

Sociodemographic and clinical characteristics of patients with violence attempts with psychotic disorders

Sevda Korkmaz¹, Levent Turhan², Filiz İzci², Sadullah Sağlam³, Murad Atmaca¹

ABSTRACT

Objective: The objective of the study is to compare the socio-demographical characteristics of patients with psychotic disorders that engage or don't engage in violent behavior against individuals, and to conduct a research on the degree of affinity of the victims of violence with the patient and on factors that could affect violence.

Methods: All patients (151 patients) that were treated during the last year, diagnosed with psychotic disorder. The patients were compared in two groups; these who engaged in violent acts and these who did not. Furthermore, patients in the violent group were separated into two groups; one consisting of the patients who engaged in violent behavior against immediate family members, hence the immediate violence group, and the patients who didn't engage in violence against immediate family members, hence the distant violence group.

Results: It was determined that 56% of the patients with psychotic disorder have attempted violence, out of which 75% were engaged in violent behavior against their immediate relatives. It was determined that patients who attempted violence were primarily those diagnosed with paranoid schizophrenia and chronic schizophrenia. It was observed that patients that did not receive regular psychiatric therapy attempted in violence more than others.

Conclusion: Patients with active psychotic symptoms should be treated in early stages and precautions should be taken against to decrease attempts at violence.

Keywords: schizophrenia, psychotic disorder, violence

INTRODUCTION

Violence is considered as an important health problem by World Health Organization and defined as the purposeful application of physical force, use of force or threat that could cause death, injury, psychological damage or developmental impairments against self or another individual, a group or the society at large (1). It is possible to observe violent behavior among the clinical symptoms of certain psychiatric diseases, especially in schizophrenia and other psychotic disorders. While previously the view that individuals with psychological disorders did not carry increased risks in engaging in violent behavior when compared to healthy individuals was prevalent, recent studies determined that the potential for violence was higher for this patient group than its rate of prevalence in society (2, 3). Fazel et al. (2) conducted a meta-analysis on 20 studies that examined the violence risk in individuals diagnosed with psychosis and conducted between 1970 and 2009. This meta-analysis determined that the patient group of 18,423 individuals with psychotic disorder displayed statistically significantly increased violent behavior pattern (9.9%) when compared to the general population (1.6%). It was reported that in the group with substance comorbidity this rate was higher.

The objective of the study is to compare the socio-demographical characteristics of patients with psychotic disorders that engage or do not engage in violent behavior against individuals, and to conduct a research on the degree of affinity of the victims of violence with the patient and on factors that could affect violence.

METHODOLOGY

The study commenced after the required approval was obtained from the ethics committee. The patients treated in Firat University Hospital, Clinic of Psychiatry and Elazığ Psychiatry Hospital during the last year were included in the study. All patients diagnosed with schizophrenia or with other psychotic disorders (Delusional disorder, schizoaffective disorder) by a psychiatrist utilizing DSM-IV-TR (4) diagnosis criteria and meeting the study criteria were included in the study. The information obtained from the relatives of patients suffering from cognitive disorders such as dementia, mental retardation and amnesic disorders or patients that could not engage in verbal communication due to psychopathological or language issues and recorded in their files were considered for the study. Missing or unclear data for certain cases were dismissed. Socio-demographical data for the patients such as their ages, genders and educational background, treatment process, personal and familial data, type of violent behavior, alcohol and substance abuse, inpatient treatment status, whether the patient received electroconvulsive therapy (ECT) and whether the patient had past violent behavior were examined (knife, firearm, beating, arson, axe, etc.) Furthermore, the degrees of affinity with the patient of the individuals that the patient engaged in violent behavior were investigated and the relationship between the degree of affinity and certain variables was scrutinized. Initially, the groups that attempted violence and non-violent groups were compared. Second, the violent group was divided into two groups. If the patients had engaged in violence against their immediate relatives such as parents, partners, children, siblings or nephews, they were included in immediate violence group.

¹ Department of Psychiatry, Firat University Medicine Faculty, Elazığ, Turkey

² Department of Psychiatry, Elazığ Mental Health and Mental Disorders Hospital, Elazığ, Turkey

³ Department of Neurology, Elazığ Mental Health and Mental Disorders Hospital, Elazığ, Turkey

Correspondence: Sevda Korkmaz

Department of Psychiatry, Firat University Medicine Faculty, Elazığ, Turkey
Phone: +90 505 351 07 30

E-mail: skorkmaz23@hotmail.com

Table 1: Comparison of socio-demographic and clinical characteristics of the violent and non-violent groups

		Violent	n:85	Non-violent	n:66	P
Gender	Male	78	%92	47	%71	0.001**
Mean Age		36.6±11.2		40± 12.4		0.043*
Diagnosis	Paranoid	31	%36.5	22	%33.3	0.69
	Chronic	29	%34.1	12	%18.2	0.03*
	Disorganized	2	%2.4	3	%4.5	0.455
	Undissociated	13	%15.3	13	%19.7	0.48
	Schizoaffective	8	%9.4	15	%22.7	0.024*
	Delusional	2	%2.3	1	%1.5	0.54
Duration of disease (Year)		4.6		4.8		0.16
Marital Status	married	26	%31	18	%27.2	0.66
	single	51	%60	43	%65.2	0.517
	divorced/widowed	8	%9	5	%7.6	0.69
Education	Illiterate	15	%18	14	%21	0.581
	Primary/HighSchool	65	%76	46	%70	0.35
	University	5	%6	6	%9	0.45
Residence	Central	43	%51	47	%71.2	0.02*
Income Level	Low	53	%62	35	%53	0.25
	Medium	31	%37	28	%42.4	0.46
	High	1	%1	3	%4.6	0.325
Occupation	Employed	46	%54	54	%81.9	<0.001**
	Unemployed					
	Retired	37	%44	11	%16.6	<0.001** 0.714
Alcohol or substance Use		11	%13	10	%15	0.82
Smoking		62	%73	39	%59.1	0.073
Psychiatric Disease in Family		13	%15	22	%33.3	0.009*
Psychiatric medicine use in the past		70	%82	64	%97	0.005*
Suicide History		25	%29	5	%7.6	0.001**
Electro convulsive therapy		26	%31	13	%20	0.129
Previous violence		66	%78			
Medicine use during the event		37	%44			
Positive symptom in attempt		76	%89			
Previous inpatient		67	%79	62	%93.9	0.09
Additional medical disease		22	%26	12	%18.2	0.261

If they were engaged in violence against other individuals than their immediate relatives, they were included in distant violence group. The final three groups of immediate violence, distant violence, and non-violent groups were then compared. Since there were no patients who engaged in violent behavior against their immediate family members such as uncles or aunts, these relative types were excluded from the analysis.

Statistical Method

“SPSS for Windows 21.0” software package was used in data analysis. For dual comparisons, t-test, and to compare the means of more than two groups, one-way variance analysis (ANOVA) were utilized. In cases where a significant difference existed, dual comparisons were conducting using the Tukey HSD method, a post hoc test. For categorical variables chi-square test was utilized. Level of significance was accepted as p<0.05.

RESULTS

A total of 151 patients with complete data were registered in the study. Attempts of violence was determined in 85 patients (%56), while 66 patients did not engage in violence (44%). The average age for the violent group was determined to be significantly lower than the non-violent group (p=0.043). The ratio of male patients in the violent group was significantly higher than the non-violent group (p=0.001). Within the whole patient sample, the ratio of violent males was 62% and the ratio of violent females was 27%. In 78% of the patients reoccurring violent attempts were determined (Table 1). The ratio of patients with past suicidal attempt was significantly higher in violent group when compared to the non-violent group (p=0.001). The rate of psychiatric disease history in family in the non-violent group was statistically significantly higher than the violent group (p=0.009). In the non-violent group, past psychiatric therapy rate was significantly higher than the violent group, however the difference between the rate of inpatients among the groups was not statistically significant (Table 1). The ratio of city-dwellers in non-violent group (71.2%) were significantly higher than the ratio (33.3%) in distant violence group (p=0.02). No significant difference was determined between the groups on the rates of patients based

on smoking, alcohol and substance abuse, educational level, marital status, average duration of disease, ECT treatment and the existence of additional medical conditions Table 1). A comparison of the groups based on Axis 1 diagnoses, it was determined that paranoid schizophrenia diagnosis was observed the most in both groups, followed by chronic schizophrenia in the violence group and schizoaffective disorder in the non-violent group (Table 1). During the violent attempts, 44% of the patients were under medication and 89% of the patients had active psychotic symptoms. After the violence group was divided into immediate violence and distant violence groups, 64 patients (75%) were included in the intimate violence, 21 patients (25%) were included in the distant violence groups. The distribution demonstrates that psychosis patients with violent tendencies usually direct this violence towards their immediate relatives. The violence attempts of 35.9% of the patients in immediate violence group were targeted towards their parents, followed by their partners (21.9%) (Table 2). The male gender ratio in immediate violence group (98%) was significantly higher than the distant violence (71%) and non-violent (71%) groups (p<0,05).

Sub-group analysis demonstrated that %50 of the married males that attempted immediate or distant violence (26 patients) targeted their partners. 1 of the women patients in violence group (14%) attempted violence against her partner, while 6 (86%) targeted their parents. The comparison of the immediate violence and non-violent groups based on Axis 1 diagnoses showed a significant difference between these groups (p=0.009). 40.6% of the patients in immediate violence group were diagnosed with paranoid schizophrenia and 31.3% were diagnosed with chronic psychosis. Contrary to the immediate violence group, chronic psychosis patients were most prevalent (42.9%) in the distant violence group, followed by patients diagnosed with paranoid schizophrenia (23.8%). The same order in non-violent group was as follows: paranoid schizophrenia (33.3%), schizoaffective disorder (22.7%). The mean age and average duration of the disease for the immediate violent group, during the time of the study, was determined to be lower than both distant violence and non-violent groups (Table 2). It was determined that in all three groups the rate of receiving inpatient therapy before violent attempts were high and there

Table 2: Comparison of socio-demographic and clinical characteristics of immediate violence, distant violence and non-violence groups

		Immediate violence n:64		Distant violence n:21		Non-violent n:66		P
Gender	Male	63	%98.4	15	%71.4	47	%71.2	<0.001**
Mean Age		36±10.5		38±13.2		40±12.4		0.043*
Diagnosis	Paranoid	26	%40.6	5	%23.8	22	%33.3	0.346
	Chronic	20	%31.3	9	%42.9	12	%18.2	0.054
	Disorganized	-	-	-	-	3	%4.5	0.455
	Undissociated	10	%15.6	2	%9.5	13	%19.7	0.76
	Schizoaffective	6	%9.4	3	%14.3	15	%22.7	0.08
	Delusional	2	%3.1	2	%9.5	1	%1.5	0.6
Duration of disease (Year)		4.5		4.7		4.8		0.16
Marital Status	married	22	%34.4	4	%19	18	%27.3	0.36
	single	35	%54.6	16	%76.2	43	%65.2	0.17
	divorced/widowed	7	%11	1	%4.8	5	%7.6	0.63
Education	Illiterate	8	%12.5	7	%33.3	14	%21.2	0.09
	Primary/High School	52	%81.2	13	%61.9	46	%69.7	0.14
	University	4	%6.3	1	%4.8	6	%9.1	0.73
Residence	Central	36	%56.3	7	%33.3	47	%71.2	0.008*
Income Level	Low	39	%60.9	14	%66.7	35	%53	0.46
	Medium	24	%37.5	7	%33.3	28	%42.4	0.71
	High	1	%1.6	-	-	3	%4.5	0.41
Occupation	Unemployed	32	%50	14	%66.7	54	%81.9	0.001**
	Employed	30	%46.9	7	%33.3	11	%16.6	0.001**
	Retired	2	%3.1	-	-	1	%1.5	0.62
Alcohol Use		5	%7.8	1	%5	6	%9.1	0.814
Substance Use		4	%6.3	1	%4.8	4	%6.1	0.943
Smoking		53	%82.8	9	%42.9	39	%59.1	0.001**
Psychiatric Disease in Family		9	%14.1	4	%19	22	%33.3	0.03*
Psychiatric medicine use in the past		51	%79.7	19	%90.5	64	%97	0.007*

Suicide History	19	%29.7	6	%28.6	5	%7.6	0.004*
ECT	18	%28.1	8	%38.1	13	%19.7	0.21
Previous violence	48	%75	18	%85.7	-	-	0.306
Type of violence Knife	20	%31.3	2	%9.5	-	-	0.049*
Firearm	12	%18.8	-	-	-	-	0.032*
Axe, etc.	7	%10.9	3	%14.3	-	-	0.679
Beating	24	%37.5	16	%76.2	-	-	0.002*
Arson	1	%1.6	-	-	-	-	0.564
Medicine use during the event	28	%43.8	9	%42.9	-	-	0.943
Positive symptoms during the event	55	%85.9	21	%100	-	-	0.069
Previously inpatient	49	%76.6	18	%85.7	62	%93.9	0.019*
Additional medical disease	14	%21.9	8	%38.1	12	%18.2	0.161

was a significant difference between the immediate violence group and the non-violent group ($p=0.014$). The analysis of findings based on medicine use histories demonstrated that the ratio of patients that received psychiatric treatment in the past in the immediate violence group (79.7%) was significantly lower than of these in the non-violent group (97%) ($p=0.005$). There were no significant differences between the groups based on marital status, income level, education, ECT rates and additional medical diseases (Table 2).

Non-violent group displayed significantly higher rates for unemployment (81.9%) and for metropolitan residence (71.2%) when compared to other groups ($p<0.05$). 43.8% of the patients in immediate violence group and 42.9% of the patients in the distant violence group were under medication during the violent attempt. The existence of positive symptoms during the attempt was 100% in distant violence group, while this rate was 85.9% for the immediate violence group. 29.7% of the patients in immediate violence group had suicidal attempts in the past and that value was significantly higher than the non-violent group ($p=0.004$). Smoking rate was also determined as higher in immediate violence group when compared to other two groups. There was a significant difference between the immediate and distant violence groups ($p=0.002$), and between the immediate violence and non-violent groups ($p=0.009$). No difference was observed on alcohol and substance abuse between the groups (Table 2). Comparison of the types of violence committed by patients revealed that patients in the immediate violence mostly beat their victims (37.5%), followed by violence using a sharp object such as a knife (34.6%).

DISCUSSION

It was found in our study that violence attempts by psychosis patients were 56% and these patients were primarily patients with paranoid schizophrenia and chronic schizophrenia diagnosis. In the literature, it was determined that violent behavior was observed more predominantly in paranoid subgroup among schizophrenia patients when compared to others. This quantitative predominance was interpreted as it could be related to dense occurrences of delusions of persecution, jealousy and reference and commanding auditory hallucinations since paranoid sub-type lose cognitive faculties less than other schizophrenia subtypes, and thus, they could exhibit violent behavior (5). In our study, consistent with these data reported in the literature, paranoid sub-group violence rate was found higher than others.

Recent studies investigated the role of age in violent behavior in patients diagnosed with psychosis. In a study by Belli et al. (6) conducted with 49 schizophrenia patients under compulsory treatment in 2010, it was reported that the mean age of schizophrenia patients with violent attempts was higher than the schizophrenia patients with no violent tendencies. In this study, the mean age for violence group was found significantly lower than the non-violent group, however no difference was observed between immediate and distant violence groups. Our data consisted of only the mean age during the study was conducted. The lack of data for the mean age at the time of the commitment of the crime might have affected the findings of this study as above.

Table 3: Relationship of victims with patients

Victim	n=64	%
Partner	n:14	%21.9
Child	n:3	%4.7
Parent	n:23	%35.9
Sibling	n:10	%15.6
Nephew	n:1	%1.6
Mixed	n:13	%20.3

It was determined in the literature that most of the individuals that display violent behavior, albeit healthy or diagnosed with schizophrenia, were of male gender (7). The findings of this study on the rate of violent behavior by male patients (62%) and the rate of violent behavior by female patients (27%) were in conformity with the results reported in the literature (7, 8).

It was reported that most of the victims of violence perpetrated by schizophrenia patients (69.4%) were family members (6). In another study where 1831 legal cases were evaluated, it was reported that the group with psychiatric disorders predominantly committed crimes against immediate family members such as parents or siblings, while the group with full criminal liability predominantly committed crimes against friends and unrelated people, and the group with limited criminal liability mostly committed crimes against their neighbors (9). The findings of this study also determined that 75% of the patients resorted to violence against their immediate families and the targets were primarily the parents, followed by the partners. The fact that violence was mainly directed towards immediate family members by psychotic patients could be considered natural since their social relationships are limited to family and immediate environment. It is known that non-compliance to treatment increased the risk of violence (10), and psychotic symptoms, more than the diagnosis itself, are related to violent behavior among individuals with severe psychiatric conditions (11). It was reported that approximately 20% of the individuals diagnosed with schizophrenia commit violence due to their active delusions and hallucinations (12). Active positive symptoms such as delusion of persecution, jealousy and resentment, play an important role in an individual with disorders in revealing emotions of hate and revenge, in addition to behavioral patterns such as self-protection and defense (13, 14). Studies determined that schizophrenia patients that engage in criminal activities were usually bachelors living alone and belonged to low income groups (15). In the study, it was observed that both violence and non-violent groups included high rates of bachelor and low-income patients. It is possible that the potential of engaging in violent behavior for individuals living alone increased due to the increased possibility of neglecting therapy or returning to therapy after periods of neglect.

It was stated that criminal psychiatric patients have more frequent criminal behavior in their history and the most significant determinant of criminal tendency was criminal

history (16, 17). Parallel to these findings, it was determined that patients with higher rates of criminal behavior in the past committed violent acts based on the findings of the study.

Studies reported that alcohol and substance abuse is more frequent among criminal mental patients, and alcohol and substance abuse is a significant determinant for criminal behavior (3, 18). In this study, it was determined that alcohol and substance abuse was low in all three groups. The fact that alcohol and substance abuse rates were found lower in this study compared to studies conducted in foreign countries could be due to the fact that alcohol and substance abuse is relatively lower in Turkey due to the sociocultural structure or the relatively low sample size.

There is a consensus that there is a higher smoking rate among schizophrenia patients when compared to the general population (19, 20). The findings of this study showed a similar smoking rate of 67% among psychosis patients. This rate was higher in violence group, especially in immediate violence group. Also smoking rates, frequent hospitalization and existence of active psychotic symptoms were higher in violence group, especially in immediate violence group. This fact could be related to the fact that the more severe prognosis of the disease in the cases in both violence groups and especially in the immediate violence group.

Studies reported that crime rates were higher in metropolitan areas and living in dense environments increased the risk of violence (13, 21). However, the findings of the study demonstrated that most of the patients in violence group lived in the provincial regions. This could be due to the fact that patients living in city centers had better access to health services and receive regular follow ups and treatment.

Limitations of the Study

Since the study was conducted as a file survey, clinical evaluation scales were not applied to patients. Also, the limited size of the sample and the inclusion of solely inpatients in the study could have affected the results. Another limitation of the study was the lack of certain data such as the venue, time and the frequency of the violent acts and the personal traits of the victim could be counted among the limitations of the study.

In the study, a high number of psychosis patients, namely 56%, engaged in violent behavior. It was determined that the violent attempts of the cases with psychotic disorders were aimed towards their intimate relatives and most of these patients were diagnosed with paranoid schizophrenia. It was also found that living in the countryside, history of violence, suicidal history and the existence of active psychotic symptoms caused an increase in violent behavior. It is suggested that, to prevent violence in patients with psychotic disorders, early treatment should be commenced when active psychotic symptoms are observed, regular follow ups on these patients should be implemented and the relatives of the risky patients with violent attempts should be informed.

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