Mental Illness and Violence – Access to Mental Health Services and Multidisciplinary Approach Priorities

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Abstract

The relationship between mental disorder and violence still remains extremely important for both professionals and the general public. Is it possible to reduce the risk of violent behavior? The study of these issues is crucial both in terms of public health and for the proper planning and development of mental health services A national reform of mental healthcare in Georgia has been undergoing for the past fifteen years with the aim of moving to a balanced care model, developing community services and promoting reintegration of people with mental disorders into the community. This, in turn, requires a better understanding of the risk factors of violent behavior to address complex needs of these people. The aim of this survey was to explore relationship between clinical needs, treatment engagement and violence in patients with schizophrenia and schizophrenia spectrum disorders (SSD) using case control design. Cases were defined as patients with SSD who have committed at least one act of violence in the past. Controls were gender-and age matched patients with SSD who have never committed such acts of violence. 94 patients were assessed in case group and 106 patients in control group. We studied the impact of various potential risk factors on each person through patient interviews and medical records. Study results showed that the data were quite variable depending on the type of treatment setting. According to survey results, the dynamic interaction of social and contextual factors with treatment engagement played an important role as determinants of violence. Study results demonstrated that access to mental health community services and multidisciplinary team approach was associated with a better outcome for individuals with SSD. Therefore, studies of violence among individuals with mental disorders should go beyond linking various conditions or types with severity or frequency of violence, and instead focus on in-depth research on contextual and comorbid factors to identify the complex patterns of interaction. Only with such an approach is it possible to plan appropriate interventions and provide to patients in community settings. Finally, reliable data are needed to properly inform the public about the relation between mental illness and violence, to avoid potentially unwarranted stigmatization associated with mental illness.

1. Introduction

There is a widespread public perception that people with mental disorders are dangerous and liable to violent crimes. This society perception contributes to the stigma faced by people with mental disorders, which in turn contributes to non-disclosure of the mental illness and decreased treatment seeking [1]. Recent meta-analyses have shown that there is a modest association between Schizophrenia Spectrum Disorders (SSDs) and increased risk of violent crime [2]. In an epidemiological study, Swanson and colleagues found that the 1-year prevalence of violent behavior in schizophrenia was 8.4%, compared with only 2.1% in those without mental illness [3]. The study which analyzed violent behavior among persons with schizophrenia committed crime in forensic settings showed that 40% of the offenders with schizophrenia had concurrent substance abuse, higher than a comparison group of individuals with schizophrenia in the community, of whom 26% abused substances [4]. Recent review of factors associated with severe violence in schizophrenia revealed that substance abuse was robustly linking schizophrenia and violence [5].

Most researchers and professionals agree that a combination of various biological and psycho-social factors play a role in violence and aggression, although there are differing opinions regarding the importance of individual factors [6]. However, general conclusions including the following: severe mental disorder alone is not a sufficient predictor of future violence; important role plays such factors as historical (past violence, physical abuse, juvenile detention, parental arrest), clinical (substance use, perceived threats, treatment adherence), dispositional (age, sex, income) and contextual (recent unemployment, divorce, victimization). In conclusion, the author points out that people with severe mental disorders are still more likely to engage in violent acts, largely because of other contributory factors associated with violence [7]. A national reform of mental healthcare in Georgia has been undergoing for the past fifteen years with the aim of moving to a balanced care model, developing community services and promoting reintegration of people with mental disorders into the community. To achieve this goal Georgia should undertake appropriate steps to shift from institutional care towards community based mental health services. This, in turn, requires a better understanding of the risk factors of violent behavior of people with mental disorders to address complex needs of these people. Is violent behavior common in people with schizophrenia? Which clinical and additional risk factors influence aggressive behavior? The study of these issues is crucial both in terms of public health and for the proper planning and development of mental health services. The aim of this survey was to explore relationship between clinical needs, treatment engagement and violence in patients with schizophrenia and schizophrenia spectrum disorders (SSD) using case-control design. In our survey, we hypothesized that cases compare to controls have experienced greater exposure to a range of violence risk factors that include: more severe positive symptoms, concurrent substance misuse, lack of family or social support and poor treatment engagement.

2. Materials and Methods

The study design was case-control study linked to retrospective study of medical records. Case-control groups were defined according to the outcome. Cases were defined as patients with SSD who have committed at least one act of violence in the past and at the time of survey were treated in the mental health forensic department at the National Mental Health Centre (Khoni, Georgia) Controls were gender-and age matched patients with SSD

who have never committed an act of violence in the past and were recruited from in-patient and outpatient mental health settings located in Khoni and Rustavi (Georgia). Formal inclusion criteria for participants were men and women of age 18–65 who met diagnostic criteria for schizophrenia and schizophrenia spectrum disorders based on the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) [8]. Written informed consent was obtained from the all study participants. Patients were excluded if they had a diagnosis of mental retardation, or other cognitive disorder, presented persistent severe psychotic symptoms, demonstrated lack of adequate decision-making capacity to make a choice about participating in the research. A total of 200 patients were recruited for the study; 94 patients in the violent-case group and 106 patients in the nonviolent-control group. Data were collected through patient interviews and medical records. We explored the impact of various potential risk factors on each person (socio-demographic, substance misuse, psychotic and negative symptoms, non-compliance with treatment, use of mental health services, impulsivity and global level of functioning) using a retrospective method. All study participants were assessed with a standard set of instruments over 2 weeks in Dec 2019 and Jan 2020. Demographic information on education, living conditions, marriage status, past medical and treatment history was obtained from patients' medical records. Scale for the assessment of positive and negative symptoms (SANS, SAPS) [9] was used to rate the severity of participants' illness. Positive and negative symptoms scale is a rating 5-point scale from 0 (absent) to 5 (severe) to measure positive (hallucination, delusion, disorganized thoughts, bizarre behavior) and negative (attention deficit, anhedonia, alogia, avolition, blunted affect) symptoms in Schizophrenia. The Global Assessment of Functioning (GAF) [10] Scale was used to rate how much a person's mental illness affect their day-to-day life. GAF considers psychological, social, and occupational functioning on a hypothetical continuum of mental health-illness from 1-10 inability to function to 90-100 highest level of functioning. Do not include impairment in functioning due to physical (or environmental) limitations. Data were analyzed using IBM SPSS statistics version 23. Study group was defined as a dichotomous variable with the categories 'cases' and 'controls'. Exposure to risk factors was measured by Odds Ratio (OR) at 95% confidence intervals (CI). Quantitative parameters were compared between groups by the independent sample t-test. The comparison of qualitative parameters between the groups was performed by chi-square test. For further analysis of their association a multivariable logistic regression model was used. $P<0.05$ was considered significant.

3. Results

Sample characteristics Data were available for 200 participants. In case group 90.4% of the respondents were male (mean age 39.8 years), in controls 86.8% -were male (mean age 41.3 years). Only 19.1% of cases and 16.0% of controls were married. 24.5% in case group had incomplete secondary school education versus 7.5 in control group. Only 8.5% of cases had completed high education versus 17% in controls. Clinical aspects Hallucinations if presented were less severe compared with controls (7.5% vs 2.1 in cases). Persecutory delusion was significantly higher in case group Negative symptoms were marked in cases but more severe in controls. Of cases 34% showed moderate impairment of globalfunctioning (vs 22,6% of controls) and 43,6% serious impairment (vs 25,5%) (Table1).

History of illness and use of mental health services There was no significant difference between groups in the duration of identified mental health problems. 34% of the case sample had used some mental health services and

44.7% used irregularly (77.4% and 22.6% respectively in controls).

Table 1: Assessment of psychotic and negative symptoms (SAPS, SANS), (P Value <0.05)

Clinical symptoms	Cases (at the time of offence)	Controls (at the time of survey)	P-value
Global rating of hallucinations			.000
None	24,5%	6,6%	
Moderate	40,4%	35,8%	
Marked	29,8%	26,4%	
Severe	2,1%	7,5%	
Rating of aggressive/agitated behaviour			.000
None	4,3%	32,1%	
Moderate	41,5%	20,8%	
Marked	40,4%	13,2%	
Severe	2,1%	0,1%	
Global rating of affective flattening			.000
None	3,2%	3,8%	
Moderate	54,3%	39,6%	
Marked	34,0%	17,9%	
Severe	0,0%	0,0%	
Global rating of avolition/apathy			.000
None	2,1%	0,9%	
Moderate	33,0%	48,1%	
Marked	58,5%	26,4%	
Severe	1,1%	1,9%	
Global rating of anhedonia/asociality			.001
None	1,1%	1,9%	
Moderate	44,7%	27,4%	
Marked	44,7%	35,8%	
Severe	2,1%	7,5%	
Global assesment of functioning			.000
Mild impairment	2,1%	18,9%	
Moderate impairment	34,0%	22,6%	
Serious impairment	43,6%	25,5%	
Severe impairment	20,2%	33,0%	

Most frequently used services were psychiatry hospitals (35.1% of cases and 25.5% of controls). Only 4.3% of cases were compliant with treatment (vs 51.9% of controls) (Table 2).

Table 2: Factors associated with identification of mental illness and treatment adherence (P Value<0.05).

Charachteristic	Cases	Controls
Use of mental health services (last year)		
Yes	34,0%	77,4%
No	21,3%	0,0%
Irregularely	44,7%	22,6%
What MH services were used		
Psychiatry hospital	35,1%	25,5%
Narcology hospital	5,3%	0,0%
MH outpatient clinic	26,6%	45,3%
MH mobile team	0,0%	29,2%
Private visits	6,4%	0,0%
Prison MH services	6,4%	0,0%
Compliance to treatment		
Yes	4,3%	51,9%
No	28,7%	13,2%
Reason for non-complaince		
I don't need	24,5%	17,9%
It makes me feel bad	19,1%	23,6%
I don't want to be controled	12,8%	,9%
I am forgetting	6,4%	0,0%

Based on multivariable regression modeling, violent behaviour was significantly more likely to have experienced contextual risk factors, such as: (Table 3)

[a] Unsatisfied living environment

[b] Low level of education

[c] Unemployment

[d] Lack of contacts with mental health services

[e] Non-compliance to treatment

[f] Drug abuse

[g] Lack of social contact or communication skills

[h] Family conflicts

4. Discussion

Bivariate analyses showed that the incidence of violent behavior was higher for people with more severe psychotic symptoms, concurrent substance misuse, lack of access to mental health services and poor treatment adherence. Our analysis also showed that high negative psychotic symptoms were significantly associated with reduced risk of serious violence. Study results suggested, that non-adherence with medication, especially in conjunction with substance misuse problems, was associated with increased risk of reoffending. Several studies have documented the link between alcohol consumption and the occurrence of aggressive behavior. However, the results of this study showed that there was no significant difference between the control group and the cases of alcohol abuse. Study of this issue is recommended for further research.

Table 3: Factors associated with violent behaviour cases versus psychiatric controls

Factors		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Alcohol abuse	1,452	,966	2,258	1	,133	4,270
	Married status	-2,425	,968	6,272	1	,012	,088
	Unsatisfied living enviroment	4,677	1,033	20,487	1	,000	107,420
	Low level of education	2,606	1,078	5,843	1	,016	13,547
	High education level	2,085	1,208	2,979	1	,084	8,046
	Unemployment (last year)	-2,679	1,036	6,684	1	,010	,069
	Salary/Income	2,868	1,259	5,190	1	,023	17,608
	Social aid	1,665	,818	4,145	1	,042	5,287
	Use of mental health services (last year)	2,452	,783	9,812	1	,002	11,617
	Irregular use of mental health services (last year)	-20,001	7093,247	,000	1	,998	,000
	Compliance to treatment	1,182	,616	3,678	1	,055	3,261
	Drug abuse	-2,154	,759	8,056	1	,005	,116
	Lack of socialization (personal/ distance contacts)	2,019	,960	4,420	1	,036	7,528
	Family conflicts	-1,896	,675	7,882	1	,005	,150
	Lack of ommunicatin skills	-1,599	,755	4,486	1	,034	,202
	Constant	-5,216	1,647	10,026	1	,002	,005

a. Variable(s) entered on step 1alcohol abuse _ family status_married, loving enviroment_satisfactory, medium_ high level of education, employment, incoem_code_1, social aid_code_2,_mh services_1, _mh services_2, treatment adherence, drug abuse,socialization_3_4, conflicts_family conflictsi_1, communication_ability_none.

This study has limitations, sometimes including reliance on expert opinions rather than verifiable facts about possible events related to violence, including the assessment of psychiatric symptoms. There are additional limitations in the current study. Self-reported violence as used in surveys likely underestimates actual violence in controls and the time span may have affected recall of important life events. The third limitation is that participants of the control group may not be representative of all persons with schizophrenia, as they represent a group of treated patients who were willing to enroll in a survey. So the study excluded treatment-rejected patients (who might have been more violent) and, thus, the findings cannot generalize to such patients

According to survey results, the dynamic interaction of social and contextual factors with clinical variables played an important role as determinants of violence. Study results demonstrated that the adequate treatment with interdisciplinary approach, including the management of comorbid substance abuse was associated with a better outcome for individuals with severe mental disorders. Promoting medication adherence and abstinence together during periods of prolonged leave from hospital or initial discharge may therefore significantly reduce risk of re-offending

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