

ANALYSIS OF PSYCHOLOGICAL FACTORS OF VIOLENT CRIME IN PATIENTS WITH SCHIZOPHRENIA

Liang Li

School of Law, Nanjing University of Finance & Economics, Nanjing 210023, China

SUMMARY

Introduction: Violent crime is a prominent problem in the development of modern society. This is a crime that does great harm to individuals and society and has extremely serious consequences. It accounts for a large proportion in criminal cases and has shown an upward trend year by year in recent years, leaving a shadow on individuals, families and society. It has become an increasingly serious global public health problem, which has attracted extensive attention of the whole society. Death and disability caused by violence have become the most important public health problem in the world. Therefore, the research on violent crime has become an active topic in the fields of criminology, psychology, epidemiology, sociology and so on. The incidence of schizophrenia is generally higher than that of normal patients (especially schizophrenic patients). In view of this, this paper analyzes the psychological factors of violent criminal behavior of schizophrenic patients, in order to clarify the psychological characteristics and risk factors of violent criminal behavior of schizophrenic patients, so as to provide a theoretical basis for timely prediction and intervention of violent criminal behavior.

Subjects and methods: In order to observe the differences and commonalities of relevant psychological factors between violent criminal behavior of SP patients and violent behavior of criminals, 49 violent criminals and 35 schizophrenic patients with violent crime were collected. Minnesota Multiphasic Personality Inventory (MMPI), Personality Diagnosis Questionnaire (PDQ4+), Family Environment Scale - Chinese Version (FES-CV) The early Bad Family Environment Questionnaire (BFEE) was investigated and tested, and then combined with logistic regression analysis to evaluate the differences and commonalities of relevant psychological factors between SP patients and criminals.

Results: The results of MMPI showed that the scores of F, D, HS, HY and PA in schizophrenia group were higher than those in criminal group ($P < 0.05$); The results of PDQ4 + showed that the scores of paranoid, schizoid, schizoid, acting, dependent, passive aggressive and depressive personality disorders in schizophrenia group were higher than those in criminal group, while the scores of antisocial personality disorders were lower than those in criminal group ($P < 0.05$); The results of FES-CV scale showed that there were significant differences in intimacy, emotional expression, success, entertainment and organization between the two groups ($P < 0.05$).

Conclusions: There are not only differences in relevant psychological factors between violent criminal behavior of SP patients and violent behavior of criminals, but also some common pathological personality characteristics.

Key words: schizophrenia - violent crimes - criminals - psychological factors - comparative analysis

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INTRODUCTION

In the classification and etiology of schizophrenia, according to the third edition of Chinese classification and diagnostic criteria for mental disorders (CCMD-3), it is divided into paranoid schizophrenia, juvenile schizophrenia, tension schizophrenia, simple schizophrenia and terminal schizophrenia according to the dominant clinical manifestations. According to the disease stage and prognosis, it can be divided into: Post schizophrenic depression, schizophrenic remission, residual schizophrenia, chronic schizophrenia and schizophrenic decline. The pathogenic factors of schizophrenia include three levels: first, neurobiological factors (Li et al. 2020). (1) Neurobiochemical studies have shown that patients have abnormal functions of a variety of neurotransmitters, mainly involving dopamine, serotonin and glutamate. Central dopamine levels are elevated and hyper functional. Traditional antipsychotics are blockers of dopamine receptors in the central nervous system. Central serotonin level is

abnormal. In addition to fighting dopamine receptors, new antipsychotics also fight serotonin receptors. The level of central glutamate is low and the function is insufficient (Podichetty et al. 2021). (2) Neuroanatomical and neuroimaging studies show that the brain tissue of temporal lobe, frontal lobe and limbic system shrinks, ventricles expand and sulcus gyri widen. (3) Maternal virus infection during pregnancy, perinatal complications, adverse stress in childhood and physical diseases are related to neurological development defects, which have a certain impact on the pathogenesis of schizophrenia. Second, genetic factors. The genetic epidemiological survey of a large sample population shows that the prevalence rate among the relatives of patients is several times that of the general population (Biondo & Gerber 2020). The closer the blood relationship, the higher the prevalence. Molecular genetic studies have shown that susceptibility loci are associated with schizophrenia. At present, it is generally believed that schizophrenia may be polygenic, and its pathogenesis is caused by the superposition of multiple genes. Third,

social psychological factors, adverse life events, economic status, pre illness personality and other social psychological factors may play an inducing and promoting role in the pathogenesis of schizophrenia. In short, the etiology of schizophrenia has not been fully clarified. At present, there is no clear causal relationship between some identifiable influencing factors and the disease. It is generally believed that susceptible quality and external adverse factors lead to disease through the joint action of internal biological factors (Bojorquez et al. 2020).

In the clinical manifestations of schizophrenia, first, early symptoms: most patients have chronic onset, decline in work enthusiasm and ability, decline in students' academic performance, indifference to others, estrangement from others, lack of interest in external things, lack of care for their families, lazy life, sensitivity and suspicion, personality change, etc. Some patients may have insomnia, headache, dizziness, weakness, emotional instability and other discomfort and neurological symptoms. Some cases develop rapidly. Clinically, most of them are sudden excitement, impulse, speech disorder, behavior disorder, sporadic hallucinations and delusions. Second, thinking Association disorder: the most typical symptom of schizophrenia is the lack of coherence and logic in the process of thinking Association. The whole dialogue or writing content of the patient is lack of logic, the narration is not very relevant, and the meaning cannot be clearly expressed around the central idea of the dialogue. It's very difficult to talk to patients, which can be confusing (loose thinking). Lack of connection between sentences, language confusion (thinking confusion). Third, the obstacle of thinking content: mainly manifested in delusion. Delusion is a morbid and distorted belief, which is inconsistent with objective facts, educational level and cultural background, and even ridiculous. However, patients do believe this and cannot be persuaded or corrected through their own experience. Fourth, hallucination: hallucination refers to the patient's perception of his own existence when there is nothing in the objective reality. This is a common symptom of schizophrenia. The most common hallucination is auditory hallucination. There was no one talking around, but the patient heard a voice. Auditory hallucinations are common. Their content is critical, controversial, imperative or thinking voices. They are characteristic auditory hallucinations, and more persistent language auditory hallucinations also have diagnostic value. Fifth, affective disorder: manifested as the patient's lack of emotional response to the surrounding things. In the early stage, it is a specific lack of emotion, such as caring and considerate for relatives (emotional indifference), indifferent to major things involving their own interests, and no corresponding emotional response to things that ordinary people feel annoyed and painful (emotional indifference). It can also show

that the emotion is uncoordinated with the surrounding environment, laughing for no reason, and it is difficult to have emotional communication with the patient. The above symptoms are characteristic symptoms of schizophrenia. Sixth, will behavior disorder: patients are often helpless, negative withdrawal, lack of initiative and enthusiasm, do nothing all day, live a lazy life, have no advanced intention requirements (decreased will), have no interest in work, study and communication, significantly reduce their ability and damage their social function. There may also be stupidity, childishness, weird behavior, and violent crime (Mwb A et al.2020).

SUBJECTS AND METHODS

Study setting

In terms of the disease harm of schizophrenia, violent crime is a prominent problem in the development of modern society. This is a crime that does great harm to individuals and society and has extremely serious consequences. It is generally believed that the incidence of violence in psychiatric patients is higher than that in the general population, and is related to the type of mental disorder. Most studies have confirmed the statistical relationship between schizophrenia and violence, especially violence related to drug abuse. Some researchers report that the risk of violent crime in alcoholism combined with schizophrenia is 25.2 times higher than that in the normal population and 7 times higher than that in non-alcohol dependent schizophrenia. Relevant studies have pointed out that there is a moderate and important link between schizophrenia and violence, but this link is less than drug abuse and antisocial personality (Mwb et al. 2020). The increase of violence is limited to specific schizophrenic symptoms, indicating that violence is closely related to schizophrenic symptoms. At the same time, relevant studies have pointed out that hallucinations and delusions are related to the aggressive behavior of mental patients, that is, violent behavior is related to the sound, content and emotion of hallucinations. Most violent patients have the illusion of persecution, which will make patients feel angry and lead to violent crimes. In short, violent crime is the result of the interaction of psychological, social, biological and other factors. This is a very complex social phenomenon. The research should start from the aspects of demography, social psychology and biological factors, pay attention to the interaction of various factors, and make a comprehensive evaluation. In view of this, this paper analyzes the psychological factors of violent criminal behavior of schizophrenic patients, in order to clarify the psychological characteristics and risk factors of violent criminal behavior of schizophrenic patients, so as to provide a theoretical basis for timely prediction and intervention of violent criminal behavior (Ygm et al. 2020).

Design

49 violent criminals and 35 schizophrenic patients with violent violations were collected as the research objects. They were divided into crime group and patient group. The patient group (35 cases) were violent offenders diagnosed with schizophrenia, and the crime group (49 cases) were violent criminals of normal people without mental diseases, brain organic diseases and serious physical diseases. Among them, the inclusion criteria of the patient group: (1) patients who meet the diagnostic criteria of CCMD-III schizophrenia. (2) Male schizophrenic patients aged 18-50. (3) A schizophrenic accused of intentional homicide or injury. Inclusion criteria of crime group: (1) imprisonment for intentional injury or intentional homicide. (2) Male criminals aged 18-50. (3) No history of mental illness. Exclusion criteria: (1) patients with brain organic diseases and serious physical diseases were excluded. (2) Those who do not cooperate with the examination and cannot effectively complete the test.

Minnesota Multiphasic Personality Inventory (MMPI), Personality Diagnosis Questionnaire (PDQ4+), Family Environment Scale Chinese Version (FES-CV) and early bad family environment questionnaire (BFEE) were used to investigate and test, and then combined with logistic regression analysis to evaluate the differences and commonalities of related psychological factors between patients and criminals. MMPI scale: the Minnesota Multiphasic Personality Questionnaire Revised by song Weizhen of the Institute of psychology of the Chinese Academy of Sciences, with a total of 399 questions, which is divided into three validity scales: l (lie score), f (fraud score), K (correction score), HS (hypochondriasis), D (depression), HY (hysteria), PD (psychopathy), MF

(masculinity feminization), PA (paranoia), Pt (mental weakness), SC (schizophrenia), MA (hypomania) Si (social introversion) 10 clinical scales. PDQ4+ scale: including 107 items, used to evaluate 12 types of personality disorders in DSM - IV, including paranoid, schizoid, schizoid, performance, narcissistic, marginal, antisocial, avoidance, dependence, compulsion, passive aggression and depression. FES-CV scale: a total of 90 questions, including 10 factors: family members' intimacy, emotional expression, contradiction, independence, success, knowledge, entertainment, morality and religion, organization and control. BFEE questionnaire includes: incomplete family structure, criminal record of parents, drug or alcohol abuse of parents, maltreatment by parents, abandonment by parents and bad parenting style; Score 0-1.

All materials and data were input into excel and compiled into data tables. SAS statistical software package was used for statistical analysis. First, univariate analysis was performed, and then the violence of schizophrenic patients was taken as the dependent variable. The variables with statistically significant difference between the two groups were taken as independent variables by univariate analysis, and multivariate stepwise logistic regression analysis was performed.

Table 1 shows the comparison of MMPI measurement results between the two groups. Table 2. Shows the comparison of PDQ4+ determination results between the two groups. Table 3 shows the comparison of FES-CV measurement results between the two groups. Table 4 shows the comparison of BFEE measurement results between the two groups. Table 5 shows the results of multivariate logistic regression analysis.

Table 1. Comparison of MMPI measurement results between the two groups

Project	Patient group (n=35)	Criminal group (n=49)	P
L	53.28±9.22	50.21±9.95	>0.05
F	64.69±12.06	59.43±11.98	<0.01
K	51.40±10.98	46.83±11.21	>0.05
HS	66.45±9.34	60.84±14.21	<0.05
D	64.99±9.77	55.72±8.68	<0.05
HY	63.99±9.77	58.39±11.47	<0.05
PD	64.99±9.77	62.44±11.03	>0.05
MF	48.66±9.82	49.49±8.30	>0.05
PA	65.70±12.60	57.65±14.25	<0.01
PT	58.98±9.63	58.03±12.55	>0.05
SC	60.64±10.72	56.56±13.82	>0.05
MA	52.88±8.76	54.61±9.78	>0.05
SI	50.45±9.50	48.93±10.95	>0.05

Table 2. Comparison of PDQ4 + measurement results between the two groups

Project	Patient group (n=35)	Criminal group (n=49)	P
Paranoid	4.42±1.55	3.62±1.25	<0.05
Split like	4.00±1.36	3.42±1.33	<0.05
Split type	4.63±1.50	3.17±1.44	<0.05
Performance type	4.62±1.25	3.02±1.26	<0.01
Narcissistic	4.42±1.33	4.42±1.50	>0.05
Marginal type	4.17±1.44	4.02±1.98	>0.05
Antisocial	2.42±1.26	3.12±1.35	<0.05
Avoidant	4.32±1.50	4.12±1.27	>0.05
Dependent type	4.52±1.98	2.42±1.50	<0.01
Compulsive type	5.02±1.35	4.62±1.25	>0.05
Passive attack	4.22±1.27	3.37±1.33	<0.05
Depressive type	4.33±1.50	3.17±1.44	<0.05
Total score	50.45±11.97	42.93±15.95	<0.05

Table 3. Comparison of FES measurement results between the two groups

Project	Patient group (n=35)	Criminal group (n=49)	P
Intimacy	5.42±1.55	6.62±1.25	<0.01
Emotional expression	4.00±1.36	5.42±1.33	>0.05
Contradiction	4.63±1.50	3.17±1.44	>0.05
Independence	5.62±1.25	5.02±1.26	>0.05
Success	4.42±1.33	5.42±1.50	<0.05
Knowledge	3.17±1.44	3.02±1.98	>0.05
Entertainment	3.42±1.26	4.12±1.35	<0.05
Moral and religious view	5.92±1.50	6.12±1.27	>0.05
Organization	5.32±1.98	6.42±1.50	<0.05
Controllability	3.92±1.35	4.02±1.25	>0.05

Table 4. Comparison of BFEE measurement results between the two groups [n (%)]

Project	Patient group (n=35)		Criminal group (n=49)		P
	Yes (%)	No (%)	Yes (%)	No (%)	
Incomplete family structure	4 (11.4)	31 (88.6)	16 (32.7)	33 (67.3)	<0.05
Parents suffering from mental illness	12 (34.3)	23 (65.7)	5 (10.2)	44 (89.8)	<0.01
Parents have a criminal record	0 (0.0)	35 (100.0)	2 (4.1)	47 (95.9)	>0.05
Parents who abuse drugs or alcohol	7 (20.0)	28 (80.0)	9 (18.4)	40 (81.6)	>0.05
Once abuse by parents	6 (17.1)	29 (82.9)	21 (42.9)	28 (57.1)	<0.05
Once abandoned by parents	1 (2.9)	34 (97.1)	2 (4.1)	47 (95.9)	>0.05
Parents have bad ways of education	12 (34.3)	23 (65.7)	31 (63.3)	18 (36.7)	<0.01

Table 5. Results of multivariate logistic regression analysis

Factor	Regression coefficient	Standard error	χ^2	P	OR	95% CI
History of parental psychosis	1.79	0.80	4.92	<0.05	0.10	1.23-28.20
Once abused by parents	-2.28	0.74	9.39	<0.01	0.10	0.02-0.44
Bad way of Education	-2.15	0.67	10.26	<0.01	0.12	0.03-0.43
MMPI-F	2.26	0.61	9.59	<0.01	9.60	2.89-31.85
MMPI-Pa	1.12	0.56	3.94	<0.05	3.04	1.01-9.10
PDQ-antisocial	-1.70	0.63	7.38	<0.01	0.18	0.05-0.62

RESULTS

Comparison of MMPI measurement results between the two groups

The scores of F (fraud), D (depression), HS (hypochondriasis), HY (hysteria) and PA (paranoia) in schizophrenia group were significantly higher than those in criminal group ($P < 0.05$), but there was no significant difference in other factor scores ($P > 0.05$).

Comparison of PDQ4+ measurement results between the two groups

The scores of paranoids, schizoid, schizoid, performative, dependent, passive aggressive and depressive personality disorders in schizophrenic group were higher than those in criminal group, and the scores of antisocial personality disorders in criminal group were higher than those in schizophrenic group, the difference was statistically significant ($P < 0.05$), and there was no significant difference in other factor scores ($P > 0.05$).

Comparison of FES-CV results between the two groups

The scores of intimacies, success, entertainment and organization of FES-CV in schizophrenia group were lower than those in criminal group, the difference was statistically significant ($P < 0.05$), and there was no significant difference in other factor scores ($P > 0.05$).

Comparison of BFEE measurement results between the two groups

In the schizophrenia group, the number of parents suffering from mental illness in the early years was more than that in the criminal group, while the number of parents suffering from parental abuse, poor parenting style and incomplete family structure in the early years was less than that in the normal criminal group, the difference was statistically significant ($P < 0.05$), and there was no statistical significance in the other factor scores ($P > 0.05$).

Results of logistic regression analysis

The risk factors of violent behavior in schizophrenic patients were the high scores of F and PA of MMPI and early parental mental history. The risk factors of criminal violence are early parental abuse, parents' bad rearing style and antisocial personality.

DISCUSSION

In terms of the disease harm of schizophrenia, violent crime is a prominent problem in the development of modern society. This is a crime that does great harm to individuals and society and has

extremely serious consequences. It is generally believed that the incidence of violence in psychiatric patients is higher than that in the general population, and is related to the type of mental disorder. Violent crime is the result of the interaction of psychological, social, biological and other factors. This is a very complex social phenomenon. The research should start from the aspects of demography, social psychology and biological factors, pay attention to the interaction of various factors, and make a comprehensive evaluation. In view of this, this paper analyzes the psychological factors of violent criminal behavior of schizophrenic patients, in order to clarify the psychological characteristics and risk factors of violent criminal behavior of schizophrenic patients, so as to provide a theoretical basis for timely prediction and intervention of violent criminal behavior (Contreras-Molina et al. 2020).

In the comparison of MMPI measurement results between the two groups, the results of this study showed that the scores of F (fraud), D (depression), HS (hypochondriasis), HY (hysteria) and PA (paranoia) in the schizophrenia group were higher than those in the criminal group, the difference was statistically significant ($P < 0.05$), and the difference of other factor scores was not statistically significant ($P > 0.05$). The high scores of HS and D scale reflect the depression, pessimism, excessive control, many vague physical discomforts, anxiety, self-centered, complaining and complaining of violent and illegal schizophrenic individuals. This may be the characteristic symptom of schizophrenic violent offenders. Most of these people have inexplicable psychological and physical pain, do not pity life, negative indifference. It may also be related to the situation of detention and judicial expertise. The high PA score of schizophrenic patients often suggests that the symptoms of patients are mainly systematic delusion, especially victim delusion. In adult mental patients, the increase of F score is a rough index of the severity of psychopathology. The higher the score, the more serious the mental disorder is. Combined with clinical analysis, it is suggested that the violent behavior of schizophrenic patients is related to psychopathology. In addition, the results of multiple stepwise regression analysis show that f and PA scores are related to schizophrenia violence, which further shows that the violence of schizophrenic patients is a disease state, and the motivation of violence is absurd and lack of reality (Amaa et al. 2020).

In the comparison of PDQ4 + measurement results between the two groups, the results of this study showed that the scores of paranoid, schizophrenic, schizophrenic, performing, dependent, passive aggressive and depressive personality disorders in the schizophrenic group were higher than those in the criminal group, the scores of antisocial personality disorders in the criminal group were higher than those in the schizophrenic group, the difference was

statistically significant ($P < 0.05$), and the differences of other factor scores were not statistically significant ($P > 0.05$). It is partially consistent with the results of MMPI in this study. In short, foreign scholars have proved that the personality diagnosis questionnaire (PDQ4+) has good specificity and sensitivity when applied to the criminal population, and is suitable for the screening of personality disorders in the criminal population (Branitsky et al. 2020).

In the comparison of the results of FES-CV and BFEE between the two groups, psychologists of all schools attach great importance to the psychological growth in childhood and believe that early experience has a great impact on the integrity of personality in adulthood. Family is the first place for individuals to accept socialization. People's behavior and psychology are directly or indirectly affected by the early family environment. Some studies believe that early parental violence, adverse family environment such as mental history and substance abuse history, and traumatic life experiences such as abandonment and abuse in childhood are related to adult violence. This study found that most of the parents in the schizophrenia group had a history of mental illness, while the violence in the criminal group was related to parental abuse and poor parenting style in their early years. At the same time, this paper found that the evaluation of family in schizophrenic patients was significantly lower than that in criminal group in terms of intimacy, success, entertainment and organization. In particular, the score of family intimacy is significantly lower than that of the criminal group, which reflects that such family members are not close enough, cannot fulfill their mutual commitments, and cannot help and support each other. It can also be understood that schizophrenic patients lack communication with their families and are not good at obtaining help and support from their families. It may be that disease factors undermine the patient's reality test ability, are sensitive to the surrounding environment and interpersonal communication, and cannot feel or make use of the support given by family and society (Seeman 2020).

Finally, in multivariate logistic regression analysis, the high scores of F and PA of MMPI and early parental mental history are the risk factors of violent behavior in schizophrenic patients, especially the high score of F of MMPI is an important risk psychological factor in this kind of patients. The high scores of PA and F are related to psychotic paranoid hostility, which reminds clinical workers and patients' families that schizophrenic patient with a history of aggressive behavior, serious paranoid hostility and high scores of F and PA of MMPI should be strictly supervised and treated in time. The results suggest that the high scores of F and pa of MMPI can be used to predict violent behavior of schizophrenic patients, but the predictive validity of MMPI on violent behavior needs to be further studied by expanding the sample size.

CONCLUSIONS

This study explores the differences and commonalities of psychosocial factors related to violent behavior between schizophrenic patients and criminals. The results suggest that both schizophrenic patients and criminals with violent behavior have pathological personality characteristics, namely impulse, self-centered, emotional instability and poor social adaptation. The reasons for the formation of this personality and how to carry out effective psychological and behavioral treatment for this kind of people will be the direction of further research in the future. At the same time, the high scores of F and PA of MMPI and the early mental history of parents are the risk factors of violent behavior in schizophrenic patients, especially the high score of F of MMPI is an important risk psychological factor in this kind of patients, which provides some reference basis for the prediction and intervention of violent behavior.

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Correspondence:

Liang Li, PhD

School of Law, Nanjing University of Finance & Economics

Nanjing 210023, China

E-mail: liliang0651@163.com