

# THE INFLUENCE OF SUBSTANCE ABUSE UPON DEVIANT BEHAVIOUR IN SCHIZOPHRENIA

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**Abstract:** *The present study aimed at examining the relationships between predictors and risk factors in the evolution of this “dual disorder”: schizophrenia/addiction and deviant behaviour. Materials and methods. In the study, there were included 60 patients of the “Am Waldsee” Clinic, Rieden, Germany, diagnosed with schizophrenia and addiction, and 67 patients with schizophrenia but without addiction hospitalized in the psychiatric ward of the “Gavril Curteanu” Municipal Hospital, Oradea. For each of the patient a record of study was compiled that included, in addition to demographic data, data on drug use and violent manifestations of impulsive and compulsive behaviour. Results and conclusions. The addictive component seems to have a causal aspect towards violence, the number of aggressive behaviour in patients with schizophrenia and drug use being almost double than within the control group. The violence resulted in damages, especially material ones (58.33% and 29.85%), followed by slight body injury (20.00%, and 16.42%). The risk of violent behaviour is 1.7 times greater in schizophrenic patients with a history of drug abuse than in those who have not used drugs, while the risk is almost 3 times greater in women and 1.3 times greater in men. The risk of violent behaviour under the age of 30 is more than 3 times greater for drug users than for those who have not used drugs and 1.4 times greater in drug consumers.*

## INTRODUCTION

Schizophrenia, a major public health problem, affects 0.8-1% of the general adult population.

There can be no healing when it comes to schizophrenia, but only partial or complete remission. Its evolution is dependent both on maintaining neuroprotection and upon the social support environment or association with toxin use.

The continuing growth of abusive drug and alcohol use in schizophrenic patients has been demonstrated in numerous epidemiologic studies, as well as the increase in drug use within a given social environment. The prevalent rating for the studied substances varies from one study to another, depending on the type of population and the investigated instruments (nicotine 58-90%, alcohol 25-40%, cannabis 23-53%, (1,2), cocaine 15-50%, amphetamine 2-25%.(3)

This co-morbid disorder is characterized by multiple forms of symptomatology, interlaced with psychotic fatigue and transitory states of depressed anxiety, fugue states and increased difficulties of adapting to the surrounding environment, with significant limitation to social functions, and the violent behaviour and deviant tendencies are a part of classic symptomatology.

Schizophrenia can have forensic implications ever since its debut (4), some cases can even present aggressive, violent, antisocial or criminal (murders, crimes of passion, muggings) tendencies or bizarre and confusing behaviour, without any comprehensible motivation and awareness towards social or legal consequences, with excesses that can defy the limits of reason (vagrancy, sometimes doubled by other abnormal gestures such as prostitution and sexual depravity).(5)

During remission, schizophrenia with psychotic

defects can lead to antisocial reactions, mostly without any violence, deceit, embezzlement and rarely to crimes against people or sexual transgressions.

However, the component related to substance abuse emphasises aggressive, violent and explosive behaviours in this patient category.

Intrapsychic differentiation, unit and psychic integrity disorder, the presence of delirious ideas and hallucinations can all lead to behavioural disorganisation, along with delinquent or criminal habits, deviant sexual behaviour or other dangerous actions.

What is remarkable is the statistical association between drug abuse and criminality, a clear proof of asocial behaviour, generated by a drug riddled lifestyle.

Criminality stems not from psyche modifications, but mostly from economic pressures and antisocial behaviour, generated by a lifestyle inflicted with addiction (social marginalization, lack of material resources), and thus the addicted enters a vicious circle that always increases and escalates.

The prevalent data for aggression and violence in schizophrenia differs quite a lot, depending on definitions (verbal violence, physical violence, self inflicted violence, aggression etc), on evaluation periods and on different methodologies applied during the studies.

Most recent studies claim that although most schizophrenia sufferers are not involved in violent behaviour, the risk of committing them is much higher, than in people without any psychiatric afflictions.(6)

The component regarding antisocial personality disorder is much higher in schizophrenic patients, its prevalence rating varying between 23-61%.(7,8)

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Impulsive violence can be caused by many situations and stimuli, alcohol and substance abuse increase irritable tendencies, aggression or paranoia and hallucinations, resulting in a decrease of inhibitions.(9)

The relationship between violence and schizophrenia is a complex one, because there are many variables or life circumstances that can affect the risk for violent behaviour (age, social and economic status, social and family rejection, specific types of positive symptomatology and impulsivity, non-compliance for therapy, stressful life events, lack of social support and material resources), along with psychotic symptoms.(10)

Some of the valid, predictive factors for criminal behaviours, especially violent ones, are: history of previous violence, co-morbidity with antisocial or psychopathic personality disorder, substance abuse, specific types of positive symptomatology and impulsivity.(11,12)

### PURPOSE

The present study aimed at examining the relationships between risk factors and predictors in the evolution of this “dual disorder” - schizophrenia/addiction and deviant/violent behaviour.

### MATERIALS AND METHODS

This clinical research has been conducted during 2011-2014 at the “Gavril Curteanu” Municipal Hospital Oradea and the “Am Waldsee” Clinic, Rieden, Germany, on groups of patients with schizophrenia and groups of patients with addiction and schizophrenia.

The study group included 60 subjects diagnosed with schizophrenia and addiction that have overcome the withdrawal phase hospitalized in Clinic “Am Waldsee”, Rieden Germany.

The control group included 67 subjects diagnosed with schizophrenia hospitalized in the psychiatric ward of the “Gavril Curteanu” Municipal Hospital Oradea.

The study is a descriptive, comparative cohort study, with retrospective elements, following the relationship between clinical and sociodemographic characteristics.

Each patient was compiled a record of study that included, in addition to demographic data, data on drug use and violent manifestations of impulsivity, previous forensic history and criminal convictions and deviant behaviour in childhood and adolescence.

### RESULTS AND DISCUSSIONS

#### Characteristics of the sample

**Table no. 1. Characteristics of the study groups**

	Study group	Control group
Gender (female/male)	36.67%/63.33%	47.76%/52.24%
Mean age	25.90±5.74 years old	36.37±6.82 years old
Environment (urban/rural)	65.0%/35.0%	64.18%/35.82%

The study group predominantly consisted of males (63.33%), the ratio between men/women being 1.7:1, while within the control group the ratio was 1.1:1 (p=0,026).

The age group distribution revealed, within the study group, that most patients were between the ages of 21 and 30 (70.00%), averaging on 25.90 years old, while the control group mostly consisted of ages between 31 and 51 (64.22%), averaging on 36.37 years old (p<0.001).

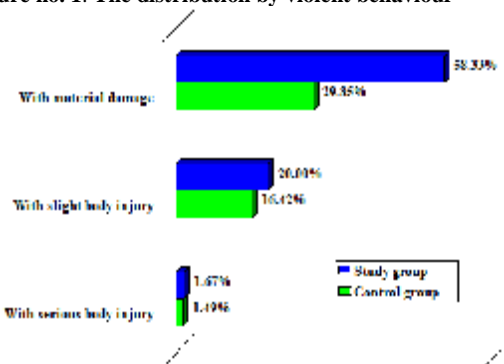
In terms of environmental origin, the majority of the patients had an urban background (65.00%, and 64.18%), without any significant differentiation (p=0.864).

**Table no. 2. The distribution by violent behaviour**

Violent behaviour	Study group		Control group	
	No.	%	No.	%
Without	12	20.00	35	52.24
With material damage	35	58.33	20	29.85
With injury	13	21.67	12	17.91
With slight body injury	12	20.00	11	16.42
With serious body injury	1	1.67	1	1.49

The violent behaviour was present in 80.00% of the illicit drugs users and in 47.76% of the non-drug users. The violence resulted specially in material damages (58.33%, and 29.85%), followed by slight body injury (20.00%, and 16.42%). One patient in every control group was registered with serious body injury behaviour.

**Figure no. 1. The distribution by violent behaviour**

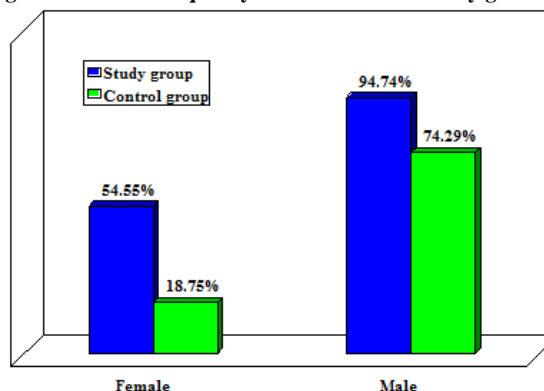


**Table no. 3. The frequency of violent behaviour by gender**

Gender	Study group		Control group	
	No.	%	No.	%
Female	12	54.55	6	18.75
Male	36	94.74	26	74.29

The violent behaviour was present in 54.55 % of the women who were drug users and 18.75 % of the women in the control group (p < 0.001) and in 94.74% men who were drug users and 74.29% of the patients in the control group (p < 0.001). The violent behaviour was significantly more common in men than in women, both in drug users and in the control group (94.74% vs. 54.55% and 74.29% vs. 18.75) (p < 0.001). The risk of violent behaviour is 1.7 times greater in drug abusing schizophrenia sufferers than in patients who do not suffer from substance abuse (RR=1.675, RA=0.322), the risk being almost 3 times greater in women and 1.3 times greater in men (RR=2.909, RA=0.358, respectively RR=1.275, RA=0.205).

**Figure no. 2. The frequency of violent behaviour by gender**



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**Table no. 4. The frequency of violent behaviour by age**

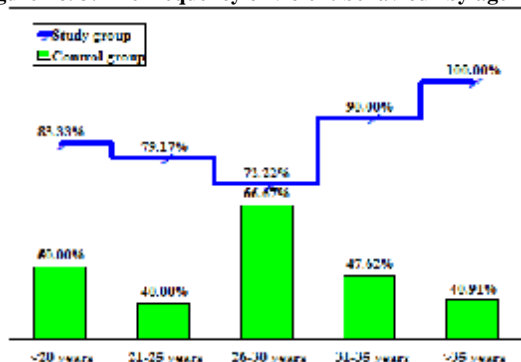
Age group	Study group		Control group	
	No.	%	No.	%
≤20 years	5	83.33	1	50.00
21-25 years	19	79.17	4	40.00
26-30 years	13	72.22	8	66.67
31-35 years	9	90.00	10	47.62
>35 years	2	100.00	9	40.91

Of the 35 violent behaviour cases recorded within the study group, 61.67% were under the ages of 30, the average age being 26.80±3.97 years old, and in the control group this percent was 19.40%, with an average age of 30.41±4.31 years old.

The risk of violent behaviour in ages under 30 is over 3 times greater in drug users than non-users (RR=3.178, RA=0.423).

In the study group, the frequency of violent behaviour was over 72% in all age groups, while in the control group the maximum percent was 66.67%, in the 26-30 years old age group.

**Figure no. 3. The frequency of violent behaviour by age**



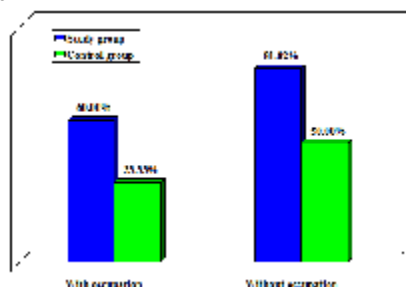
**Table no. 5. The frequency of violent behaviour by occupation**

Occupation	Study group		Control group	
	No.	%	No.	%
Yes	3	60.00	3	33.33
Not	45	81.82	29	50.00

The frequency of violent behaviour was over 60% amongst the drug users with an occupation (employed) and 81.82% amongst those without an occupation (unemployed, retired) (p<0.001). In the control group, the frequency of violent behaviour was 33.33% in those with an occupation and 50.00% in those without an occupation (p<0.001).

The risk of violent behaviour amongst those without an occupation is 1.4 times greater in drug abusers (RR=1.364, RA=0.218) and over 2.3 times greater amongst non-drug users (RR=2.328, RA=0.443).

**Figure no. 4. The frequency of violent behaviour by occupation**

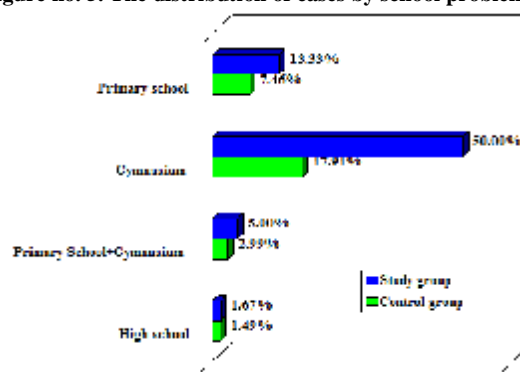


During childhood and adolescence, 70% of the drug abusing patients and 29.85% of the non-drug users, had had problems in school, consisting of violent behaviour (property damage, verbal or physical violence towards colleagues and/or teachers), theft or prolonged truancy.

**Table no. 6. The distribution of cases by school problems**

	Study group		Control group	
	No.	%	No.	%
Primary School	8	13.33	5	7.46
Gymnasium	30	50.00	12	17.91
Primary School + Gymnasium	3	5.00	2	2.99
High school	1	1.67	1	1.49
<b>Total</b>	<b>42</b>	<b>70.00</b>	<b>20</b>	<b>29.85</b>

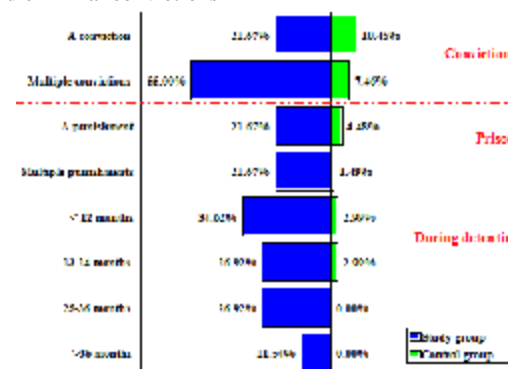
**Figure no. 5. The distribution of cases by school problems**



**Table no. 7. The distribution of cases by previous forensic and criminal convictions**

	Study group		Control group	
	Nr.	%	Nr.	%
Convictions				
A conviction	13	21.67	7	10.45
Multiple convictions	33	55.00	5	7.46
Prison punishment				
A punishment	13	21.67	3	4.48
Multiple punishments	13	21.67	1	1.49
Number of months received through conviction				
≤ 12 months	9	34.62	2	2.99
13-24 months	7	26.92	2	2.99
25-36 months	7	26.92	0	0.00
> 36 months	3	11.54	0	0.00

**Figure no. 6. The distribution of cases by previous forensic and criminal convictions**



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Criminal convictions were recorded in 76.67% of the drug abusing patients and in 17.91% of the control group. It stands to mention that the German law applies prison penalty in cases of aggravating circumstances or repeated possession, consume and drug trafficking. In the EU, there is an increasing tendency to differentiate between crimes consisting of drug possession and crimes of drug possession with the intent to sell or distribute.

### CONCLUSIONS

The addictive component seems to have a causal aspect towards violence, the number of aggressive behaviour in patients with schizophrenia and drug use being almost double than within the control group.

The violence resulted in damages, especially material ones (58.33% and 29.85%), followed by slight body injury (20.00%, and 16.42%).

The risk of violent behaviour is 1.7 times greater in drug abusing schizophrenic patients, than in non-consumers, with the risk being almost 3 times greater in women and 1.3 times greater in men.

The risk of violent behaviour under the age of 30 is 3 times greater in drug abusing schizophrenic patients than in non-consumers, with the risk being 1.4 times greater in unemployed drug users.

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