A Psychosomatic Approach to Quality of Life in Patients with Epilepsy

Epilepsi Hastalarında Yaşam Kalitesine Psikosomatik Açıdan Yaklaşım

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Abstract

Aim: The aim of this study was to evaluate psychosocial functionality in patients with epilepsy using the Diagnostic Criteria for Psychosomatic Research (DCPR) classification system that aims to identify patients with clinically significant and relatively weighted psychological factors and to compare it with the Diagnostic and Statistical Manual of Mental Disorders (DSM). In addition, it was aimed to validate the DCPR system by investigating the effects of psychosomatic diagnoses on the quality of life in the disease process.

Materials and Methods: One hundred consecutive patients with epilepsy who were referred to the Epilepsy special branch outpatient clinic were included in the study. The control group consisted of 53 healthy volunteers. All participants underwent structured DCPR and SCID-I interviews and were investigated using the Short Form-36 (SF-36) and a Sociodemographic Data Form.

Results: Eighty-seven percent of the patients met the diagnostic criteria with the DCPR system while 82% of the patients met the diagnostic criteria with DSM ($\chi^2(1, N=100)=4.539$, $p=0.04$). Examination of the effect of diagnostic systems on SF-36 scores in patients with epilepsy with the hierarchical regression model showed that diagnoses in the DCPR system predicted most of the SF-36 subscale scores better.

Conclusion: The DCPR system could detect psychological distress at a higher rate than DSM in patients with epilepsy. Syndromes in the DCPR classification were associated with poor quality of life in the patients. The DCPR classification is therefore valid in patients with epilepsy and may have advantages in a more comprehensive evaluation of patients.

Keywords: Epilepsy; psychosomatic; validation; DCPR; DSM; quality of life.

Öz

Amaç: Bu çalışmanın amacı, epilepsi hastalarında psikososyal işlevselliği; klinik olarak anlamlı ve belirgin psikolojik faktörleri olan hastaları tanımlamayı amaçlayan Psikosomatik Araştırmalar için Tanı Ölçütleri (PATÖ) sınıflandırma sistemi kullanarak değerlendirmek ve Ruhsal Bozuklukların Tanısal ve İstatistiksel El Kitabı (DSM) ile karşılaştırarak farklılıklar olup olmadığını göstermektir. Ayrıca psikosomatik tanıların hastalık sürecindeki yaşam kalitesi üzerine etkisi araştırılarak PATÖ sisteminin geçerliliğini göstermek amaçlanmıştır.

Gereç ve Yöntemler: Çalışmaya Epilepsi Özel Dal Polikliniğinden yönlendirilen ardışık yüz epilepsi hastası ve 53 sağlıklı gönüllü kontrol grubu dahil edildi. Tüm katılımcılarla yapılandırılmış PATÖ ve SCID-I görüşmeleri yapıldı. Katılımcılar Kısa Form-36 (SF-36) ve Sosyodemografik Veri Formu kullanılarak araştırıldı.

Bulgular: Hastaların %87'si DCPR sistemi ile ve hastaların % 82'si DSM ile tanı kriterlerini karşıladı ($\chi^2(1,N=100)=4,539$, $p=0,04$). Epilepsili hastalarda tanı sistemlerinin SF-36 skorları üzerindeki etkisi hiyerarşik regresyon modeli ile incelendiğinde, PATÖ sistemindeki tanıların birçok SF-36 alt ölçek puanını daha iyi yorumladığı bulundu.

Sonuç: Epilepsili hastalarda, PATÖ sendromları DSM'den daha yüksek oranda psikolojik sıkıntı tespit etmiştir. PATÖ sınıflandırmasındaki sendromlar hastaların düşük yaşam kalitesi ile ilişkilendirilmiştir. PATÖ sınıflandırması epilepsili hastalarda geçerlidir ve hastaların daha kapsamlı değerlendirilmesinde avantajları olabilir.

Anahtar Sözcükler: Epilepsi; psikosomatik; geçerlilik; PATÖ; DSM; yaşam kalitesi.

Received/*Geliş* : 11.07.2020
Accepted/*Kabul*: 27.08.2020

DOI: 10.21673/anadoluklin.778315

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INTRODUCTION

Epilepsy is a disease that affects nearly 1% of the population (1). Since epilepsy has high rates of morbidity and mortality, it generates direct and indirect costs and creates a significant economic burden on individuals and the society (2). One of the most common comorbidities is psychological distress/psychiatric disorders, and patients with epilepsy have been reported to have a higher incidence of neurological diseases than the general population or control groups (3).

Although the psychopathology associated with epilepsy entails contradictory opinions, the link between neurological diseases and epilepsy has been observed for more than 2,000 years, and is supported by the concept of "epileptic deterioration" (4). It is estimated that the lifetime prevalence of psychiatric disorders in epilepsy exceeds 60% (5). Psychiatric illnesses accompanying epilepsy may be diagnosed prior to, or may accompany or follow the diagnosis of epilepsy (6). Knowing the clinical, psychosocial and biological factors that increase the risk of psychiatric disorders in epilepsy can play an elucidative role (7). The presence of psychiatric disorders as comorbidities in epilepsy is known to be detrimental to seizure control (8,9), is accompanied by adverse effects of antiepileptic drugs (8,9), health system usage (10) as well as quality of life (QoL) (9), and may contribute to other psychosocial problems (11).

Comorbid psychiatric disorders in epilepsy are not adequately evaluated by many physicians or are missed because of inadequacies in existing structural interview systems. In fact, scientists have been increasingly aware that the Diagnostic and Statistical Manual of Mental Disorders (DSM) classification captures only a small portion of the information required in the clinical evaluation process (12). In particular, according to DSM-IV, the category of somatic symptom disorder neglects important features of the psychological factors affecting medical conditions. These include abnormal illness behaviors, coping strategies, burden of disease, effects of comorbid conditions, tendency to overpsychologize somatic symptoms (when axis I disorders are present) or underestimate psychological aspects (when medical diagnoses are established), as well as the neglect of sub-syndromal conditions, personality and behavioral factors (13,14). Evaluation with Diagnostic Criteria for Psychosomatic Research (DCPR) may expand the physician's perspective on a patient's illness by obtaining additional clinical information that cannot be determined through conventional psychiatric classification. In this regard, the DCPR may be proposed as an operative tool for the diagnosis of psychosomatic disorders in outpatient polyclinics and clinics (15,16).

The current study has a primarily descriptive design with the purpose of elucidating the prevalence of psychological distress in a consecutive sample of patients receiving epileptic therapy. The study also tested the hypothesis that the two diagnostic classifications can be distinguished from each other. Additionally, due to the importance of subclinical and psychosomatic factors in explaining impaired psychosocial functionality, lower quality of life, and medical comorbidities the also study tested the validity of DCPR and whether the DCPR classification was related to functionality (13,14).

MATERIALS AND METHODS

Sample

One hundred consecutive patients with epilepsy and a control group of 53 healthy volunteers with matching age, sex and educational status were enrolled in the study. Patients as well as healthy controls aged younger than 18 years and older than 65 years, those with mental retardation or cognitive defects as deducible through interview, and participants who had difficulties in following instructions were excluded from the study.

Procedure

The Neurology Clinic, Epilepsy Special Branch Polyclinic at our institution is functional for 2 days of the week and accepts patients with confirmed diagnosis who are treated in general outpatient clinics. Patients who were referred to this outpatient clinic and who agreed to participate in the study by signing the informed consent form were eligible to be included in the study. The control group included individuals from the hospital staff and their acquaintances. Participants in the healthy control group also signed an informed consent form stating that they voluntarily participated in the study. Patients with epilepsy were first evaluated using the Structured Clinical Interview for DSM-IV

Axis I Disorders (SCID-I), which took approximately 1 hour and 40 minutes, followed by DCPR reviews for about 20 minutes by one of the authors of the current study (T.A.). Finally, the Short Form-36 (SF-36), a QoL assessment tool, was applied.

Data collection tools

Sociodemographic data form

The sociodemographic data form was prepared by the authors of the current study to obtain data on demographics and psychosomatic symptoms. The form, which was used at the first admission, contained items that obtained details such as age, sex, marital status, occupation, education level, place of residence, socioeconomic status, social security, resume, family history, presence of depressive mood, and history of medication used by the patients.

Structured clinical interview for DSM-IV axis I disorders (SCID-1)

SCID is a semi-structured clinical interview scale, which was developed by First et al. for DSM-IV Axis-I diagnoses (11). Structured interviews were developed to increase the reliability and validity of diagnoses through standardization of the evaluation process by facilitating the implementation of DSM-IV diagnostic criteria and systematically investigating symptoms that might be otherwise overlooked. The Turkish adaptation and reliability studies of SCID-I were performed by Corapcioglu et al (17).

Diagnostic criteria for psychosomatic research (DCPR)

The DCPR classification was created by Fava in 1995 in Italy. The DCPR was applied to various patient groups by Grassi, Ottolini, Porcelli, Rafanelli and Sonino between 2003 and 2005. The Mangelli study is one of the leading studies for the use of DCPR classification. Galeazzi et al. in 2004 showed the reliability of the DCPR classification in various fields. The DCPR is a diagnostic interview, tested in many clinical practices, which evaluates psychosocial factors in medical diseases. The DCPR structured interview is performed face-to-face with the patient and is completed in 15 to 30 minutes. The questions are composed of 58 yes/no questions intended to determine whether a person has experienced one or more DCPR syndromes in the last 6 or 12 months. Psychiatric evaluation is not required but is recommended. Twelve DCPR syndromes have been developed and grouped in a cluster of abnormal disease behaviors. These syndromes include health anxiety, disease phobia, thanatophobia (fear of death), illness denial, functional somatic symptoms secondary to a psychiatric disorder, persistent somatization, conversion symptoms, anniversary reaction, type A behavior, irritable mood, demoralization, and alexithymia. The Turkish validity and reliability study of the DCPR scale is currently being undertaken by Gulec et al. However, studies using the Turkish version of the DCPR scale are available (18).

Short form (SF-36)

The SF-36 is a widely used scale for measuring QoL. In addition to physical parameters, the psychosocial dimension is important in the monitoring of physical diseases. The SF-36 is a self-assessment scale that reviews eight dimensions of health including physical function, social function, role constraints (due to physical and emotional reasons), mental health, vitality (energy), pain, and general perception of health, through 36 items. The original version of the SF-36 was developed by Ware and Sherbourne in 1992 (19). This scale was translated into Turkish, and its validity and reliability study was performed by Kocyigit et al. (20).

Statistical analysis

The study data were analyzed using the Statistical Package for the Social Sciences (SPSS-16) for Windows (SPSS Inc. Chicago, IL) software program. The independent samples t-test was used for the comparison of descriptive statistical methods as well as quantitative data such as age and subscale scores of QoL between the patient and healthy control groups. Additionally, the Chi-square test was used to compare categorical variables such as marital status, income level, education level, and social security between the patient and healthy control groups. Hierarchical linear regression model was used to examine the relationship between diagnostic systems and SF-36 subscales. The results were evaluated with a confidence interval of 95% and a significance level of $p<0.05$.

Table 1. Descriptive properties of the quantitative parameters used in the current study

	Patients with Epilepsy									Healthy Controls								
Variables	N	M	SD	Mod	Median	Range	Min-Max	Skewness	Kurtosis	N	M	SD	Mod	Median	Range	Min-Max	Skewness	Kurtosis
Age	100	35.6	11.52	24	33	47	18-65	0.587	-0.471	53	34.45	10.09	29	32	41	20-61	1.001	0.394
SF-36 Physical function	100	25.6	4.15	28	27	17	13-30	-1.126	0.650	53	28.6	4.44	30	29	37	18-55	3.63	24.544
SF-36 Physical role difficulties	100	6.29	1.56	8	7	5	4-9	-0.318	-1.396	53	6.75	1.28	8	7	4	4-8	-0.651	-0.787
SF-36 Pain	100	5.16	2.61	2	5	9	2-11	0.401	-0.963	53	3.83	1.43	3	4	7	2-9	1.52	3.144
SF-36 General health	100	15.76	2.13	15	16	11	10-21	0.250	0.123	53	15.3	1.59	15	15	9	11-20	0.132	1.058
SF-36 Power (Vitality)	100	13.86	2.73	13	14	13	7-20	-0.312	0.035	53	13.7	2.37	16	14	9	9-18	-0.167	-0.512
SF-36 Social function	100	6.31	1.66	6	6	8	2-10	-0.185	0.232	53	6.88	1.40	7	7	7	3-10	-0.134	0.971
SF-36 Emotional role difficulties	100	4.64	0.96	5	5	4	3-7	-0.032	-0.713	53	4.79	0.92	5	5	3	3-6	-0.318	-0.706
SF-36 Mental Health	100	19.04	3.29	20	19	18	11-29	0.196	0.197	53	19.6	1.98	21	20	8	15-23	-0.817	0.309

SF-36: Quality of Life Scale Short Form

RESULTS

The study included 100 patients with epilepsy and a control group of 53 healthy volunteers. The average age of the patients in the epilepsy group was 35.6±11.5 years while the average age of the healthy control group was 34.45±10.1 years. There was no significant difference in age between the groups (t (151)=-0.61, p=0.542). While 50 (50%) patients recruited to the epilepsy group were female, 27 (50.9%) participants in the healthy control group were female. There was no significant difference in gender between the groups (X^2 *(1,* N=153*)*=0.012, p=0.912). Additionally, 52% (n=52) of the individuals in the patient group were married while 52.8% (n=28) of the individuals in the healthy group were married; this difference was not significant (X^2 *(2,* N=153*)*=3.577, p=0.167). Forty percent of the patients with epilepsy had a physical disease, 51% had a history of psychiatric disorders and 27% had a family history of psychiatric disorders. Eight (15.1%) individuals in the control group had a history of physical diseases and three (5.7%) had a family history of psychiatric disorders. A statistically significant difference in the presence of additional diseases and family history of psychiatric disorders was identified between the patient and control groups. Descriptive properties of the quantitative parameters used in the study are shown in Table 1.

A comparison of the SF-36 subscale scores of the patients with epilepsy and controls are shown in Table 2. A comparison of the mean SF-36 scores of the epilepsy and healthy control groups indicated significant differences in physical function, pain, general health, vitality, social function, and mental health subscales.

According to DSM-IV, 82% of patients with epilepsy had a psychiatric illness. The distribution of diagnoses of patients with epilepsy according to DSM-IV system is shown in Table 3. Psychiatric disorders such as depression and dysthymic disorder were found to be the most common comorbid psychiatric disorder in patients with epilepsy.

Evaluation of patients with epilepsy according to the DCPR indicated that 52% of the patients had alexithymia, 44% had Type A behavior, 36% had irritable mood, 35% had illness denial, 35% had persistent somatization, 35% had demoralization, 22% had functional somatic symptoms secondary to a psychiatric disorder, 18% had conversion symptoms, 7% had thanatophobia, 7% had health anxiety, and 7% of the patients had disease phobia. The distribution of DCPR diagnoses of patients with epilepsy is shown in Table 4.

Table 2. Comparison of SF-36 subscale scores of epilepsy patients and the healthy control group (mean ± sd)

	Patients with Epilepsy (n=100)	Healthy Controls (n=53)	t-test	p
Physical function	25.6±4.1	28.66±4.7	4.191	**<0.001***
Physical role difficulties	6.3±1.6	6.8±1.3	1.855	0.07
Pain	7.8 ±2.6	9.1±1.4	3.437	**0.01***
General health	15.0±4.3	19.3±3.3	6.344	**<0.001***
Vitality	13.4±3	14.7±2	2.649	**0.01***
Social function	7.8±2.3	9.5±1.6	4.802	**<0.001***
Emotional role difficulties	4.6±1	4.8±1	0.939	0.35
Mental Health	19.7±3.3	21.4±3	3.086	**0.01***

SF: Short Form Student T test was performed.*p<0.05

Table 3. Diagnosis of epilepsy patients with psychiatric disorders (in %) according to the DSM-IV system

Diagnosis According to DSM-IV	Percentage
Depression	37(37%)
Dysthymic disorder	10(10%)
Generalized anxiety disorder	5(5%)
Previous depression	5(5%)
Panic disorder	5(5%)
BD	4(4%)
PTSD	4(4%)
OCD	4(4%)
Phobia	2(2%)
Personality disorder	2(2%)
Schizophrenia	2(2%)
Dissociative disorder	1(1%)
Psychotic disorder	1(1%)
No disease	18(18%)

PTSD: post-traumatic stress disorder BD: bipolar disorder OCD: obsessive compulsive disorder

Evaluation with DCPR resulted in the diagnosis of a psychiatric disorder in 87 of the patients with epilepsy, whereas evaluation with DSM-IV resulted in the same diagnosis in 82 patients; this difference was statistically significant in a chi-square test (χ^2 (1, N=100)=4.539, p=0.04). When the patients who were diagnosed according to DSM-IV but not according to the DCPR were examined in detail, two patients were diagnosed with previous depression, three patients were diagnosed with current depression, two patients had obsessive-compulsive disorder (OCD), and one had generalized anxiety disorder. Of the 13 patients with epilepsy who were not diagnosed based on the DSM-IV, six (46.1%) were diagnosed with illness denial, one had functional somatic symptoms secondary to a psychiatric disorder, five had persistent somatization, eight had Type A behavior, three had demoralization, and three had alexithymia according to the DCPR.

When the effect of the diagnostic systems on QoL scores in patients with epilepsy was examined with the hierarchical regression model, it was found that the diagnoses in the DCPR system showed better regression with most of the SF-36 subscale scores (Table 5). A regression model that significantly predicted general health, mental health and vitality subscales of the SF-36 scale could not be created.

DISCUSSION

Epilepsy is considered to be psychosomatic in nature due to the high rate of comorbid psychiatric disorders and the presence of psychiatric symptoms that do not meet diagnostic criteria (21). The cause-effect relationship in the context of onset of illnesses and/or relation with seizures has not been fully explained by this association with comorbid psychiatric disorders; nonetheless, it has a negative effect on patient management and treatment and contributes to greater disease disability and burden. The current literature has contradictory reports on patients with epilepsy, although the idea of a decrease in QoL compared with healthy individuals is consistent (22). The current study supports that QoL is negatively affected in patients with epilepsy. Therefore, we aimed to examine patients with epilepsy using the DCPR system, which incorporates the presence of comorbidity, in conjunction with the DSM system,

with the view that a psychosomatic medicine approach might be necessary for managing epilepsy patients. We also evaluated whether the DCPR system differed from the DSM in order to investigate the extent to which the diagnostic and conceptual framework of DCPR was associated with QoL, regardless of the severity of the illness (23).

The most common psychiatric disorders associated with epilepsy are depression, followed by anxiety disorders and psychotic disorders. To the best of our knowledge, there are no published studies on DCPR diagnoses in patients with epilepsy. However, studies on patients with cancer, psoriasis, headache, fibromyalgia, rheumatoid arthritis, endocrine disorders, chronic diseases such as functional gastrointestinal disease, and neurological diseases conducted with DCPR are available (18). A comparison of DCPR and DSM diagnostic systems in patients with psoriasis has shown the presence of a stronger relationship between disease severity and DCPR diagnoses. In oncology and endocrinology studies, comorbid health anxiety and demoralization 'anniversary reactions' have been shown to be detected using the DCPR.

Although only one DCPR syndrome can be detected in approximately 16% of patients in the medical disease spectrum, fibromyalgia (100%) and rheumatoid arthritis (79%) are the diseases that nearly always have a psychiatric disorder comorbidity. Based on the available information, it is believed that evaluation using DCPR might help identify the clinical picture better by providing more detailed information on comorbid

Table 4. Diagnosis of epilepsy patients with psychiatric disorders (in %) according to the DCPR system

Diagnosis According to DCPR	Percentage
Alexithymia	52(52%)
Type A behavior	44(44%)
Irritable mood	36(36%)
Illness denial	35(35%)
Persistent somatization	35(35%)
Demoralization	35(35%)
Functional somatic symptoms secondary to a PD	22(22%)
Conversion symptoms	18(18%)
Thanatophobia	7(7%)
Health anxiety	7(7%)
Disease phobia.	7(7%)
Anniversary Reaction	2(2%)

Psychiatric disorder diagnoses were made using the DCPR in 87 of the patients with epilepsy. The distribution of the disorders on the basis of DCPR diagnosis in 87 patients with epilepsy is as shown in the table. PD: Psychiatric Disorder

Table 5. Results of hierarchical linear regression analysis of the SF-36 subscales

SF-36 Physical Component Score															
	Physical Function					Physical Role					Bodily Pain				
	β	t	R^2	F	F_{change}	β	t	R^2	F	F_{change}	β	t	R^2	F	F_{change}
Step I			.079	8.423**	8.423**			.046	4.684*	4.684*			.036	3.634	3.634
DSM	-.28	-2.902**				-.21	-2.164*				.19	1.906			
Step II			.236	14.941***	19.840***			.193	11.576***	17.671***			.230	14.513***	24.520***
DSM	-.17	-1.810				-.10	-1.084				.06	0.667			
DCPR	-.41	-4.454***				-.40	-4.204***				.46	4.952***			

SF-36 Mental Component Score										
	Social Function					Role Emotional				
	β	t	R^2	F	F_{change}	β	t	R^2	F	F_{change}
Step I			.052	5.324*	5.324*			.015	1.454	1.454
DSM	-.23	-2.307*				-.12	-1.206			
Step II			.092	4.909**	4.314*			.087	4.624*	7.695**
DSM	-.17	-1.678				-.04	-0.428			
DCPR	-.21	-2.077*				-.28	-2.774**			

*p<.05, **p<.01, ***p<.001, DSM: Diagnostic and Statistical Manual of Mental Disorders, DCPR: Diagnostic Criteria for Psychosomatic Research, SF-36: Short Form

diseases that may adversely affect the course of the disease. This can provide opportunities for more effective treatments. In the current study, the rate of psychiatric comorbidity diagnosis using the DCPR was found to be 87%, while the same using SCID was 82%; the latter is similar to previously published reports. Indeed, when the previous studies conducted in patients with cancer, cardiology and gastroenterology are examined, the DCPR diagnosis system was found to detect more psychiatric conditions than the DSM diagnosis system (24,25).

The SF-36 QoL scale has been widely accepted as a tool to determine the effects of disease burden on QoL in patients with epilepsy (26). In the present study, the QoL in patients with epilepsy was found to be decreased in various domains. Evaluation with the DSM diagnosis system alone indicated that the quality of life of patients with epilepsy was affected in many areas. Research indicates that patients with epilepsy are at a higher risk of developing depression and anxiety compared to healthy controls or those with other medical conditions (27). Untreated depression results in a worse response to epilepsy treatment, and more adverse effects of antiepileptic drugs (27,28). Depression and anxiety have a significant negative impact on the quality of life in patients with epilepsy, over and above that associated with seizure frequency (29). Anxiety and depressive disorders frequently co-occur, which results in more significant clinical consequences for patients with epilepsy, including a greater suicide risk (30).

In the current study, when the DSM and DCPR systems were considered together, the DCPR system was found to be more predictive of the decrease in the quality of life of patients. The DCPR has been validated for excellent predictive ability of psychosocial functioning and treatment outcomes in several medical settings including oncology, dermatology, endocrinology, cardiology and gastroenterology. Furthermore, psychosomatic syndromes suggest predictive validity with respect to a poor health-related quality of life. The Diagnostic and Statistical Manual of Mental Disorders (DSM) do not seem to be entirely suitable or clinically effective in detecting the psychological problems that are often "subclinical", for example, somatic symptom disorders. The Diagnostic Criteria for Psychosomatic Research (DCPR) could have a negative prognostic role in medical illnesses, which are not detectable with the use of DSM-based standard psychiatric criteria (31).

Mental health, which is the one domain of the QoL assessment, questions whether the person feels calm, happy, and relaxed. In our study, no significant relationship was found between either diagnostic systems or mental health. This was thought to be related to our hospital being a neuropsychiatry specialty branch whereby psychiatric comorbidities are diagnosed early and treated. Examination with the DCPR system indicated that diagnoses of illness denial and functional somatic symptoms secondary to a psychiatric disorder significantly affected mental health. Illness denial may be a coping mechanism that can ease psychological distress by rejecting the burden of physical illness. However, rejecting, distorting or minimizing clinical attention, personal responsibility and treatment need may adversely affect long-term prognosis and may cause serious health-related consequences (32). Patients with epilepsy often develop seizures when treatment is discontinued due to illness denial. It is known that developing seizures affects mental health by inducing feelings of desperation or hopelessness in patients.

The cross-sectional design of the current study and the low number of patients are the limitations of our study. In addition, the fact that the study sample was comprised only of patients who were admitted to a neurology outpatient clinic of a tertiary hospital in a large province may have led to some regional differences being disregarded. Supporting information from studies with larger samples will increase the validity and diversity of the data in the future. The fact that the current study was carried out at a specialist psychiatric and neurological disease hospital may have led to a bias in the patient profile in favor of psychiatric disorders. The high rate of psychiatric diagnoses that we identified in the patients' histories is another limitation of our study. In addition, the lack of clinical features of the patients such as the history of epilepsy seizures, seizure frequency, and time of the last seizure can be considered among other limitations of the study.

In conclusion, in the light of available data, it can be considered that DCPR classification is valid in patients with epilepsy. Moreover, DCPR evaluations in

epileptic patients with psychosomatic features and in other medical diseases might provide additional clinical information and greater detail that could contribute to better treatment. The DCPR diagnostic and conceptual framework may contribute to the identification of subclinical syndromes, and the determination of psychopathological phenomena outside the DCPR might have an effect on QoL.

Acknowlegement

We would like to thank MD Ari B.Ç. for her important contributions during data collection.

Funding Sources

There is no funding source.

Conflict of Interest

The authors have no conflicts of interest to declare.

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