographical Characteristics of Parents with Children with Epilepsy					
Variables	(n)	Family dimension Mean ± SD	Friends Dimension Mean ± SD	Significant Other Dimension Mean ± SD	Scale Total Score Mean ± SD
<b>Age</b>					
18-22 year	2	18.5 ± 7.77	13.5 ± 3.53	17.5 ± 7.77	49.5 ± 19.09
23-30 year	40	21.15 ± 6.04	16.62 ± 6.60	15.27 ± 6.60	53.05 ± 15.53
31-40 year	50	19.84 ± 5.70	17.3 ± 5.68	15.16 ± 7.18	52.3 ± 16.35
41 year and above	55	19.92 ± 6.68	16.4 ± 6.74	12.96 ± 7.06	42.29 ± 17.29
<i>P</i> **		0.71	0.78	0.27	0.69
<b>Marital</b>					
Married	132	20.57 ± 6.06	16.91 ± 6.35	14.75 ± 7.01	52.24 ± 16.27
Single	15	17 ± 6.24	15.06 ± 5.72	11.33 ± 6.43	43.1 ± 6.21
<i>P</i> ***		<b>0.03*</b>	0.28	0.07	<b>0.05*</b>
<b>Parent</b>					
Mother	91	20.01 ± 5.93	16.14 ± 5.79	14.18 ± 6.77	50.34 ± 15.19
Father	56	20.53 ± 6.55	17.67 ± 7.00	14.75 ± 7.42	52.96 ± 18.30
<i>P</i> ***		0.62	0.15	0.64	0.35
<b>Educational</b>					
Primary school graduate	91	19.71 ± 5.86	15.25 ± 5.86	13.16 ± 6.73	48.13 ± 14.97
High school graduate (a)	32	20.18 ± 6.96	18.56 ± 6.15	14.81 ± 6.91	53.56 ± 17.39
University graduate (b)	24	22.12 ± 6.03	19.87 ± 6.56	18.54 ± 6.80	60.54 ± 17.26
<i>P</i> **		0.24	<b>0.001*</b>	<b>0.003*</b>	<b>0.003*</b>
<b>Income</b>					
Equivalent to income expense (a)	45	21.91 ± 4.96	19.11 ± 5.76	15.53 ± 6.84	56.55 ± 13.63
Income more than expenses	16	21.31 ± 6.81	16.62 ± 7.29	15.81 ± 7.73	53.75 ± 19.13
Income less than expenses (b)	86	19.11 ± 6.42	15.5 ± 6.08	13.54 ± 6.91	48.16 ± 16.65
<i>P</i> **		<b>0.04*</b>	<b>0.007*</b>	0.21	<b>0.02*</b>
<b>Kinship status of parents</b>					
Yes	46	20.65 ± 5.79	17.17 ± 6.12	14.63 ± 6.44	52.36 ± 15.64
No	101	20.04 ± 6.34	16.52 ± 6.40	14.29 ± 7.28	50.87 ± 16.83
<i>P</i> ***		0.64	0.56	0.79	0.61
<b>Presence of another child with chronic disease in the family</b>					
Yes	20	20.9 ± 7.09	16.7 ± 7.28	12.85 ± 7.70	50.45 ± 19.65
No	127	20.10 ± 6.02	16.73 ± 6.16	14.64 ± 6.6.89	51.48 ± 15.95
<i>P</i> ***		0.59	0.98	0.29	0.8
<b>Family type</b>					
Nuclear family	100	20.07 ± 6.38	16.74 ± 6.31	14.3 ± 7.09	51.11 ± 16.87
Extended family	39	20.84 ± 5.52	16.64 ± 6.43	14.69 ± 6.53	52.17 ± 15.06
Broken family (divorced, death.)	3	17.66 ± 8.02	15.66 ± 5.50	11.33 ± 11.01	44.66 ± 24.01
Other	5	19.6 ± 6.65	17.8 ± 7.19	16 ± 8.39	53.4 ± 17.85
<i>P</i> **		0.79	0.97	0.82	0.88

\**P* < .05; \*\* ANOVA; \*\*\* Student's *t*-est; b>a; a>b.

**Table 4. The Relationship Between the Brief Symptom Inventory and the Multidimensional Scale of Perceived Social Support for Parents of Children with epilepsy**

		Perceived Family Support	Perceived Friend Support	Perceived Significant other support	Perceived Social Support Total Score
Anxiety	<i>P</i>	.03*	.05*	.35	.05*
	<i>r</i>	−0.18	−0.16	−0.08	−0.16
Depression	<i>P</i>	.03*	.15	.96	.18
	<i>r</i>	−0.18	−0.12	0.004	−0.11
Negative self	<i>P</i>	.001*	.04*	.24	.01*
	<i>r</i>	−0.26	−0.17	−0.09	−0.21
Somatization	<i>P</i>	.19	.05*	.91	.23
	<i>r</i>	−0.11	−0.16	0.009	−0.1
Hostility	<i>P</i>	.19	.43	.98	.43
	<i>r</i>	−0.11	−0.06	0.002	−0.06
Positive Symptom Distress Index	<i>P</i>	.18	.22	.89	.3
	<i>r</i>	−0.11	−0.1	−0.01	−0.09
Global Severity Index	<i>P</i>	.01*	.04*	.61	.05*
	<i>r</i>	−0.21	−0.17	−0.04	−0.16
Positive Symptom Total	<i>P</i>	.02*	.07	.6	.07
	<i>r</i>	−0.20	−0.15	−0.04	−0.15

\**P* < .05; \*\* Pearson correlation test.

the somatization mean scores of the mothers of children with epilepsy were higher than those of the fathers. It was stated that parents of children with epilepsy played a key role in the children's coping with it,<sup>15</sup> and the somatization scores of the mothers were higher than those of the fathers.<sup>16</sup> In another study performed, it was stated that the somatization scores of the parents of children with epilepsy were high, which was due to the fact that the parents worried that their child might have an epileptic fit in the future<sup>17</sup> and moreover the fathers of children with epilepsy were more nervous about the management of epilepsy than the mothers.<sup>18</sup> The depression, stress, and anxiety scores of the mothers of children with epilepsy were higher than those of the fathers.<sup>19</sup>

The parents of children with epilepsy tend to have both a protective and a rejecting attitude. It is thought that women take on greater responsibility for chronic patient care, elderly care, and child care than men in the Turkish culture. Moreover, in a study conducted, it was stated that men were unfamiliar with the responsibility of "taking care of a person," while women regarded "taking care" as the continuation of their past responsibilities.<sup>20</sup> The mothers of children with epilepsy can express the problems through gestures if not verbally. Therefore, it is thought that the mothers who assume greater responsibility for the care might have a higher somatization score than the fathers. In this study, it was determined that the mean scores of the single parents' depression, anxiety, negative self, and hostility were much higher than the married parents. In a study conducted by Snead et al<sup>21</sup> on epilepsy patients and their families, it was reported that the depression, anxiety, negative self, somatization, and hostility score mean of single parents were higher than those of married parents.

In contrast, it was stated that single parents benefited more from social support such as environment and friends than married ones. Literature supports this result of the study. In the Turkish culture, since married individuals get more social support than the single ones, they can support the patient and the family in case of a chronic disease, and this means that families will experience less difficulty.

It was determined that the family sub-dimension of MSPSS and mean overall scale scores of the single individuals of children with epilepsy were lower than those of the married ones. The fact that the child has epilepsy might create big changes and uncertainty in the parents' expectations of the child and in their own parental roles.<sup>22</sup> A study revealed that a feeling of uncertainty, fear, and anxiety, which the married parents experienced more than the single parents, caused them to be overprotective toward their children with epilepsy.<sup>23</sup> Another study also showed that the mean scores of MSPSS were lower for the single individuals than the married ones in terms of the marital status of the parents of children with epilepsy.

This result showed that the single parents of children with epilepsy were influenced by the fact that the child had epilepsy more negatively than the married parents because the single parents played a larger role in their children's long-lasting care and treatment.<sup>24</sup> Another study stated that the social support obtained from various sources (spouse, relative, friend, etc.) rather than only one source was more effective.<sup>25</sup> Parents of children with epilepsy are stigmatized due to the disease. Since epilepsy manifests itself only during a seizure, some parents have difficulty in explaining this situation and even keep the disease secret, hardly participate in social activities, and

prefer to stay at home, instead.<sup>11</sup> In this study, the finding that family sub-dimension of MSPSS and mean overall scale scores of the single individuals of children with epilepsy were lower than those of the married ones supports the literature.

It was determined that the family sub-dimension of MSPSS, significant other sub-dimension, friend sub-dimension, and mean overall scale scores were the lowest for the primary school graduates. According to the study of the life quality, depression, anxiety, and MSPSS in children with epilepsy conducted by Akcalı and his friends, there was not a significant relationship between the level of education and the sub-dimensions of MSPSS.<sup>26</sup> According to a study conducted on the mothers' level of education and the scores of MSPSS in India, it was found that there was no difference between the education level of the mothers and their use of social support.<sup>25</sup> The results of the study showed that patients' knowledge about their disease and the sub-dimensions of MSPSS were insufficient and in addition to this, it was observed that their level of training increased, and the sub-dimensions of MSPSS increased, too.<sup>27</sup> The present study indicates that the sub-dimension of MSPSS, significant other sub-dimension, and overall scale mean scores of the parents of children with epilepsy are the lowest for the primary school graduates, which supports the literature. Moreover, it is thought that educated parents can have access to system support, more sources, research, and knowledge.

It was found that the sub-dimension of MSPSS, friend sub-dimension, and mean total scale score were the lowest for the individuals who have less income than expenses. Some of the parents of children with epilepsy have to quit their jobs in order to look after their children with epilepsy. This leads the income of the family to fall and makes them not to participate in leisure activities. The income of the parents of children with epilepsy goes down due to the children's treatment and medication prices. The findings suggest that as the income level of the parents goes down, the family sub-dimension of MSPSS goes down too.<sup>26</sup> The study carried out by Fazlıoğlu and his friends on the effects of the childhood epilepsy on the family revealed that the parents of children with epilepsy had a social environment on their monthly income and provided that they met their children's needs and anxiety lessened too.<sup>5</sup> Studies that Akçalı and his friends conducted showed that the family dimension, in terms of income level, among the sub-dimensions of MSPSS had lower values than the other dimensions.<sup>26</sup> On the other hand, the study done by Dorris et al<sup>25</sup> demonstrated that the family support, friend support, and total support scores of the patient relatives with minimum wages were low, while the family support and total support scores of those with high income were high. Our study also indicates that sub-dimension of MSPSS, friend sub-dimension, and overall scale mean scores of the parents of children with epilepsy are the lowest for the families with less income than the expenses, which supports the literature.

A low-level and negatively significant relationship was found between anxiety, depression, negative self, variables of GSI and PST, which are subscale dimensions of BSI, and Perceived Friend Support, which is the subdimension of MSPSS. It can be said that the family support of the parents decreases, and their levels of anxiety, depression, and negative self increase. A low-level and negatively significant relationship was found between the total scale score of MSPSS and anxiety, negative self, and GSI. The results of the study suggest that parents play a crucial role in taking care of their children and that there is a relationship between the mental states of the parents and social support.

The healthcare professionals who work with the parents of children with epilepsy should schedule a modular education program regularly, which include training sessions aimed at developing the mental health of the parents and increasing their social support.<sup>2</sup> A study indicates that the parents of children with epilepsy use supplementary and alternative approaches to their children with epilepsy and the most common approach is to pray.<sup>28</sup> If the families of children with epilepsy gather together with the aim of increasing children's social support, solving their prevalent problems, and sharing their experiences in camps and social responsibility projects, this can help ease their anxiety.<sup>2</sup> It must be acknowledged by the nurses that parents should enhance overcoming skills to maintain a good mental state and improve it. Nurses play a key role in improving the best health outcomes for the children with epilepsy by enlightening parents about epilepsy, teaching them self-management skills, and discussing treatment options.<sup>12</sup>

### Limitations of the Study

All the data were obtained from the parents of children who stayed only in a hospital. Since the research was done solely in a province, it cannot be generalized to the whole country. All the data are based on the personal statements of the parents of the children.

### Conclusion and Suggestions

The results of the study show that as the family support of the parents of children with epilepsy decreases, their levels of anxiety, depression, and negative self increase. Likewise, as the social support of the parents dwindles, their mental health conditions increase. In accordance with these results, it has been suggested that social responsibility projects aimed at increasing their social support and supporting their mental states should be organized.

**Ethics Committee Approval:** Ethics committee approval was received for this study from Mersin University Clinical Research Ethics Committee (date and number: August 20, 2016, and 2016/330).

**Informed Consent:** Written informed consent was obtained from all participants who participated in this study.

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