ID Design Press, Skopje, Republic of Macedonia
Open Access Macedonian Journal of Medical Sciences. 2019 Feb 28; 7(4):657-662.
https://doi.org/10.3889/oamjms.2019.146
eISSN: 1857-9655
Public Health

Antisocial Personality Traits as a Risk Factor of Violence between Individuals with Mental Disorders

Izabela Filov*

Higher Medical School, University "St Kliment Ohridski", Bitola, Republic of Macedonia

Citation: Filov I. Antisocial Personality Traits as a Risk Factor of Violence between Individuals with Mental Disorders. Open Access Maced J Med Sci. 2019 Feb 28; 7(4):657-662. https://doi.org/10.3889/oamjms.2019.146

Keywords: Mental disorder; Violence; Comorbidity; Psychopathy

***Correspondence:** Izabela Filov. Higher Medical School, University "St Kliment Ohridski", Bitola, Republic of Macedonia. E-mail: belafilov@gmail.com

Received: 03-Dec-2019; **Revised:** 04-Feb-2019; **Accepted:** 05-Feb-2019; **Online first:** 25-Feb-2019

Funding: This research did not receive any financial support

Competing Interests: The authors have declared that no competing interests exist

Abstract

BACKGROUND: Mental disorder can increase the likelihood of taking violent acts of some individuals, but only a small percentage of violence in societies could be attributed to patients with mental health problems. For the past several years numerous studies related to forensic psychiatry has confirmed a close causal relationship between violent offenders and psychiatric comorbidity. Several studies have provided strong evidence that antisocial personality disorders (APD) represent a significant clinical risk for violence.

AIM: This study aims to show the relationship between antisocial personality disorder and antisocial personality traits with the other mental disorders and the manifestation of violence between the forensic populations of patients.

METHODS: The survey was conducted at the Psychiatric Hospitals and the Mental Health Centre. The research was carried out between two groups: one group of perpetrators of violence (PV) and a control group divided into two subgroups, a control group without violence (CG WV) and a group of respondents forcibly hospitalised CG FH. After obtaining consent for participation in the study, patients were interviewed, and questionnaires were applied. The research methodology included using measuring instrument-Psychopathy Checklist-revised (Hare's PCL-R).

RESULTS: The results show that in the group PV antisocial personality disorder is present in 45 patients, or 50% of the total sample. According to statistical research in between groups PV, CG WV and CG WV, there were determent significant differences in specifically listed items from Hare's PCL-R.

CONCLUSIONS: Psychopathological traits of mental disorders which are pathognomonic of committing violence are paranoid schizophrenia, as the most present and antisocial personality disorder in comorbidity, as the highest risk factor among the population with mental disorders that manifest violence.

Introduction

Mental disorder and violence

The myth that mental disorder by its very nature means the manifestation of violence persisted for centuries with the trend of intensifying of these beliefs even though in recent decades have made many campaigns to reduce fear in public [1]. There are no definitive answers to the questions of how the expression of violent behaviour is correlated with the nature of mental disorders under different circumstances or is associated with other developmental and life history variables. A mental disorder can increase the likelihood of taking violent acts of some individuals, but only a small percentage of violence in societies could be attributed to patients with mental health problems [2]. Ansis in his study found that 21 of 517 (4%) patients in the outpatient urban areas reported assassination attempts [3]. Psychiatric disorders that are associated with violence are ranging very widely and may include psychotic disorders, mood disorders, disorders of personality disorders and disorders associated with post-traumatic stress syndrome [4]. Elbogen & Johnson (2009) [5] used data from the National Epidemiological Survey on Alcohol and Related Conditions to prospectively identify risk factors for violent behaviour. They found that having a diagnosis of schizophrenia was not strongly associated with violent behaviour. In the Swanson's study, conducted

from 57 clinical sites across the United States, in the 6-month prevalence of any violence, the author found that, of 1,410 participants, 1,140 (81%) reported no violence, 219 (15%) reported only minor violence and 51 (4%) reported serious violence. Distinct, but overlapping, sets of risk factors were associated with minor and serious violence. Swanson reveals that the rate of violence linear increases with the number of diagnoses and concludes that mental disorder is a risk of violence among many others [6].

Comorbidity with personality disorder and violence

For the past several years numerous studies related to forensic psychiatry has confirmed a close causal relationship between violent offenders and psychiatric comorbidity [7]. Comorbidity in forensic psychiatry describes the co-occurrence of two or more conditions or psychiatric disorders known as dual diagnosis and defined by World Health Organization [8]. The majority of violent offenders have multiple psychiatric diagnoses. A high level of psychiatric comorbidity (50-90%) is associated with personality disorders [9], [10], [11], [12]. For the last few decades, forensic psychiatry is mainly concerned and focused on violent offenders with a history of psychiatric disorder, usually psychotic or personality disorder [13].

Several studies have provided strong evidence that antisocial personality disorders (APD) represent a significant clinical risk for violence. The relationship of greater risk for violence among persons with certain PD is in terms of four fundamental personality dimensions: 1) impulse control; 2) affect regulation; 3) threatened egotism or narcissism, and 4) paranoid cognitive personality style. Two of these dimensions-impulse control and affect regulation-are probably substantially affected by virtually all PDs linked to violence [14].

The main hypothesis of the study is that the manifestation of violence among people with mental disorders is not directly related to the diagnosis of severe mental disorder. The other hypothesis is that the violence caused by people with mental disorders is in direct correlation with comorbidity with an antisocial personality disorder or the presence of antisocial personality traits. This study aims to show the relationship between antisocial personality disorder and antisocial personality traits with the other mental disorders and the manifestation of violence between the forensic populations of patients.

Limitation of the study: The correlation between schizophrenia and schizophrenic disorders and antisocial personality disorders with criminal behaviour and manifestation of violence, was not followed in the continuum, but was confirmed. Research suggests that antisocial personality in adults and adolescents are the best to view as existing in a continuum. In our study, the selected participants were previously diagnosed as psychiatric patients in psychiatric hospitals. It opens up space for a deeper analysis of this connection, especially with some personal antisocial characteristics such as the most exposed

Subjects and Methods

It was a prospective study with a retrospective approach. The survey was conducted at the Psychiatric Hospital Demir Hisar, Psychiatric Hospital "Skopje" from Skopje and the Mental Health Centre in Prilep.

The timeframe in which the survey was conducted was between December 2016 to December 2017.

The study group consisted of 89 patients admitted to the Psychiatric Hospital Demir Hisar, most of the patients of the forensic psychiatric wards. These are patients who have committed crimes and who have been diagnosed by ICD 10. Based on this diagnosis and forensic expertise, the Court had determined the security measure "placement and treatment in a psychiatric institution." The survey excluded individuals admitted in the forensic psychiatric department with a diagnosis F 11 "drug addiction". After obtaining consent for participation in the study, patients were interviewed, and questionnaires were applied. The respondents of the study group were designated as perpetrators of violence (PV).

The control group consisted of 120 patients, most of the users of the Community Mental Health Center and some patients hospitalised at the Psychiatric Hospital Demir Hisar, which are not perpetrators of crime. The control group is divided into two subgroups. One control subgroup comprised 60 patients and in their history of illness, there were no records of violence. This group is referred to as a control group without violence CG WV. Another subgroup consists of 60 patients of the Psychiatric Hospital Demir Hisar who were forcibly hospitalised in the period from May 2016 to June 2017, which, according to sex and diagnosis of conditions responding to the survey. This subgroup is marked as control group involuntary hospitalised CG IH. The choice of respondents who are involuntarily hospitalized as a control group in this study was made, because that the act of involuntary hospitalization implies the existence of violence as one of the essential factors for the implementation of individuals with mental disorders to be admitted to hospital, as well as measures to control the threat of violence that could be forthcoming. This subgroup of patients is selected because it is an intention to show

whether there is a difference in the characteristics of patients who have already committed a crime and those in which there is a manifestation of violence in the form of aggressive behaviour, but they are not the perpetrator of the crime.

The research methodology included using the measuring instrument-Psychopathy Checklist-revised (Hare's PCL-R). The scale was created by Hare, RD in 1985 and formally published in 1991. It is a clinical assessment scale of psychopathy with 20 items. Each item refers to a different symptom or feature of a personality disorder. The closest equivalent to psychopathy in the APA guidebook is a condition called antisocial personality disorder. In a study published in 2013 in the Journal Assessment, a team of researchers from Florida State University compared the criteria for an antisocial personality disorder to the personality traits associated with psychopathy. These researchers concluded that the antisocial personality disorder definition captures many of the deviant or abnormal behaviours associated with psychopathy (Not 2013).

It is significant to note that this survey covered all forensic population placed on forensic departments in two psychiatric hospitals in Macedonia.

Results

To provide a detailed description, we used computations in which scores are presented as percentages, mean and medians. Determining the statistical significance of differences of continuous variables between the groups of patients was determined by the Pearson coefficient. We also combined ANOVA analysis. The level of statistical significance was ($p < 0.05$). Statistical analysis was conducted by software packages SPSS 15.0 and STATISTICA 8.0.

Table 1: Diagnostic structure of the patients

	PV		CG-WV		CG-IH	
ICD -10	N	%	N	%	N	%
F20.0	30	33.71	36	60.0	45	75.0
F21-25	14	15.73	18	30.0	8	13.33
F30	0	0	3	5.0	1	1.67
F31	0	0	0	0	0	0
F32	0	0	2	3.33	0	0
F32.3	0	0	1	1.67	0	0
F60.2	17	19.1	0	0	1	1.67
F60.2 F20.0	12	13.48	0	0	3	5.0
F60.2 F21	6	6.74	0	0	1	1.67
F60.2 F22	3	3.37	0	0	0	0
F60.2 F23	7	7.87	0	0	1	1.67
Total	89	100	60	100	60	100

Analysis of the structure of the patient's psychiatric diagnosis according to ICD 10, shows that in 19 (23%) patients in the study group (PV) were diagnosed with antisocial personality disorder (F60.2). In 28 (31%) patients were found double diagnosis, antisocial personality disorder in comorbidity with schizophrenia (F20) in 12 patients (13%), with transient acute psychotic disorder (F23) in 7 (7.9%) patients, with schizotypal disorder (F21) in 6 (6.7%), with delusional disorder (F22) in 3 (3%). These results show that in the study group – perpetrators of violence (PV)-antisocial personality disorder is present in 45 patients, or 50% of the total sample (Table 1).

Hare Psychopathy Checklist (PCL-R)

In the Hare Psychopathy Checklist (PCL-R) contains a group of items that are in direct correlation with the manifestation of violence It is evident that there is significant difference in the values of all variables that mark the disorder of personality (psychopathy) as a significantly higher in the perpetrators of the crime (PV) compared to two control groups CG WV and CG IH, except for the one variable "multiple, short-term marital relationships" (Table 2 and 3).

Table 2. Hare Psychopathy - 1 (PCL-R)

Hare Psychopathy Checklist	PV N (%)	CG WV N (%)	CG IH N (%)	P*
1. Glibness/superficial charm				
0	33 (37.08%)	47 (78.33%)	45 (75.0%)	PV/CG WV
1	33 (37.08%)	10 (16.67 %)	10 (16.67%)	P = 0.000003
2	23 (25.84%)	3 (5.0%)	5 (8.33%)	PV/CG FH
Total	89	60	60	P = 0.0000029
2. Grandiose Sense of Self Worth				
0	13 (14.61%)	32 (53.33%)	17 (28.33%)	PV/CG WV
1	46 (51.69%)	17 (28.33%)	20 (33.33%)	P = 0.0000029
2	30 (33.71%)	11 (18.33%)	23 (38.33%)	PV/CG FH
Total	89	60	60	P = 0.043
3. Need for Stimulation/Proneness to Boredom				
0	54 (60.67%)	14 (23.33%)	21 (35.0%)	PV/CG WV
1	23 (25.84%)	17 (28.33%)	33 (55.0%)	P = 0.0000015
2	12 (13.48%)	29 (48.33%)	6 (10.0%)	PV/CG FH
Total	89	60	60	P = 0.0014
4. Pathological lying				
0	31 (34.83%)	58 (96.67%)	48 (80.0%)	PV/CG WV
1	43 (48.31%)	2 (3.33%)	11 (18.33%)	P = 0.000000
2	15 (16.85%)	0	1 (1.67%)	PV/CG FH
Total	89	60	60	P = 0.0000025
5. Conning/Manipulative				
0	29 (32.58%)	55 (91.67%)	48 (80.0%)	PV/CG WV
1	37 (41.57%)	5 (8.33%)	9 (15.0%)	P = 0.000000
2	23 (25.84%)	0	3 (5.0%)	PV/CG FH
Total	89	60	60	P = 0.000000
6. Lack of remorse of Guilt				
0	5 (5. 62%)	40 (66.67%)	10 (16.67%)	PV/CG WV
1	14 (15.73%)	20 (33.33%)	36 (60.0%)	P = 0.000000
2	70 (78.65%)	0	14 (23.33%)	PV/CG FH
Total	89	60	60	P = 0.000000
7. Shallow affect				
0	1 (1.12%)	13 (21.67%)	4 (6.67%)	PV/CG WV
1	19 (21.35%)	43 (71.67%)	44 (73.33%)	P = 0.000000
2	69 (77.53%)	4 (6.67%)	12 (20.0%)	PV/CG FH
Total	89	60	60	P = 0.000000
8. Callous/Lack of empathy				
0	4 (4.49%)	36 (60.0%)	10 (16.67%)	PV/CG WV
1	26 (29.21%)	24 (40.0%)	44 (73.33%)	P = 0.000000
2	59 (66.29%)	0	6 (10.0%)	PV/CG FH
Total	89	60	60	P = 0.000000
9. Parasitic Lifestyle				
0	23 (25.84%)	48 (80.0%)	37 (61.67%)	PV/CG WV
1	31 (34.83%)	11 (18.33%)	21 (35.0%)	P = 0.000000
2	35 (39.33%)	1 (1.67%)	2 (3.33%)	PV/CG FH
Total	89	60	60	P = 0.000000
10. Poor behavioural control				
0	3 (3.37%)	37 (61.67%)	5 (8.33%)	PV/CG WV
1	20 (22.47%)	22 (36.67%)	45 (75.0%)	P = 0.000000
2	66 (74.16%)	1 (1.67%)	10 (16.67%)	PV/CG FH
Total	89	60	60	P = 0.000000

Participants from PV group with highly significant ($p < 0.001$) less compared to respondents from the two control groups need stimulation, or propensity to apathy The tested difference in the distribution of possible responses to the symptom

"lack of remorse or guilt" among groups PV and CG WV is highly statistically significant ($p < 0.001$), due to the significantly more common frequency of occurrence of this symptom of the disordered personality among respondents perpetrators of a crime (Table 2).

Cruelty and lack of empathy highly significantly more often ($p < 0.001$) were registered among respondents perpetrators of a crime. Also, respondents perpetrators of a crime are characterised by high significance ($p < 0.001$) as compared with the participants of the two control groups in terms of 10 item scale of analysis concerning the "weak control behaviour" (Table 2).

Tested differences in the distribution of possible responses to early behavioural problems among groups PV and CG WV is highly statistically significant, in the level of $p < 0.001$, due to the significantly more frequent early behavioural problems in the group of surveyed, perpetrators of criminal work (Table 3).

Table 3: Hare Psychopathy – 2 (PCL-R)

Hare Psychopathy Checklist	PV N (%)	CG WV N (%)	CG IH N (%)	P*
11. Promiscuous Sexual Behavior				
0	63 (70.79%)	55 (91.67%)	54 (90. 0%)	PV/CG WV
1	12 (13.48%)	1 (1.67%)	6 (10.0%)	P = 0.0063
2	14 (15.73%)	4 (6.67%)	0	PV/CG FH
Total	89	60	60	P = 0.0032
12. Early Behavioral Problems				
0	33 (37.08%)	52 (86.67%)	30 (50.0%)	PV/CG WV
1	23 (25.84%)	8 (13.33%)	25 (41.67%)	P = 0.000000
2	33 (37.08%)	0	5 (8.33%)	PV/CG FH
Total	89	60	60	P = 0.00036
13. Lack of Realistic Long-term Goals				
0	12 (13.48%)	24 (40.0%)	7 (11.67%)	PV/CG WV
1	23 (25.84%)	33 (55.0%)	46 (76.67%)	P = 0.000000
2	54 (60.67%)	3 (5.0%)	7 (11.67%)	PV/CG FH
Total	89	60	60	P = 0.000000
14. Impulsivity				
0	7 (7.87%)	44 (73.33%)	6 (10.0%)	PV/CG WV
1	25 (28.09%)	16 (26.67%)	46 (76.67%)	P = 0.000000
2	57 (64.04%)	0	8 (13.33%)	PV/CG FH
Total	89	60	60	P = 0.000000
15. Irresponsibility				
0	8 (8.99%)	39 (65.0%)	16 (26.67%)	PV/CG WV
1	29 (32.58%)	21 (35.0%)	37 (61.67%)	P = 0.000000
2	52 (58.43%)	0	7 (11.67%)	PV/CG FH
Total	89	60	60	P = 0.000000
16. Failure to Accept Responsibility				
0	4 (4.49%)	32 (53.33%)	8 (13.33%)	PV/CG WV
1	21 (23.6%)	28 (46.67%)	42 (70.0%)	P = 0.0063
2	64 (71.91%)	0	10 (16.67%)	PV/CG FH
Total	89	60	60	P = 0.0032
17. Marry Short Term Marital Relationships				
0	83 (93.26%)	59 (98.33%)	59 (98.33%)	PV/CG WV
1	2 (2.25%)	0	1 (1.67%)	P > 0.05
2	4 (4.49%)	1 (1.67%)	0	PV/CG FH
Total	89	60	60	P > 0.05
18. Juvenile Delinquency				
0	70 (78.65%)	60 (100%)	56 (93.33%)	PV/CG WV
1	4 (4.49%)	0	2 (3.33%)	P = 0.00065
2	15 (16.85%)	0	2 (3.33%)	PV/CG FH
Total	89	60	60	P = 0.034
19. Revocation of Conditional Release				
0	65 (73.03%)	60 (100%)	55 (91.67%)	PV/CG WV
1	8 (8.99%)	0	3 (5.0%)	P = 0.000065
2	16 (17.98%)	0	2 (3.33%)	PV/CG FH
Total	89	60	60	P = 0.013
20. Criminal Versatility				
0	0	55 (91. 67%)	2 (3.33%)	PV/CG WV
1	31 (34. 83%)	5 (8. 33%)	51 (85.0%)	P = 0.000000
2	58 (65. 17%)	0	7 (11.67%)	PV/CG FH
Total	89	60	60	P = 0.000000

Individuals with mental disorders who have committed crimes significantly more likely than respondents without violence and those involuntarily hospitalised, are characterised by impulsiveness in response (Table 2-part two). These high values of items that are in direct correlation+96/8 with the manifestation of violence confirm the connection between mental disorder and antisocial personality disorder as a mutual relationship which is the basis for violent acts. In PCL-Hare items, with statistical significance dominates the value of 2 (applies fully) in the subjects of the study group in a percentage much higher than the 31%, which is a representation of the entire sample of antisocial personality disorder. This frequency is even greater than 50%. Out of 21 items in PCL-Hare, in 14 (66%) item the rates is over 31% of representations of the traits that are characteristic of psychopaths, at the group of the perpetrators of violence (PV). According to our statistical research in between groups: PV (Perpetrators of violence), CG WV (control group-without violence) and CG WV (control group-without violence) we determent significant differences ($p < 0.05$) in a high rate (more than 50%) especially represented in the items listed in Table 4.

Table 4. Database for different groups of items

Items		PV N (%)		CG WV N (%)		CG IH N (%)
Lack of remorse or guilt-		70 (78.65%)		0		14 (23.33%)
Poor behavior control		66 (74.16%)		1 (1. 67%)		10 (16.67%)
Failure to accept responsibility		64 (71.91%)		0		10 (16.67%)
Callous lack empathy		59 (66.29%)		0		6 (10.0%)
Criminal versatility		58 (65.17%)		0		7 (11.67%)
Impulsivity		57 (64.04%)		0		8 (13.33%)
Lack of realistic, long term plans		54 (60.67%)		3 (5.0%)		7 (11.67%)
Groups	*Count*	*Sum*	*Average*	*Variance*		
70	6	292	48.66667	579.0667		
0	6	3	0.5	1.5		
14	6	31	5.166667	17.76667		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	8468.111	2	4234.056	21.22925	4.22E-05	3.68232
Within Groups	2991.667	15	199.4444			
Total	11459.78	17				

Discussion

The results show that in the diagnostic structure in a violent forensic population that has committed a crime, located in psychiatric hospitals in Macedonia dominated comorbidity between schizophrenia and schizophrenic disorder and an antisocial personality disorder. Schizophrenia and antisocial personality, as autonomous disorder have been associated with a higher risk of violence. Despite a large number of studies examining the link between schizophrenia and its most prominent symptoms, the involvement of the manifestation of violent remains unclear [6], [15]. This raises the question of the impact of personal antisocial characteristics on a person who has schizophrenia and how this interdependence fosters violent behaviour. Numerous studies in the field of forensic psychiatry have confirmed a close causal relationship between the violent offender and comorbid psychiatric disorder [16], [17]. It confirms that the comorbidity has a significant influence in

clinical outcome, criminal relapse, on detention rate and length of detention [18], [9]. Schizophrenia and antisocial personality disorder are both characterised by impulsive, poorly planned behaviour. This behaviour may originate from a weak or poorly coordinated response inhibition system [19]. Comorbidity influences the assessment of criminal responsibility but may also affect the outcome of treatment and risk of relapse. The criminal activity of this comorbidity is interpreted as a result, among other things, of the fact that antisocial personality traits are regarded as being almost untreatable. Antisocial personality disorder presents a general pattern of disregard for and violation of the rights of others. Individuals with antisocial personality disorders lack insight into their disorder [20]. Psychotic who commit violent behaviours can be reincorporated into society once they are receiving medication and attended to since they immediately stop being dangerous. The same doesn't occur with psychopaths or antisocial personality disorders [21]. Although those individuals with antisocial personality disorders clearly could have been compulsorily treated very few were. Indeed, in Peay's study, compulsory admissions during the year 2007-8 there were 9995 admissions for those with mental disorders illness and only 147 for those with antisocial personality disorders [22].

The analysis of the results obtained by using the PCL HARE on forensic population placed in psychiatric hospitals in the country showed a significantly greater representation of the characteristics of antisocial personality disorder among individuals with mental disorders who are perpetrators of a crime, in terms of psychiatric patients who manifested violent behaviour. It confirmed that individuals with antisocial personality disorder in comorbidity with mental disorders are more criminally active than other perpetrators of violent acts [20], [23]. They often use psychological defence mechanisms like projection, denial, projective identification, and omnipotent ion, splitting, which are very early and primitive defence mechanisms that lead to disintegration [24]. The high values of the items "poor control behaviour" and "impulsivity" also suggest that the common denominator of APD – associated violence is anger. This is an emotion that is expressed with rage, resentment and irritability. Anger can be considered as a part of the neuropsychological response to a threat or perceived harm [14]. From the dimensional point of view, those antisocial personality traits having the greatest tendency towards violence are impulsiveness deficient affective regulation, narcissism and paranoid [25].

Identification and management of these psychological manifestations are extremely important in everyday clinical practice for the safety of the wider environment, but also the diagnosis and treatment planning [26]. That is confirmed by the findings in the survey. Analysing the items in the study, we can conclude that the most prominent items from the scale of PCL R in the perpetrators of crimes are those belonging to the emotional facet 2.

In conclusion, psychopathological traits of mental disorders which are pathognomonic of committing violence are paranoid schizophrenia, as the most present compared to other mental disorders and antisocial personality disorder, in comorbidity with paranoid schizophrenia is confirmed as the highest risk factor among the population with mental disorders that manifest violence. Personal traits of the individuals with mental disorders that correlate violent behavior are antisocial personality traits that are acknowledged as the highest risk factor among the population with mental disorders that manifest violence, sociopath orientation with inclination towards outsourcing of aggressive impulses through criminally behavior, defects in the moral sphere, with reduced feelings of guilt and remorse about past events and volatility in mutual relations. It confirms the conclusion that the diagnosis of schizophrenia itself does not constitute factors with risk of violence, but with statistically significant correlation with other factors is an important clinical indicator of violence [27].

This study opens the question of the relationship between mental disorders in violent behaviour. Many of the factors that are associated most with violent behaviour and people with a mental health condition, such as antisocial personality traits, antisocial behaviour or anger are predictors of significant violence among subjects without mental disorders so that the independent effect of the mental disease and violence is not clear [28].

The identification and management of antisocial personality characteristics as well as specialised treatments for specific clinical correlates (e.g. specialised treatment of impulsivity), in addition to the treatment of mental disorder are extremely important in everyday clinical practice, the safety of the wider environment, but also because of the management and planning of treatment.

Continuous medication, social support, the non-stress environment may, in significant part to control these symptoms.

References

1. Sirotich F. Correlates of crime and violence among persons with mental disorder: An evidence-based review. Brief Treatment and Crisis Intervention. 2008; 8(2):171-194. https://doi.org/10.1093/brief-treatment/mhn006

2. Mulvey E. Assessing the evidence of a link between mental illness and violence. Hosp Community Psychiatry. 1994; 45:663–668. https://doi.org/10.1176/ps.45.7.663

3. Asnis GM, Kaplan ML, Hundorfean G, Saeed W. Violence and homicidal behaviors in psychiatric disorders. Psych Clin N Am. 1997; 20:405–425. https://doi.org/10.1016/S0193-953X(05)70320-8

4. Petit J. Management of the actuely violent patient. Psych Clin N Am. 2005; 28:701–711. https://doi.org/10.1016/j.psc.2005.05.011 PMid:16122575

5. Elbogen EB, Johnson SC. The intricate link between violence and mental disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions. Archives of general Psychiatry. 2009; 66(2):152-61. https://doi.org/10.1001/archgenpsychiatry.2008.537 PMid:19188537

6. Swanson JW, Swartz MS, Van Dorn RA, Elbogen EB, Wagner HR, Rosenheck RA, Stroup TS, McEvoy JP, Lieberman JA. A national study of violent behavior in persons with schizophrenia. Archives of general psychiatry. 2006; 63(5):490-9. https://doi.org/10.1001/archpsyc.63.5.490 PMid:16651506

7. Žarković Palijan T, Radeljak S, Kovač M, Kovačević D. Relationship between comorbidity and violence risk assesment in forensic psychiatry-the implicaton of neuroimaging studies. Psychiatria Danubina. 2010; 22(2):253-6.

8. WHO, 1995.

9. Nedopil N, Hollweg M, Hartman J, Jaser R. Comorbidity of psychopathy with major mental disorder. European Psychiatry. 2015; 30:406

10. Rueve ME, Welton RS. Violence and Mental Illness, 2008. www.psychiatrymmc.com

11. Marshall E, Farrell M. Substance use and psychiatric comorbidity. Medicine. 2007; 35(4):246-249. https://doi.org/10.1016/j.mpmed.2007.02.010

12. Kertesz SG, Madan A, Wallace D, Schumacher JE, Milby JB. Substance abuse treatment and psychiatric comorbidity: do benefits spill over? Analysis of data from a prospective trial among cocaine-dependent homeless persons. Subst Abuse Treat Prev Policy. 2006; 1:27. https://doi.org/10.1186/1747-597X-1-27 PMid:16965639 PMCid:PMC1584225

13. Snowden, P. Substance misuse and violence: the scope and limitations of forensic psychiatry's role. Adv Psych Treat. 2001; 7:189-197. https://doi.org/10.1192/apt.7.3.189

14. Esbec E&Echeburúa E. Violence and personality disorders: clinical and forensic implications. Actas Esp Psiquiatr. 2010; 38(5):249-261. PMid:21116999

15. Fazel S, Sjöstedt G, Långström N, Grann M. Severe mental illness and risk of sexual offending in men: a case-control study based on Swedish national registers. The Journal of clinical psychiatry. 2007; 68:588-96. https://doi.org/10.4088/JCP.v68n0415 PMid:17474815

16. Fortuna LR.Adolescent Substance Abuse Psychitaric Comorbidity and High Risk Behaviour. Psychiatr Serv. 2009; 60:128. https://doi.org/10.1176/ps.2009.60.1.128

17. Fazel S, Grann M. The population impact of severe mental illness on violent crime. American journal of psychiatry. 2006; 163(8):1397-403. https://doi.org/10.1176/ajp.2006.163.8.1397 PMid:16877653

18. Steadman HJ, Mulvey EP, Monahan J, et al. Violence by people discharged from acute psychiatric inpatient facilities and by others in the same neighborhoods. Arch Gen Psychiatry. 1998; 55:393–401. https://doi.org/10.1001/archpsyc.55.5.393 PMid:9596041

19. Kiehl KA, Smith AM, Hare RD, Liddle PF. An event-related potential investigation of response inhibition in schizophrenia and psychopathy. Biological psychiatry. 2000; 48(3):210-21. https://doi.org/10.1016/S0006-3223(00)00834-9

20. Hare RD. The psychopathy checklist–Revised. Toronto, ON. 2003.

21. Borrasl. Asesinos en serie espanoles (2 nded). Barcelona:Bosch Editor, 2002.

22. Peay J. Personality disorder and the law: Some awkward questions. Philosophy, Psychiatry, & Psychology. 2011; 18(3):231-44. https://doi.org/10.1353/ppp.2011.0035

23. Skeem JL, Schubert C, Odgers C, Mulvey EP, Gardner W, Lidz C. Psychiatric symptoms and community violence among high-risk patients: A test of the relationship at the weekly level. Journal of Consulting and Clinical Psychology. 2006; 74(5):967. https://doi.org/10.1037/0022-006X.74.5.967 PMid:17032100

24. Gacono CB, Meloy JR, Speth E, Roske A. Above the law: Escapes from a maximum security forensic hospital and psychopathy. Journal-American Academy of Psychiatry And The Law. 1997; 25(4):1-4.

25. Nestor P. Mental disorder and violence. Am J Psychiatry. 2002; 159:1973-8. https://doi.org/10.1176/appi.ajp.159.12.1973 PMid:12450942

26. Hare RD. Chance and circumstance. Forensic Update: Special 100th Issue. 2009; 100:14-7.

27. Brennan PA, Mednick SA, Hodgins S. Major mental disorders and criminal violence in a Danish birth cohort. Arch Gen Psychiatry. 2000; 57(5):494-50. https://doi.org/10.1001/archpsyc.57.5.494 PMid:10807490

28. Harris A, Lurigio A. Mental illness and violence: A brief review of research and assessment strategies. Aggression and Violent Behavior. 2007; 12:542-51. https://doi.org/10.1016/j.avb.2007.02.008