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Epilepsili Çocuklarda Psikopatoloji, Yaşam Kalitesi ve Ebeveynlerinde Psikopatoloji Taraması

Psychopathology and Life Quality in Children with Epilepsy and Psychopathology in Their Parents

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ÖZ

GİRİŞ ve AMAÇ: Epilepsi en sık görülen kronik nörolojik bozukluklardan biridir. Epilepsili çocukların sağlıklı çocuklara ve diğer kronik hastalıkları olan çocuklara göre daha çok psikiyatrik hastalığa sahip olduğu bilinmektedir. Bu çalışma ile epilepsili çocuklardaki psikopatoloji, yaşam kalitesi algıları, ebeveynlerindeki psikopatolojiyi belirlemek amaçlanmıştır.

YÖNTEM ve GEREÇLER: Çalışmaya 48 epilepsili çocuk ve 48 sağlıklı çocuk ve ailesi dahil edildi. Değerlendirmeler için Ankara Gelişim Tarama Envanteri (AGTE), Kısa 1-3 Yaş Sosyal ve Duygusal Değerlendirme Ölçeği (K-1/3SDD), Erken Çocukluk Envanteri–4: Ebeveyn Formu (EÇE-4: EF), Çocuklar için Yaşam Kalitesi Ölçeği (ÇİYKÖ), Ruhsal Belirti Tarama testi (SCL-90) kullanıldı.

BULGULAR: 1-3 yaş grubundaki epilepsili çocukların sosyal ve duygusal değerlendirme ölçek puanları kontrol grubu ile benzer bulundu. 4-6 yaş çocukları için EÇE-4: EF ile yapılan değerlendirmede, dikkat eksikliği hiperaktivite bozukluğu (DEHB), distimik bozukluk, yaygın anksiyete bozukluğu (YAB), travma sonrası stres bozukluğu (TSSB) ve eliminasyon bozuklukları kontrollere kıyasla yüksek oranda tespit edildi. Epilepsili grubun annelerinde somatizasyon, depresyon, anksiyete, öfke-düşmanlık, fobik anksiyete ve ek skala puanları anlamlı derecede yüksek bulunmuştur. Epilepsili grubun yaşam kalitesi toplam puan ve alt ölçek puanları kontrol grubu ile benzer tespit edildi.

TARTIŞMA ve SONUÇ: Bu çalışmada 1-3 yaş grubu epilepsili çocuklarda her hangi bir psikopatoloji saptanmazken, 4-6 yaş epilepsili çocuklarda psikopatoloji sıklığı artmıştır. Epilepsili çocukların annelerinde ruhsal belirti sıklığının arttığı tespit edilmiştir.

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Türkçe Kısa Başlık: Epilepsili Çocuklarda Psikopatoloji ve Yaşam Kalitesi

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ABSTRACT

INTRODUCTION: Epilepsy is one of the most common chronic neurological disorders. It is known that epileptic children have more psychiatric diseases than normal population and children with other chronic diseases. The present study was aimed to identify the psychopathology of children with epilepsy, their life quality and the psychopathology of their parents.

METHODS: 48 children with epilepsy, 48 children for control group and their parents were included in this study. We used Ankara Development Screening Inventory (ADSI), Brief Infant Toddler Social Emotional Assessment (BITSEA), Early Childhood Inventory-Parent Scale (ECI-4), Pediatric Quality of Life Inventory (PedsQL) and Symptoms Checklist-90 (SCL-90) for assessments.

RESULTS: There was no difference between the epilepsy and the control groups in BITSEA scores for 1-3 years. In the ECI-4 assessment for 4-6 years, Attention Deficit Hyperactivity Disorder (ADHD), general anxiety disorder (GAD), social phobia (SP), posttraumatic stress disorder (PTSD), dysthymic disorders and elimination disorder (ED) were found higher in the children with epilepsy. In the mothers of the children with epilepsy, psychiatric symptoms were found higher than the controls. There was no difference in quality of life scores between the children with epilepsy and the control groups.

DISCUSSION AND CONCLUSION: In the present study, no psychopathology was detected in the children with epilepsy 1-3 years of age, while frequency of psychopathology was increased in those 4-6 years of age. Also, it was found that the frequency of psychiatric symptoms was increased in the mothers of the children with epilepsy.

Keywords: Child, epilepsy, life quality, psychopathology

İngilizce Kısa Başlık: Psychopathology in children with epilepsy

Introduction

Existence of the psychopathology related with epilepsy in childhood or adolescence have frequently been showed by researchers. It is known that children with epilepsy have more psychiatric problems rather than healthy children or children with other chronic diseases (1). Comorbid psychiatric disorder level in epileptic patients was stated between 21-60% (2). In this area, the majority of the studies were made in children and adolescents, and psychiatric disorders in infants and pre-school children haven't been assessed sufficiently (3,4).

In recent years, researchers have been focusing on life quality of patients with epilepsy and the importance of psychiatric comorbidity has also been emphasized in the studies (5,6) . It was found that, comorbid psychiatric disorders such as anxiety or depression decline life quality of children with epilepsy (7). Although in most studies it was shown that epilepsy declines children's life quality, there isn't enough data showing the relation between chronic disorders and life quality in children aged 1-6 (8,9). In only study, it was found that a decline in life quality in first six months in children with epilepsy, aged 4-12 (10).

Negative effects of chronic disorders on mental health of parents are known. Addition to physical care, the right approach to mental health of children and parents is also necessary in order to treat children with epilepsy appropriately (11). Despite the fact that parents of children with epilepsy have plenty of psychiatric, social and economical problems which affect the life quality of the whole family (12), this issue generally is neglected by researchers.

In this study, it was aimed to scan pre-school children with epilepsy for psychiatric disorders, to identify the relation between epilepsy and life quality and to determine mental symptoms in parents of these children.

Material and Methods

Sample of 48, aged 1-6 (24 children aged 1-3, 24 children aged 4-6), treated in a University Medical Faculty Child Neurology policlinic between May 2011 and October 2011 are involved in this study.

The permission is taken from parents of all children involved in the study and it is approved by the University Medical Faculty Ethical Committee. Epilepsy diagnosis was made by a neurologist based on clinical symptoms and Electro Encephalography (EEG) findings with regard to International Classification of Epilepsy. In cranial imaging of the epilepsy group, no pathological sign were found. Their EEG findings were in accordance with their present pathologies and epileptic malign syndrome, Landau Klefner Syndrome, other neurological seizure syndromes and Electrical Status of Sleep (ESES) patients were excluded from the studies. All cases were diagnosed with generalized tonic-clonic seizures and epilepsy diagnosis was made minimum a year ago or followed maximum 2 years and they were getting antiepileptic treatment for at least one year. Also children who suffered only one seizure episode were excluded. Based on the results of Ankara Development Screening Inventory (ADSI) evaluation, patients whose cognitive development was abnormal were not included in the study.

As the control group, 48 healthy-volunteer children aged 1-6 and their parents were included. The children were matched in terms of age and gender with the patient group. Evaluations of medical history, seizure semiology, neurologic and psychiatric examination and neurophysiologic assessment were made. Both groups consisted of children who did not have any other neurologic disorder, congenital metabolic disorder, congenital genetic disorder, or mental retardation.

ADSI : It is an inventory evaluating development and skills of infants and pre-school children based on information obtained from their caregivers. This inventory provides 5 different scores: Total Development Score, Language-Cognitive, Fine-Motor, Gross-Motor and Social Skill-Self Care scores. When Denver Development Screening Inventory is used, the relation between two measurement scales was found high (13).

Brief Infant Toddler Social Emotional Assessment (BITSEA): BITSEA is a scale developed by Briggs-Gowan and colleagues for children aged between 1 and 3 and filled by parents and is proportioned as “not right/rarely”, “partially right/sometimes”, ‘quite right/frequently” which involves

42 questions (14). This scale examines the last month of children and is developed as 3 optioned likert scale. There are 3 indexes: the total score of the scale, problem field score, and capability score.

Early Childhood Inventory-Parent Scale (ECI-4): ECI-4 is a scale developed for children aged 3-6 years and filled in by parents and teachers and involved 2 question lists. Both of the question lists that teachers and parents fill in involve 108 items. It evaluates behavioral, emotional and cognitive problems occurring in childhood according to diagnosis criteria of Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV). It was developed by Sprafkin and Gadow in 1996 (15).

Pediatric Quality of Life Inventory (PedsQL): PedsQL is a scale developed by Varni and colleagues in 1999 with the purpose of measuring life qualities related to health of children and adolescents aged 2-18 years (16). PedsQL is formed by 7 forms in total: parent scale for children or adolescents aged 2-4, 5-7, 8-12, 13-18 and self-assessment scale for children or adolescents aged 5-7, 8-12, 13-18. It is developed in the form of a scale 3 optioned likert type for children aged 5-7 years and another 5 optioned likert type for children and adolescents aged 8-18 years. Scoring is made in 3 fields. First of all, scale total point (STP), secondly physical health total point (PHP), thirdly psychosocial health total point (PSHP) formed after calculating of item points evaluating emotional, social and school functionality.

Symptoms Checklist-90 (SCL-90): Symptom Checklist is developed by Deragotis with reference to hypothetic suggestions related to schema's role in the development of psychopathology (17). The scale has 9 subscales reflecting 9 different symptom groups: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity,

Depression, Anxiety, Anger-Hostility, Phobic Anxiety, Paranoid İdeation and Psychoticism. Moreover, the scale also has 3 indexes which are General Symptom Index (GSI), Positive Symptom Total (PST), and Positive Symptom Level (PSL) and it also has an additional scale formed by items evaluating problems related to guilt feelings, eating problems, and sleep.

Statistics: Statistical analyses were made by "SPSS 17.0" program. 'Shapiro Wilk','Kolmogorov-Simirnov" test, 'independent samples T test', 'Mann-Whitney U test', and chi-square test' were used. The statistical significance level was accepted as $p<0,05$.

Results

There were 32 (66.7%) females and 16 (33.3%) males in both groups. 24 children aged 1-3 years and 24 children aged 4-6 years were included in the study. Mean age was calculated as 42.56 ± 16.70 months.

In all ADSI subscales there was no statistical difference between epilepsy group and control group except for Language Cognitive Development. It was found that scores of Language Cognitive Development was statistically lower in children with epilepsy (p=0.047) (Table 1). When BITSEA for children aged 1-3 years was compared in terms of total scores and subscale scores, the difference between the patient and the control group wasn't found statistically significant (Table 2).

Table 1. Evaluation of the groups with ADSI

	EPILEPSY	CONTROL	
	(n=48) Mean ± Sd	(n=48) Mean ± Sd	
Total Development Score	37.19±16.89	45.27±21.77	p=0.083
Language-Cognitive	35.44±16.55	44.47±21.07	p=0.047
Fine Motor	36.25±16.85	42.72±21.40	p=0.159
Gross-Motor	38.47±15.89	41.05±17.15	p=0.510
Social and Skill-Self Care	38.75±17.12	40.97±18.51	p=0.599

Abbreviations: ADSI**:** Ankara Developmental Screening Inventory

Table 2. The Brief Infant-Toddler Social and Emotional Assessment (BITSEA) Scores

	EPILEPSY	CONTROL	
	(n=24) Mean ± Sd	(n=24) Mean ± Sd	
Problem Field Score	14.79 ± 8.08	12.41 ± 4.77	p=0.223
Capability Score	17.12 ± 2.95	16.29 ± 3.35	p=0.366
Total Score	31.91 ± 8.29	28.70 ± 5.43	p=0.121

In the ECI-4 for children aged 4-6 years, it was identified that fine motor and gross motor developments were delayed in the patient group compared to the control group. It was also identified that Attention Deficit Hyperactivity Disorder (ADHD) -Attention Deficit subtype (ADHD-AD), ADHD-Hyperactivity subtype (ADHD-HA), ADHD-Combined subtype (ADHD-C) type, General Anxiety Disorder (GAD),

Social Phobia (SP), Posttraumatic Stress Disorder (PTSD), Dysthymic Disorder and Elimination Disorder (ED) were found significantly more frequent (Table 3).

Table 3. Early Childhood Inventory – 4: Parent Scale (ECI-4) Scores

	EPILEPSY (n=24) Mean ± Sd	CONTROL (n=24) Mean ± Sd	
Language-Cognitive	9.08 ± 3.52	11.25 ± 1.60	p=0.076
Gross-Motor	1.16 ± 1.11	0.25 ± 0.45	p=0.021
Fine Motor	0.91 ± 1.08	0.08 ± 0.28	p=0.010
Social Skill-Self Care	11.9 ± 3.11	12.08 ± 2.64	p=0.889
ADHD-AD	10.91 ± 5.51	5.08 ± 4.87	p=0.012
ADHD-HA	12.7 ± 6.71	5.08 ± 3.87	p=0.002
ADHD-C	23.66 ± 11.13	10.16 ± 7.86	p=0.002
ODD	7.83 ± 3.58	5.16 ± 3.32	p=0.072
CD	2.58 ± 2.74	0.91 ± 1.50	p=0.079
Tic Disorder	0.41 ± 0.51	0.33 ± 0.65	p=0.506
GAD	10.6 ± 2.26	8.33 ± 2.93	p=0.040
SP	2.58 ± 1.50	2.91 ± 1.78	p=0.040
SAD	4.58 ± 4.07	3.50 ± 3.58	p=0.496
OCD	1.00 ± 0.85	0.91 ± 1.08	p=0.836
PTSD	7.58 ± 2.64	4.66 ± 1.96	p=0.006
Depression	8.25 ± 2.56	6.50 ± 1.50	p=0.054
Distimic Disorder	6.75 ± 2.13	4.83 ± 1.02	p=0.013
ASD	6.25 ± 4.76	4.83 ± 1.02	p=0.086
AD	1.41 ± 1.31	1.25 ± 1.13	p=0.743
ED	3.08 ± 1.67	0.41 ± 1.16	p=0.001
EAD	1.50 ± 1.24	0.83 ± 1.19	p=0.194

Abbreviations: ADHD-AD: Attention Deficit Hyperactivity Disorder- Attention Deficit subtypes, ADHD-HA: Attention Deficit Hyperactivity Disorder- Hyperactivity subtypes, ADHD-C: Attention Deficit Hyperactivity Disorder-Combined subtypes, ODD: Oppositional Defiant Disorder, CD:Conduct Disorder GAD: General Anxiety Disorder ,SP: Social Phobia SAD: Seperation Anxiety Disorder, OCD:Obsesif Compulsif Disorder, PTSD: Post-Traumatic Stress Disorder, ASD: Autism Spectrum Disorder , AD: Attachment Disorder, ED: Elimination Disorder, EAD: Eating Disorder

In the SCL-90 Scale, used for the assessment of psychopathology in parents, scores of mothers SCL total, SCL PSL, SCL PST in children with epilepsy were found higher compared with the control group. In comparison with the control group, somatization, depression, anxiety, anger-hostility, phobic anxiety and additional scale scores were found significantly higher in mothers of children with epilepsy (Table 4). In SCL-90 Scale Scores for fathers, no difference was found in all fields (p=0,093) compared with the control group. 6 children from both patient and control groups were not involved in the comparison due to the fact that they were under 2 years. When two groups were compared in terms of life quality, scale scores were not found statistically significant (Table 5).

Table 4 . SCL-90 Test Scores in Mothers of Both Group

	EPILEPSY (n=48) Mean ± Sd	CONTROL (n=48) Mean ± Sd	
SCL Total	81.73± 50.25	52.66± 39.77	p=**0.009**
SCL PSL	1.68 ± 0.513	1.43± 0.36	p=**0.019**
SCL PST	45.85± 20.90	34.08± 20.92	p=**0.022**
SCL GSI	0.90 ± 0.55	2.31 ± 10.41	p=0.433
Somatization	0.95± 0.61	0.62 ± 0.50	**p=0.016**
OC	1.00± 0.59	0.72 ± 0.62	p=0.055
Interpersonal Sensitivity	1.11± 0.78	0.85 ± 0.76	p=0.159
Depression	1.11± 0.71	0.76 ± 0.61	**p=0.034**
Anxiety	0.92± 0.72	0.48 ± 0.38	**p=0.003**
Anger-hostility	0.93 ± 0.80	0.49 ± 0.47	**p=0.008**
Phobic Anxiety	0.53± 0.51	0.22 ± 0.30	**p=0.006**
Paranoid İdeation	0.85± 0.72	0.56 ± 0.48	p=0.056
Psychoticism	0.55± 0.55	0.31 ± 0.30	p=0.086
Additional scale	0.91± 0.66	0.62 ± 0.54	**p=0.049**

Abbreviations: SCL-90: Psychological Symptom Screening Test, PSL: SCL-90 Positive Symptom Level, PST: SCL-90 Positive Symptom Total, GSI: General Symptom Index, OC:Obsessive-Compulsive

Table 5: Pediatric Quality of Life Questionnaire Scores (PedsQL)

	EPILEPSY (n=42) Mean ± Sd	CONTROL (n=42) Mean ± Sd	
STP	66.59±12.11	71.61±13.14	p=0.129
PHP	85.20±19.29	85.10±14.01	p=0.981
PSHP	82.83±13.75	87.33±14.26	p=0.218

Abbreviations: STP: Scale Total Point, PHP: Physical Health Total Point, PSHP: Psychosocial Health Total Point

Discussion

In the present study, we assessed the psychopathology in children with epilepsy at 1-6 years, the relation between epilepsy and life quality and the psychopathology in parents of these children. In ADSI, retardation in only language field was established in children with epilepsy. In a study, especially language and memory from cognitive functions are affected in children with epilepsy and it is established that they have retardation in verbal learning at the rate of 29-35% (18). We found that scores of Language Cognitive Development were lower in the children with epilepsy than the controls. It must be kept in mind that these children have much more risk in terms of communication (language and speaking) and learning disorders which can occur in the future and even if their only diagnosis is epilepsy, they should be followed up closely for their language development. In our study, no difference between the patient and the control groups was found in terms of the scale scores of BITSEA. No literature information in accordance with this situation was found in children aged 1-3 years. It is known that, attachment, sleep and eating problems more frequently occur due to development periods of these children (19). In our evaluation made for ECI-4 for children aged 4-6 years, while fine motor and gross motor developments were delayed in the patient group than the control group, no difference was found in terms of language development and individual social domain. It was found that ADHD-AD, ADHD-HA, ADHD-C type, GAD, PTSD, SP, Dysthymic Disorder and ED were significantly more frequent in children with epilepsy than the control group.

In the literature, comorbidity of ADHD in children with epilepsy is stated as 12%-29% (20). Although in a study, ADHD rate in the normal society was stated as 4-5%, this rate was found 29.1% in children with epilepsy (21). In many studies, it was stated that the most frequent diagnosis is ADHD in children with epilepsy (22, 23) and our results were consistent with the literature. In the studies, depression and anxiety disorders are also seen frequently in children with epilepsy (3). And also the frequency of mood disorders in childhood epilepsies is established in rates of 12-36.4% (18, 24). In patients with epilepsy, depression and anxiety disorders were determined at 33% (25). In another study, depressive symptoms were determined at 23% (26). In our study, no difference was found in depression symptoms between the two groups, but an increase in dysthymic symptoms was determined in children with epilepsy. In the literature, it is stated that anxiety symptoms have increased in children with epilepsy (27). In our study, GAD, SP, PTSD were found higher in children with epilepsy than the control group. High levels of PTSD symptoms bring to mind that epilepsy could be a trauma for patients and their families. In our study, ED was found higher in children with epilepsy in 4-6 years of age. In the literature, there was no information about the incidence of ED in children with epilepsy. Because of central nervous system effects of epilepsy, ED could be higher in children with epilepsy.

In the studies examining effects of chronic illnesses, it was found that mothers of patients are more depressive, anxious and neurotic than the mothers of healthy children (28). In mothers of children with epilepsy, psychiatric symptoms are established at higher rates than fathers of these children (12). It was stated that mothers of children with chronic disorders are more vulnerable depending on stressors On the other hand, when their children have a chronic disorder, fathers less get exhausted (29). In our study, we found that psychiatric symptoms were more frequently in the mothers of children with epilepsy. But no difference was found between the fathers of children with epilepsy and control groups.

In our study, no significant difference between epilepsy and control groups was found in terms of life quality total score and subscale scores. In the study of Stevanovic et al, it is established that life quality scores are lower compared to controls (8). In contrast, in the study of Eddy et al, no difference between epilepsy and control groups was established in terms of life quality scores (30).

It is a well-known truth that epileptic children and their family have more psychiatric problems than normal society or children with other chronic disorders. Also, epilepsy can make child's perception of life quality worse. Therefore, more comprehensive studies examining psychopathology in children with chronic disorders, psychological problems in their parents, their perception of life quality and relation of these with each other are necessary.

Limitations

1. The small number of study group.

2. Different scales were used due to the age of the study group.

3. Psychiatric evaluations were not being supported by structured interview.

4. The life quality of the parents were not assessed.

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