

Evaluation of Burden in a Group of Patients with Chronic Psychiatric Disorders and Their Caregivers

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ABSTRACT

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Objective: Psychosocial, emotional and physical responses arising while giving care is considered as the burden of the caregiver. To be aware of the burden to the family members or caregivers and the severity of the burden provides important clues for family treatment. The aim of this study was to investigate the burden of the caregivers of bipolar disorder and schizophrenia patients, the relationship of the caregiving burden with sociodemographic and psychopathological variables, and whether there is any similarities between the two groups with respect to caregiving burden.

Methodology: The caregivers of 40 chronic bipolar patients and 40 schizophrenia patients diagnosed according to DSM-IV participated in this study. Patients' symptoms were assessed with Clinical Global Impression Scale. Caregivers were evaluated using Zarit Burden Interview.

Results: Caregiving burden was found high in the caregivers of bipolar disorder and schizophrenia patients, but there is no statistical difference between the groups. Educational status of the caregivers, the severity of the illness, caregiver's relationship to the patient, a history of psychiatric disorder in the family were found as important variables that increased the burden of the caregiver.

Discussion: To uncover the factors that affect the burden of the caregivers is important for predicting relapses. Bipolar disorder and schizophrenia significantly affect not only patients but also their families (or caregivers). At this stage, the responsibility of the clinician is not restricted to clinical practice, but includes educating patients and their families as well as helping them to organise against psychological and social difficulties.

Key words: Bipolar disorder, schizophrenia, caregiving burden

ÖZET

Kronik psikiyatrik bozukluğu bulunan hastaların ve bakım verenlerinin bakım yükü açısından değerlendirilmesi

Amaç: Bakım veren yükü kavramı, bakım sunarken ortaya çıkan fiziksel, psikosozyal veya maddi tepkileri ifade etmek için kullanılmaktadır. Aile üyelerinin ya da hastaya bakım verenlerin taşıdığı yükler ve bu yüklerin ne şiddette olduğunun bilinmesi aile tedavilerinde önemli ipuçları sağlamaktadır. Bu araştırmanın amacı, şizofreni ve bipolar bozukluk tanıları hastaların yakınlarının bakım yükünü değerlendirmek, bakım yükünün sosyodemografik ve psikopatolojik değişkenlerle ilişkisine bakmak ve her iki hastalık için hasta yakınlarının bakım yükü açısından benzerliği olup olmadığını araştırmaktır.

Yöntem: Çalışmaya; DSM-IV-TR kriterlerine göre bipolar bozukluk (n=40) ve şizofreni (n=40) tanısı konmuş olan hastalar ve bu hastaların yakınları dahil edilmişlerdir. Hastalara Klinik Global İzlenim Ölçeği ve hasta yakınlarına Zarit Bakım Ölçeği uygulanmıştır.

Bulgular: Hem şizofreni hastalarına ve hem de bipolar bozukluk hastalarına bakım verenlerde bakım yükünün fazla olduğu, ancak karşılaştırıldığında, iki grup arasında istatistiksel olarak anlamlı farklılık olmadığı görülmüştür. Hasta yakınlarının eğitim durumu, hastalığın şiddeti, bakım verenlerin hastaya yakınlık derecesi (eşleri ve ikinci sırada anne babaları), ailede başka bir bireyde bulunan psikiyatrik hastalık öyküsü, bu çalışmada hasta yakınlarının bakım verme yükünü artıran önemli değişkenler olarak ortaya konmuştur.

Tartışma: Nüksleri yordamada önemli bir faktör olduğu için, hasta yakınlarında bakım yükünü etkileyen faktörlerin ortaya çıkarılması önemlidir. Şizofreni ve bipolar bozukluk sadece hastayı değil, hasta yakınlarını da psikolojik ve sosyal açıdan anlamlı ölçüde etkilemektedir. Bu aşamada hekimin sorumluluğu sadece klinik uygulamayla sınırlı olmayıp, ailelerin hastalık konusunda eğitilmesinden, hastaların ve hasta yakınlarının ruhsal ve toplumsal zorluklara karşı örgütlenmelerine kadar birçok alana yayılması gerekmektedir.

Anahtar kelimeler: Bipolar bozukluk, şizofreni, bakım yükü

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INTRODUCTION

Care giving is management of supporting patient emotionally, physically or financially, coordinating his/her healthcare and some social services, routine healthcare (obtaining medicines, treatment, follow-up etc.), personal care (bathing, feeding, toiletry, clothing etc.), transportation, shopping, doing small homecare, financial management and sharing the same house (1). Knowing characteristics of population of patients' caregivers is important for determining the group under risk of experiencing difficulties, forming support groups according to these characteristics, determining sources to plan services, improving services provided by health institutions and development of health policies. Treatment of chronic psychiatric patients are generally conducted at homes rather than institutions such as hospitals and care centers so relatives of patients have to face with lifelong care demands of chronic patients which are due to multidimensional requirements and problems of them.

Burden on the family is gathered under two main topics in the literature as objective and subjective burden: Objective burden consists of consequences such as changes and disruptions which current disease directly creates in lives of relatives of patients and caregivers (loss of income, limitation of social activities, stress at home etc.). Subjective burden is psychological conditions such as loss experienced by patient's relative, guilt, anxiety and embarrassment in social environment (2). In a study done by Karancı et al. (3) in 60 patient relatives, most frequently reported difficulties reported by caregivers are familial conflicts, disruption of family, financial loss due to patient and personal care burden.

When studies on burden experienced by caregivers are examined, variables causing care burden can be divided to five factors (4): Practical/household tasks, atmosphere at home, great incidents, financial liabilities and emotional consequences. Practical/household tasks which are the first factor consist of leading some activities of patient, steering him/her towards using medications or accompanying him/her when going out. Another dimension of this factor is

being carried out the tasks which patient was previously able to by family members after the onset of disease. Atmosphere at home which is the second factor is divided into two as state of mind and chaos experienced. Great incidents which are the third factor are problems due to incidents such as violent acts of patient, excessive noise, disruption of families' sleep, leaving home or threaten to leave home and disruption of communication with family. Finally, financial liability brought to family patient and emotional problems of family members due to disease make up burden variables experienced by family.

When different characteristics requiring care are examined, it is possible to divide factors affecting burden of caregiver into factors belonging to caregiver and factors belonging to patient. Factors belonging to patient can be collected under three different topics: cognitive impairment, functional impairment and behavioral problems. Factors belonging to caregiver are age, ethnical origin and gender of caregiver, relationship with patient, volunteering status to give care, educational level, economical status, presence of a chronic disease, coping skills, beliefs, social support and cultural characteristics of the society (5).

Bipolar disorder may be thought as not showing typical characteristics regarding loss of functionality and care burden due to presence of euthymic episodes. However, there are studies in the literature indicating that bipolar disorder has a significant care burden on patients' relatives (6). There is only one study done in Turkey about impact of bipolar disorder on patient care burden (7). In this study, we aimed to compare probable care burden of bipolar disorder and schizophrenia which had already been shown to increase patient care burden at a sample from Turkey.

METHODS

Patients who were admitted to inpatient clinic of Dışkapı Yıldırım Beyazıt Training and Research Hospital, Department of Psychiatry between July and December 2007 and followed-up from outpatient clinic and having at least 4 year history of disease were

recruited. Relatives of patients who were living with them and have the most important position for patients' care made up the sample. Relatives of patients having at least a primary school degree was taken as an inclusion criterion in order to administer the tests accurately. Patients having a psychotic disorder due to a medical reason were excluded from the study. Patients and their relatives who complied with inclusion criteria were informed about the study. Eighty patients out of 90 accepted to participate in the study and their written consents were also taken. Inclusion criteria of patients' relatives who make up the sample group are having diagnosis of schizophrenia and bipolar mood disorder according to DSM-IV-TR criteria, not living alone and not having a disease impairing communication in his/her general medical status and absence of an additional chronic disease impairing functionality.

Tools

1) Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I): This scale which was developed by American Psychiatry Association has a high reliability. Turkish validity and reliability study of the scale which is a Standard to confirm diagnosis in clinical studies was published (8,9).

2) Zarit Burden Interview: Although there are various scales evaluating care burden, only few of them have validity and reliability studies in Turkey. This scale was selected in this study due to its previous utilization in the literature in chronic psychiatric disorders such as schizophrenia (10). Turkish validity and reliability study of this scale was developed by Zarit et al. (11) to assess subjective burden of caregiver in chronic diseases and its validity and reliability study in Turkish was published as well (12). Scale consists of 22 items and total score is between 0 and 88 and the higher the score the higher subjective burden exposed. Zarit proposed to group care burden as severe burden for scores between 61 and 88, moderate to severe burden for scores between 41 and 60 and mild to moderate burden for scores between 21 and 40 (11).

3) Clinical Global Impression Scale (CGIS):

This is an assessment scale developed by Guy (13). It is used for evaluation by clinician to assess the severity and evolution of disease and efficacy of medications being used. Scale has 3 sub-scales assessing severity, global improvement and severity of adverse effects. Severity sub-scale was used to assess severity of disease in this study. Severity levels at the scale are as follows: 1, normal, not at all ill; 2, borderline mentally ill; 3, mildly ill; 4, moderately ill; 5, markedly ill; 6, severely ill; or 7, extremely ill.

4) Socio-demographic Evaluation Form: This form was developed to obtain socio-demographic data of patients such as age, gender, educational level, marital and professional status, life style and economical condition of patients and their caregivers.

Data Analysis

Data obtained were analyzed by "SPSS 15.0 for Windows" package software. Descriptive statistics were performed to evaluate demographic characteristics of cases and results were expressed as frequency, percent, mean and standard deviation. Chi-square test was used to analyze the difference between groups and variables. p values less than 0.05 were accepted as statistically significant.

RESULTS

When caregivers at study group of Table 1 were evaluated regarding gender, proportion of women was found higher with 68.75% (55 women) and proportion of men was 31.25% (25 men). When marital status was examined, 81.25% (65 cases) were found to be married. Proportion of single marital status was 16.5% (12 cases). When relationship of caregivers to patient was examined, spouses become first (35%; 28 cases) and parents become second (33.75%; 27 cases). When educational levels of caregivers were examined, 42.5% were found to be primary school graduates, 21.5% (17 cases) high school graduates and 12.5% (10 cases) university graduates.

Table 1: Socio-demographic characteristics of relatives of patients with schizophrenia and bipolar disorder

Patients' Relatives	Schizophrenia (n=40)	Bipolar Disorder (n=40)
Gender		
Men, n (%)	10 (25)	15 (37.5)
Women, n (%)	30 (75)	25 (62.5)
Marital Status		
Married, n (%)	32 (80)	33 (82.5)
Single, n (%)	6 (15)	7 (17.5)
Widower, n (%)	1 (2.5)	0 (0)
Divorced, n (%)	1 (2.5)	0 (0)
Proximity		
Parents, n (%)	13 (32.5)	14 (35.0)
Spouse, n (%)	14 (35.0)	14 (35.0)
Son-daughter, n (%)	6 (15.0)	3 (7.5)
Sister-brother, n (%)	7 (17.5)	9 (22.5)
Educational Level		
Primary, n (%)	17 (42.5)	17 (42.5)
Secondary, n (%)	8 (20.0)	11 (27.5)
High School, n (%)	11 (27.5)	6 (15.0)
University, n (%)	4 (10)	6 (15.0)

Gender distribution of bipolar and schizophrenia patients were 51.25% men (41 cases) and 48.75% (39 cases) women. Marital status was 51.25% married (41 patients) and 37.52% (30 patients) were single. Proportion of divorced cases was 7.5% (6 cases). 27.5% (22 patients) of patients were working at a permanent job and 41.25% (33 patients) were unemployed. Eighteen patients (22.5%) defined themselves as housewives. 61.25% (49 patients) owned their homes and 38.75% (31 patients) were tenants.

Scoring of patients' relatives evaluated by Zarit Burden Interview were rated between 0-40 and 41-88; scores between 0 and 40 corresponded to small or absent subjective burden, scores between 41 and 88 corresponded to moderate to severe subjective burden. Relationship between socio-demographic variables and scores from life burden care scale were summarized in Table 3.

Spouses were exposed to higher subjective burden by 35% (28 cases) followed by parents by 33.75% (27 cases) ($p<0.001$). Correlation between income levels of patients' relatives and subjective burden was not found significant ($p=0.074$). Tobacco and alcohol use were not found to be significant regarding caregiver burden

Table 2: Socio-demographic characteristics of patients with schizophrenia and bipolar disorder

Patients	Schizophrenia (n=40)	Bipolar Disorder (n=40)
Gender		
Men, n (%)	19 (47.5)	22 (55.0)
Women, n (%)	21 (52.5)	18 (45.0)
Marital Status		
Married, n (%)	21 (52.5)	20 (50.0)
Single, n (%)	15 (37.5)	15 (37.5)
Widower, n (%)	0 (0)	3 (7.5)
Divorced, n (%)	4 (10.0)	2 (5.0)
Ownership of Home		
Own, n (%)	26 (65.0)	23 (57.5)
Rental, n (%)	14 (35.0)	17 (42.5)
Working Status		
Working, n (%)	10 (25.0)	12 (30.0)
Unemployed, n (%)	17 (42.5)	16 (40.0)
Pensioner, n (%)	3 (7.5)	4 (10.0)
Housewife, n (%)	10 (25.0)	8 (20.0)
Suicidal Attempt		
Yes, n (%)	11 (27.5)	13 (32.5)
No, n (%)	29 (72.5)	27 (67.5)

($p=0.466$ and $p=0.483$, consecutively). Medical or psychiatric diseases of caregivers themselves were also not found to be statistically significantly correlated with care ($p=0.489$).

Having an additional psychiatric patient other than recruited patients in the family was also found to statistically significantly increase care burden ($p<0.01$). Also, subjective caregiver burden found to be increased by increasing disease severity according to CGIS scale which indicates that how severely ill patients are ($p=0.06$). Care burden was found to be increased when educational levels of patients' relatives are low ($p=0.37$).

When caregivers of patients with schizophrenia and patients with bipolar disorder were compared, subjective care burden was found to be increased at both groups and on the other hand, no significant difference was found between two groups regarding care burden ($p=0.813$).

DISCUSSION

Schizophrenia and bipolar disorder are among chronic diseases which cause deterioration in patients, affect both patients and their environment negatively

Table 3: Relationship of socio-demographic and other variables with care burden

	Yaşam Yüğü Ölçeđi		χ^2	p
	0-40 puan (n=53)	41-88 puan (n=27)		
Gender				
Men	16	9	4.65	0.774
Women	37	18		
Marital Status				
Married	46	19	6.56	0.107
Single	7	8		
Educational Level				
Primary	26	8	12.06	0.037
Secondary	10	9		
High School	8	9		
University	9	1		
CGI				
3	16	0	21.32	0.006
4	26	20		
5	11	7		
Age				
0-40	19	12	3.84	0.456
41-73	34	15		
Monthly level of income (TL)				
<500 TL	11	4	7.45	0.074
500-1000	25	21		
1000-1500	9	2		
>1500	8	0		
Proximity to patient				
Parents	26	1	22.23	<0.001
Spouse	19	9		
Other	8	17		
Additional Disease				
Medical	21	9	3.55	0.489
Psychiatric	1	2		
Absent	31	16		
Tobacco use	21	13	3.72	0.466
Alcohol use	7	2	3.64	0.483
Diagnosis				
Schizophrenia	27	13	0.58	0.813
Bipolar	26	14		
Family history of psychiatric disease	14	15	18.32	<0.01

CGI: Clinical Global Impression Scale, χ^2 : Chi-square

by this deterioration and have a remitting/relapsing course. Disruption of treatment and consequent need to continue treatment in an inpatient setting and its cost on country economy are other issues to be discussed. For this reason, there is ongoing research about every step (etiological factors, clinical findings, assessment of clinical symptoms, factors affecting treatment, prognosis and factors affecting prognosis) of these diseases. We investigated the caregiver burden at relatives of patients with schizophrenia and bipolar disorder by Zarit Burden Interview.

In our study, we found that care burden increases by decreasing level of education. Results of the study by Aydın et al. (14) published in 2009 are consistent with our study that lower educational level increases care burden. However, in another study done in Nigeria in 2006 by Ukpong, it was concluded that higher number of years of education increases care burden. This was interpreted as well-educated person leaving his/her working environment, spending more time with his/her spouse and higher responsibility to financially support the patient (15). These inconsistent results may be due to differences at study designs and sample sizes but also be interpreted as intercultural differences which educational level may arise due to different social consequences and life styles.

Foldemo et al. (16) found that age and gender of caregiver is not correlated with care burden in their study published in 2005. We also did not found any statistically significant correlation between age and gender consistent with this finding.

When CGIS scores which determines clinical severity of disease increase, subjective burden of caregivers also significantly increase. Van Der Voort et al. (17) also reported in 2007 that higher level of CGIS increases caregiver burden. Similarly, in the study of Şahin et al. (7), disease severity found to be significantly increase the burden experienced by patients' relatives by using "Young Mania Rating Scale".

We also found that spouses and parents are the most exposed to subjective burden among caregivers. In studies of Jungbauer et al., it was concluded that parents (18) and spouses (19) are under continuous care burden.

In our study, no significant correlation was found

between income levels of patients and care burden. This finding conflicts with the finding of Karancı published in 1995 (3) which found that financial problems increase care burden. This can be due to 61.25% of our patients own their homes; all patients in the study group have social security and not paying for medications in the last 12 years due to green card applications.

Finding not increased care burden by tobacco or alcohol use of patients' relatives in our study is parallel to five year follow-up study of Möller et al. (20).

Exposure to subjective care burden was found in relatives of patients with bipolar disorder and schizophrenia. However, no statistically difference was found between groups regarding care burden. This can be explained by chronic and remitting-relapsing nature of schizophrenia and bipolar disorder. Relatives of patients exposed to care burden may experience similar difficulties from this point of view. Another issue to be mentioned here is although bipolar disorder does not cause cognitive and executive dysfunction as much as schizophrenia, it can cause care burden at least as much as schizophrenia from care burden related with functional loss.

Our study has some limitations. Being a tertiary care institution and consequently not being a field study, small sample size and relatively higher number of treatment-resistant patients might have affected study results. Not investigating the effect of severity and symptoms of both disorders and cognitive and behavioral deterioration on care burden and not comparing effects of socio-demographic and patient characteristics of both disorders on care burden are among limitations of our study.

CONCLUSION AND RECOMMENDATIONS

Care burden is substantial among caregivers of patients with both bipolar disorder and schizophrenia but there is no statistically significant correlation between two groups when compared. Most important variables which increased care giving burden of patients' relatives found in our study were lower level of education of patients' relatives, severity of disease,

proximity of caregivers (spouse>parents), presence of psychiatric disorder in another member of the family. It is important to determine factors affecting care burden in relatives of patients due to their value to predict relapses.

When results of our study are considered, it can be said that chronic psychiatric diseases cause a burden more than the medical aspect of the condition in both practical and psychiatric senses for family of patient. Changing life styles and family structures in our modernizing society produces severe problems for care

of individuals with chronic diseases. There is increasing need for institutional follow-up units for patients deprived of social support for following their treatment after acute phase treatment and gaining their functionality as much as possible. Social Mental Health Centers which are under development will serve in narrow districts and will both treat and follow-up individuals with chronic psychiatric diseases and contribute to their clinical and social conditions. This will avoid disruption of treatment and consequently increase social participation and functionality of these patients.

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