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WHEN IS THE APPROPRIATE TIME FOR FAMILIES TO BE INVOLVED IN ADDICTION TREATMENT; FROM THE BEGINNING? A RETROSPECTIVE EVALUATION OF INPATIENTS IN A PRIVATE HOSPITAL

BAĞIMLILIK TEDAVİSİNE AİLENİN NE ZAMAN DAHİL EDİLMESİ UYGUNDUR; BAŞLANGIÇTAN İTİBAREN Mİ? ÖZEL BİR HASTANEDE YATARAK TEDAVİ GÖREN HASTALARIN GERİYE DÖNÜK DEĞERLENDİRİLMESİ

Onat Yılmaz[*1], Serdar Nurmedov[2], Cemal Onur Noyan[2], Asli Enez Darcın[3], Nesrin Dilbaz[2], Nevzat Tarhan[2]

Abstract

Aim of the study is to investigate the referral type of dependent patients and its effect on treatment outcomes. This retrospectively designed study was conducted at a private hospital. The sample included 323 patients, and all patients' records were evaluated according to their referral type, sociodemographic features, criminal history, relapse rates and accompanying axis II disorders. Patients were reassessed six months after their discharge by semi-structured face-to-face or phone interviews with the patient or a family member. There were significant differences in some of sociodemographic characteristics, presence of criminal records, substance use patterns and relapse rates between voluntary inpatients and coerced inpatients. These results indicate a benefit in family participation at the very early stages of dependency treatment. Prospective studies are needed to evaluate whether family participation at the beginning of dependency treatment contributes to prognosis and patient's motivation.

Keywords: Addiction treatment, Family involvement, Treatment outcomes

Özet

Bu çalışmanın amacı bağımlılık tedavisi amacıyla hastaneye başvuran hastalarda, başvuru şeklinin ve bu şeklin tedavi sonuçlarına olan etkisinin araştırılmasıdır. Özel bir hastanede retrospektif olarak gerçekleştirilen bu çalışmaya, verilerine ulaşılabilen ve çalışmaya katılmayı kabul eden 323 hasta dahil edilmiştir. Hastaların başvuru şekli, sosyodemografik özellikleri, kriminal kaydı, relaps oranları ve eşlik eden eksen II psikiyatrik tanılar arasındaki ilişkiler araştırılmıştır. Taburcu edildikten altı ay sonra, yarı yapılandırılmış görüşme formu ile hastaların kendisi ya da bir aile üyesi ile yüz yüze ya da telefonla görüşme sağlanmıştır. Kendi isteği ile hastaneye başvuran hastalar ile bir başkası tarafından yönlendirilen hastalar arasında, sosyodemografik özellikler, criminal kayıt varlığı, uyuşturucu madde kullanım paternleri ve relaps oranları açısından istatistiksel olarak anlamlı fark saptanmıştır. Bu çalışmanın sonuçları, bağımlılık tedavisinin daha erken basamaklarında ailenin de tedaviye katılımının yararlı olduğuna işaret etmektedir. Bağımlılık tedavisinin başlangıcında, ailenin tedaviye katılımının prognoza ve hastanın tedavi motivasyonuna hangi ölçüde katkı sağladığına dair ilerleyen dönemde gerçekleştirilecek çalışmalara gereksinim duyulmaktadır.

Anahtar Kelimeler: *Bağımlılık tedavisi, Aile katılımı, Tedavi sonuçları*

1. Introduction

ASubstance and alcohol dependence is an important health problem which causes serious biological, social and economic costs, both for the patients and their families. Therefore, reducing the consequences of dependence is of great importance for public health. There have been studies investigating the effectiveness and outcomes of the treatments in dependent patients. But the first consideration of engaging the patient in the treatment programme is itself associated with many internal and external factors. Cognitive impairment caused by substances or alcohol may impact upon an individual's motivation to change, their ability to delay gratification and appreciation of adverse consequences (Goldstein, 2002; Brevers, 2014) and patients might refuse treatment owing to a negative attitude towards treatment or feelings of

[*1]Corresponding author: M.D., Kasimpasa Military Hospital, Psychiatry Service, Bahriye Hastanesi Yokusu, 34200, Kadikoy, Istanbul, Turkey onatyilmaz@yahoo.com +90 212 238 79 00

[2]Psychiatry Department, Uskudar University, NPIstanbul Neuropsychiatry Hospital, Siteyolu Sok, 34768, Umraniye, Istanbul, Turkey serdarnurmedov@gmail.com +90 216 633 0 633

[3]M.D., Kanuni Sultan Suleyman Education and Research Hospital, Department of Psychiatry, Atakent Mh, 34303, Buyukcekmece, Istanbul, Turkey, aenez5280@yahoo.com 90 212 404 15 00

hopelesness (Opsal, 2013). There is conflincting evidence about the effectiveness of treatment referral with some studies indicating patients who enter treatment under legal pressure show better treatment responses (Brecht 2005; Knight, 2000; Kelly 2005; Collins 1983), some showed that readiness to change at the admission was not correlated to treatment outcomes (Burke, 2007), and some pointed out that length of stay, risk of voluntary or involuntary readmission were at least equal or greater to the involuntarily admitted patients (Kallert, 2008).

Substance users consist of a heterogenous group of individuals that differ in some dimensions, such as age, substance type, length and severity of their substance use, the extent and type of their criminal involvement, their social functioning and treatment motivation. Because motivation is a dynamic condition, mental health professionals and social service workers have looked for alternative management approaches for every individual, focusing on increasing the patients' awareness and upgrading their ability to actively participate and engage in treatment. Nevertheless, limited research about treatment referral has been conducted so far, and to the best of our knowledge only Bilici and colleagues have investigated the effects of personal volunteering and treatment motivation in substance users in Turkey (Bilici, 2014).

The aim of this study is to investigate possible differences in treatment outcomes and prognosis between dependent patients who were voluntarily admitted to an inpatient addiction clinic and those who were persuaded to take up treatment by their family.

2. Method

The study was conducted in a private psychiatric hospital, between February 2012 and August 2014. This center comprises 49 inpatient beds and accepts patients from all over Turkey and some Middle Eastern countries. This retrospectively designed study was approved by the Ethical committee of Uskudar University.

This study included the medical records of 323 inpatients who met DSM-IV TR diagnostic criteria for Alcohol and Substance dependence. The excluding criteria for this study were any neurological comorbid disorder, dual diagnosed patients and mental retardation. After a detoxification period, all patients were evaluated by clinical examination and Turkish version of Structured Clinical Interview for DSM-IV (SCID-I) (First, 1997; Corapcioglu 1999) was used as a screening test. Sociodemographic variables of patients, presence of criminal record and presence of psychiatric comorbidity were also assessed. Referral type was determined by a single question; "Have you attended this treatment on your own will or has your family motivated you to seek treatment?" All patients were reassessed six months after their discharge by semi-structured face-to-face or phone interviews directly with the patient or with a family member.

2.1. Statistical Analysis

Statistical analyses were performed using SPSS 16 (SPSS Inc., Chicago, IL, USA) for Windows. Categorical variables in the study were compared by means of chi-square statistics. One-way Anova was used to compare continuous variables. Values were stated as median with 25%- 75% values and mean ± standard deviation (SD). Descriptive statistics were also calculated as frequency or percentage. The univariate analyses to identify variables associated with "referral type" was investigated using Chi-square, Fisher exact, Student's t-test and Mann-Whitney U test where appropriate. For the multivariate analysis, possible factors identified with univariate analyses were later entered into the logistic regression analysis to determine independent predictors of patients outcome. Hosmer-Lemeshow goodness of fit statistics were used to assess model fit. A 5% type-I error level was used to infer statistical significance. For all analyses, $p < 0.05$ was regarded as statistically significant.

3. Results

In our study, the medical records of 323 patients (288 men, 35 women; M age=32.5) were scanned retrospectively. Among these patients, 59% were single, 30% were married or cohabiting. Patients had completed 11.5 years of education, on average (SD=±2.4). Approximately 14% of the patients reported having a regular job and more than half of the patients (53.6%) reported being unemployed. (Table 1) Some 199 (61.6%) patients had no history of criminal records and 59 (18.3%) had experienced substance-related conviction. Among all of the patients, 8 (2.5%) had a comorbid Cluster A personality disorder, 203 (62.8%) met the criteria for Cluster B personality disorder and 27 (8.4%) had comorbid Cluster C personality disorder (Table 2). Some 124 (38.4) patients had received psychiatric treatment prior to referral, 78 (24.1%) of them had a history of hospitalisation due to substance use, 91 (28.2%) had been hospitalized more than once and 99 (30.7%) reported alcohol as their primary substance of abuse, 74 (22.9%) reported cannabinoid and its derivatives, 16 (5%) reported heroin, 7 (2.2%) reported cocaine, 3 (0.9%) reported volatile substances, and 81 (25.1%) reported mixed drug abuse(Table 3).

Table 1: Sociodemographic characteristics of the inpatients

	voluntary (n:115)	persuaded (n:208)	t/ χ2	p
Age (mean±SD)	33.80 (10.70)	31.70 (10.61)	1.70	0.550
Sex n (%) Female Male	 14 (12.2) 101 (87.8)	 21 (10.1) 187 (89.9)	0.331	0.565
Duration of education (mean ± SD)	11.62 (3.01)	11.45 (2.64)	0.506	**0.044**
Marital Status n (%) Single-widow(er) Married Separated	 59 (51.3) 40 (34.8) 16 (13.9)	 131 (63) 58 (27.9) 19 (9.1)	4.438	0.109
Employment Status n (%) Unemployed Employed (temporarily/ part time) Employed (permanently/ full time)	 50 (43.5) 27 (23.5) 38 (33)	 123 (59.1) 67 (32.2) 18 (8.7)	15.087	**0,001**

Table 2: Sociodemographic features of the inpatients

	voluntary	persuaded	t/ χ2	p
Duration of substance use (year)(mean±SD)	10.39 (8.32)	10.32 (8.72)	0.074	0.892
Age at first substance use (mean±SD)	18.38 (3.95)	18.09 (4.17)	0.622	0.386
Number of hospitalisations (mean±SD)	1.64 (1.21)	2.11 (2.46)	-1.913	**0.047**
Presence of criminal records n (%)				
No records	84 (73)	115 (55.3)	10.97	**0.012**
Probation	17 (14.8)	42 (20.2)		
Simple offense	10 (8.7)	41 (19.7)		
Major crime	4 (3.5)	10 (4.8)		
Use of SCs n (%)				
Yes	41 (35.7)	98 (47.1)	3.97	**0.046**
No	74 (64.3)	110 (52.9)		
Slip n (%)				
Yes	70 (63.6)	143 (72.6)	2.663	0.103
No	40 (36.4)	54 (27.4)		
Relaps n (%)				
Yes	59(53.6)	134 (68)	6.256	**0.012**
No	51 (46.4)	63 (32)		
Drop n (%)				
No	68 (59.1)	123 (59.1)	0.000	0.99
Yes	47 (40.9)	85 (40.9)		
Time to slip* (days) (n: 213) median (25%- 75% values)	40 (23.75-90)	30 (15-90)	-0.638	**0.042**
Time to relapse** (days) (n:193) median (25%- 75% values)***	50 (30-120)	47 (20-100)	0.022	0.348

* Time to slip was assessed among the patients who reported slip
** Time to relapse was assessed among the patients who reported relapse.
*** Median values are given due to skewed distributions of time to slip and time to relapse

Table 3: Substance use profiles in patient groups

	voluntary (n:115)	persuaded (n:208)	χ2	p
Alcohol dependency n (%)	42 (36.5)	57 (24.4)		
Cannabis and its derivatives n (%)	19 (16.5)	55 (26.4)		
Heroin dependency n (%)	10 (8.7)	6 (2.9)	10.745	0.057
Cocaine dependency n (%)	2 (1.7)	5 (2.4)		
Polysubstance dependency n (%)	41 (35.7)	83 (39.9)		
Inhalant dependency n (%)	1 (0.9)	2 (1.0)		

Of the total 323 patients, 115 (35%) joined the treatment under their own motivation and 208 (65%) were referred to the hospital under pressure from family members or friends. The mean hospitalisation time was 21±20, 5 days for all of the patients.

The voluntarily admitted group had a greater duration of education and higher occupation rates. Voluntary inpatients had lower recorded number of hospitalisations and fewer criminal records. It was also determined that inpatients persuaded by their family tended to use synthetic cannabis (SC) (35.7% in voluntarily admitted group and 47.1% in persuaded group) and relapse rates were significantly higher in this group (p=0.012).

Time to relapse was longer in the voluntarily admitted group and voluntary inpatients were less likely to have an accompanying Axis II disorder (Table 4). Inpatients from the persuaded group had higher rates of psychotic symptoms (Table 5). These symptoms were observed by the doctors and noted, none of these patients met the criteria for any psychotic disorder. There was no difference in age, sex, drop rates, and time to relapse between the voluntarily admitted group and persuaded group. On the other hand, there was a relationship between treatment referral type and personality disorder comorbidity, presence of criminal record and relapse rates (Table 6).

Table 4: Comparison of presence of axis II disorders in patient groups

	voluntary (n:115)	persuaded (n:208)	χ2	p
Axis II diagnosis n (%)				
No diagnosis	35 (30.4)	50 (24.0)		
Cluster A	2 (1.7)	6 (2.9)		
Cluster B	61 (53)	142 (68.3)		
Cluster C	17 (14.8)	10 (4.8)	13,09	0.004

Table 5: Distribution of psychotic symptoms

	voluntary (n:115)	persuaded (n:208)	χ2	p
Psychotic symptoms n (%)	12 (10.4)	58 (27.9)	29.686	**p<0.01**

Table 6: Distribution of referral type in binary logistic regression when employment status, presence of criminal records, use of SCs, relapse, Axis II comorbidity, accompanying psychiatric symptoms were independent variables

Risk Factor*	RR (%95 GA)**	p
Employment status	0.760 (0.578 – 0.999)	0.049
Presence of criminal record	1.583 (1.164 – 2.153)	0.003
Use of SCs	0.810 (0.487 – 1.346)	0.415
Relapse	0.526 (0.319 – 0.866)	0.012
Axis II diagnosis	0.983 (0.768 – 1.258)	0.891
Accompanying psychotic symptoms	1.123 (0.927 – 1.361)	0.236

*variables entered: Employment status, Presence of criminal record, Use of SCs, relapse, Axis II diagnosis, Accompanying psychotic symptoms
**RR: odds ratio and %95 confidence interval

4. Discussion

The aim of this study is to provide some additional information about the impact of treatment referral on treatment outcomes in dependent patients. Different from previous studies, our sample included inpatients using synthetic cannabinoids.

All forms of voluntary treatment carry the potential to have some component of pressure and persuasion. Sometimes, pressure from family and friends might be favourable to initiate or continue therapeutic process. The persuasion might vary from verbal encouragement to

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threat of social consequences like divorce, separation or loss of financial support (Stevens, 2006). In this study none of the 323 patients were coerced (mandated) for addiction treatment.

The significantly lower duration of education, and higher numbers of hospitalizations, higher rates of presence of criminal records, relapses, and comorbidity axis II diagnosis in the persuaded group in this study was not surprising. Together with frequently observed Cluster B personality characteristics including impulsivity, low frustration tolerance, and an inability to delay gratification, most of the substance users' motivation for treatment is argued to be poor, unstable, and inconsistent (Maddux, 1998). In the literature, the association between substance use and crime is well-documented, and frequency and severity of criminal behavior has been thought to rise and fall with the level and kind of substance use (Chaiken, 1990; Anglin, 1989). Therefore, one of the reasons that patients are directed to treatment by their families may be because of functional and social impairments and distress emanating from their dependency.

In addition to sociodemographic features affecting treatment referral, we have investigated the presence of synthetic cannabis (SC) use in this patient group and we determined that SC use was significantly higher in the persuaded patient group. When compared to cannabis, SCs are associated with severe intoxication symptoms, more intense withdrawal and craving symptoms, more functional impairments and negative impacts on both education and employment (Papanti, 2013), and because of this families might develop higher treatment seeking tendencies than other patients. In a recent study conducted by Nurmedov et al, (2015) lower levels of education, lower employment levels, and greater numbers of criminal records were more likely to be associated with SC use, when compared to cannabis.

Significant differences in employment status might be associated with the source of financial support. Families might be persuading the patient to seek treatment due to financial burden caused by the dependency. Marlowe and colleagues defined financial reasons as an important treatment entry pressure (Marlowe, 2001). Higher levels of hospitalisation in the persuaded group might be asssociated with the treatment motivation. In their recent study, Bilici and colleagues pointed out that higher motivation is related with voluntarily treatment admission, desire for help and treatment readiness (Bilici, 2014). A limitation of this study is that the motivation levels of the patients were not determined, but accepting family persuasion as an external motivation might help mental health professionals to discover or design new treatment approaches.

Higher relapse rates in the persuaded group are similar to the previous studies (Loneck, 1996). Psychotic symptoms were significantly higher in the persuaded group and this might be related to the effects of the substances they used, the severity of their dependence and impairments in decision-making. This might also be associated with higher synthetic cannabis use in persuaded group (William, 2014)

As stated before, several personality disorders are associated with addiction (Douzenis, 2012). In our study, Cluster B peronality traits were associated with persuaded treatment referral. The distribution of referral type in binary logistic regression when employment status, presence of criminal records, use of SCs, relapse, Axis II comorbidity, accompanying psychotic symptoms were independent variables showed that employment status, presence of any criminal record and relapse can predict results of persuaded treatment. Previous studies also emphasized the association between antisocial personality characteristics, criminal behaviour and substance use (Klag, 2005).

To the best of our knowledge, this is the first study evaluating the referral type in dependent patients, including synthetic cannabinoid users. The widespread collectivistic familial and societic culture type in Turkey, perception of drug or alcohol use as immoral and self-destruction and disability of a family member due to dependence does affect the other family members. Besides financial and health problems in the short time, being exposed to psyhopathological role models and negative identities about dependence force families to act at once. These cultural motives might play an important role in persuading patients in Turkey.

Several limitations of this study should be mentioned. The treatment motivation wasn't measured, the study was retrospectively designed and other factors affecting the prognosis or results of this treatment were not examined. Prospectively designed future work using motivation scales with longer follow up intervals would contribute valuable information to the literature.

The results of this study indicate that substance users are subjected to a broad range of pressures that contribute to their entry into treatment, suggesting that prediction of treatment retention and treatment outcomes might be improved by considering and assessing the full range of treatment entry pressures including their individual and interactive influence on their social environment.

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