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The Relationship Between Schizophrenia and Dissociative Identity Disorder with Criminal Behavior and Intervention Methods

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Abstract. With the popularity of people's caring about mental health, more and more news are related to mental disorder reports, and the public is also worrying about their own security. Based on some researches of meta-analysis, narrative reviews, and case reports, this paper uses narrative review to study the relationship between schizophrenia and dissociative identity disorder with criminal behavior and intervention methods. Interventions grounded in evidence, such as Social Cognition and Interaction Training (SCIT), the R&R2-MHP program, Metacognitive Training (MCT), and schema therapy, show promise in enhancing cognitive deficits, managing emotions, and curbing impulsivity, which can lead to a decrease in violent risk. This paper finds that schizophrenia and dissociative identity disorder patients have a higher risk of engaging in criminal behavior than the general, underscoring the necessity of early detection, improved diagnostic instruments, and broader clinical studies, despite the methodological constraints present in the various investigations. Enhancing intervention strategies could facilitate recovery, diminish violence, and foster safer and more knowledgeable societal reactions to serious mental disorders.

Keywords: Schizophrenia, Dissociative Identity Disorder, Criminal Behavior

1. Introduction

Nowadays, criminal behaviors such as arson, murder, sexual offences, which are related to mental illness or psychological disorder, are still endlessly emerging, most people are on tenterhooks. Following the development of economy and technologies, more and more people are also caring about their mental health and security.

A lot of studies are showing that schizophrenia and dissociative identity disorders are associated with a higher risk of criminal behaviors. For example, they are easily to hurt others, or they may murder or sexually harass to others, which is not fair if victims only get one sentence which is 'they are innocent because they are disorder individuals. Most of schizophrenia and dissociative identity disorder patients are having biology defects on their brains and cognitive and some other aspects. However, the society still has the question of how could the present study show that schizophrenia and dissociative identity disorder individuals have a higher risk of crime than genral? Also, why do they keep crimming? Also, how to treat or intervene those patients?

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This paper is researching the relationship between schizophrenia and dissociative identity disorder with criminal behavior and intervention methods by using a narrative review, aiming to provide a clearer relationship. As the result, doctors and counsellors could develop more specific treatment methods and medicines to help schizophrenia and dissociative identity disorder individuals to recover and to stay away from the criminal behaviors.

2. Introduction to schizophrenia

Schizophrenia is a chronic mental health disorder, showing repeated episodes of psychosis. For one hand, the positive symptoms, there are hallucinations and delusions, which are symptoms of illusions. Hallucinations means that the patient believe somebody is a spy or comes to steal something, which is not true. Delusions meaning the patient sees or hears something not real, they may hear somebody whisper things such as 'go to bed' or 'you are pathetic', but there is no real person talking. On the other hand, there are also negative symptoms. There are anhedonia, alogia, avolition, and social withdrawal. For anhedonia, it means the patient losses ability to feel joy or pleasure; Alogia means the person loses logic or ability to speak; Avolition means the patient is deficient of willpower; Social withdrawal means the person cannot be gregarious.

Schizophrenia also contains cognitive symptoms. Cognitive deficits span multiple domains, including attention, processing speed, working memory, learning, and executive functioning. All of those are showing that schizophrenia individuals have different perspective to see this world than others. Mood disorders and some neurological conditions are also problems of schizophrenia individuals [1,2].

3. Introduction to dissociative identity disorder

Dissociative Identity Disorder is a mental health disorder of incorporation the notion of identity, often performing as a person with two or more variable personalities. For example, one alter may like coriander, but the other may hate coriander. For the most of time, dissociative identity disorder occurs because the patient's life is too stressful to withstand. Moreover, Individuals experience disruptions in identity, memory, and consciousness; distinct identity states ('alters') may differ in memories, traits, or even perceived gender. Real dissociative identity disorder patients cannot be pretend, because this disorder will cause dysfunction. From DSM IV, there are 5 kinds of dissociative disorders: Dissociative Identity Disorder, Dissociative Amnesia, Depersonalization Disorder, Dissociative Fugue, and Dissociative Disorder Not Otherwise Specified [3].

4. The relationship between schizophrenia and criminal behaviour

All included participants had documented histories of criminal or violent behaviors prior to study enrollment. The measurement methods include meta-analysis, statistical analysis, and narrative reviews.

From a meta-analysis article, across 11 studies, individuals with schizophrenia exhibited a higher risk of criminal behavior compared with general population controls. Here are some different data of individuals with schizophrenia had done criminal behaviors, including murder, sexual crimes, and arson. In eight studies focusing on homicide, elevated risk was observed; however, estimates varied depending on adjustment for substance use and socioeconomic factors. Then, there are 9 studies which included in meta-analysis of sexual criminal that showing the crime possibility for individuals with schizophrenia is higher than individuals who are without. At last, there are 4 studies showing

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the risk of arson. There is no comparison group for arson, but there is still positive association between individuals with schizophrenia and arson behavior. Across 17 studies, comorbid substance use substantially amplified risk (e.g., from approximately 3.5 to 9.9 for violent outcomes), potentially via increased impulsivity and criminogenic exposure [4].

All of those studies and conclusions are showing that individuals with schizophrenia are at higher risk of criminal behavior than genral, and here are some factors that cause schizophrenia individuals to hurt others.

From another article, the relationship of schizophrenia and criminal behavior is also related to brain structure and mechanisms. Differences are also happening in schizophrenia individual's mind structures. Through fMRI, showing brain structures and functions, violent behaviors are related to hippocampus, amygdala, and frontal cortex. For hippocampus, it relates with memories; for amygdala, it relates to fear and agression emotions; for frontal cortex, it relates to judgment, ability to plan, and ability to process new memories. Those three have one thing quite in common, that is they all relate to cognitive. At here, the word 'cognitive' includes both neurocognitive and social cognition domains. Both of them can be observed from young ages, even before the illness onset. But still, it has a strong negative effect on the individual's psychosocial functioning [5].

From a meta-analysis outcome, schizophrenia individual who have more than one standard deviation below the mean for global cognition score are a higher risk of violence or criminal behavior. Then for neurocognitive deficit, which physciological decit, is related to other variables which are in the following text. When the individual with schizophrenia is worse in neurocognitive function, which includes four main parts to measure: social cognition, symptom severity, social functioning, and violence proneness, they tend to be more likely to commit a crime [5].

Next, the article found out that, various from other factors, social cognition appears to have a direct effect on violent behavior. Lower educational attainment and reduced processing speed emerged as strong discriminators of violence history, followed by poorer accuracy in recognizing anger in others. Those are easy to understand: lower education level meaning lower ethics level, which also causes lower processing speed; The means by accuracy for anger recognition is actually the ability of schizophrenia individuals to recognize others angery, not themselves. For schizophrenia individuals, they are easy to recognize some neutral facial expression as angry or aggressvie, leading to their own rage. As the result, they may hurt or murder the others. This could also relate to hallucinations and delusions, schizophrenia individuals are having unreal feelings of others [5].

Still from the article, some tests had done on individuals with schizophrenia showing the reason that they have a higher tendency to crime. The first exam is Wisconsin Card Sorting Test (WCST), followed by Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). On WCST, the participant needs to match the response card with stimulus card, they may have same color or shape or other feature in common. This relates to cognition. Participants performed worse on these two, meaning they have a higher risk to do criminal or violent behavior, especially for the performance on language component of RBANS [6].

Interestingly, some violent offenders demonstrated better attentional scores, potentially reflecting task-specific effects, sampling differences, or subgroup heterogeneity. For those who had violent relapse, they have a higher score on attention domain, a higher level of psychopathy, and a lower level of impulsivity [5].

For the third article, a case study of matricide, showed that in 64 murder parents cases (patricides or matricides) the most frequent mental disorders are schizophrenia and other psychotic disorders. For this case report, the patient said that before he murdered his mother, he felt like singers on the

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TV are monitoring his thinking because they sing it out, and his mother cooperates with singers to make him feel more insecure. This is a typical hallucinations [7].

Cognitive-remediation-oriented interventions target neurocognition and social cognition. SCIT is a group-based program focusing on attributional style and emotion recognition over multiple sessions, with evidence for improving social cognition and reducing hostility. SCIT could rectify schizophrenia individuals' inaccuracy of anger recognition. It concentrates on the process of how schizophrenia individuals getting wrong conclusions. In the other words, SCIT effectively reduce the aggressiveness of schizophrenia patients through improve their cognitive function [8]. Then, the R&R-2 MHP intervention, which is a revised version of Reasoning and Rehabilitation program. This one has a significant effect on treating impulsivity, verbal aggression, physical aggression, problem solving, awareness of thoughts of others, and integration of information. This treatment includes to break down their cognitive triad and increasing their emotional control. R&R-2 MHP intervention also help patients to be more systematicly and logically to think or plan [9]. Last, the Metacognitive Training (MCT). The behaviors such as tension, hostility, arousal, and aggressive behaviors are notably reduced through MCT. MCT could effectively help to reduce positive symptoms, which relate to cognitive bias. Hallucinations and delusions are cognitive biases caused by wrong beliefs of patients, MCT could help them to think more critically instead of jumping to conclusions or being overconfident to their illusions. All of those are related to rational-emotive behavior therapy and cognitive behavior therapy, which help people to think more critically and less extreme [10].

Overall, here are still some limitations for the research. Firstly, some of the participants are from different countries. As the result, the outcome may be confused by different treatment of different justice systems, meaning some of the behaviors are divided into'criminal behavior' under their justice system, but in other areas may not. Then, there is an extra variable. The variation of level of comparison groups' matching between studies is the only thing that quality rating acquired, this may cause deviation of the outcome of research and the real problem in general [7]. Next, there is no clear indication of what level of behavior in some of the studies is classified as either violence or criminal behavior, meaning some of the assessments are subjective. Last, the case report is hard to implement for every schizophrenia individuals, so some of the schizophrenia individuals may have other triggers leading to criminal behaviors, or even the reason in the case report will not cause them to murder.

5. The relationship between dissociative identity disorder and criminal behaviour

Still, all included participants had documented histories of criminal or violent behaviors prior to study enrollment. The measurement methods include case study and narrative reviews.

For the case study article, a traumatic past is the strongest reason leading to Dissociative Identity Disorder, which mostly occurs in childhood. Dissociative identity disorder patients try to protect themselves through creating an alter to help them to adjust their feelings or emotions. The case study is about a film called 'Split', which describes a dissociative identity disorder patient with 24 personalities who kidnapped three girls. The most noteworthy part is that the main character's 24th alter, 'the beast'. All the other 23 personalities know they cannot release those three girls, because 'The beast' wants to eat those three girls.

A significant part of Split is why the main character would have 24 different alters. Although there was no direct explanation from the film, people could infer that it is because of physical abuse at childhood by the main character's mother. This is leaving behind trauma for the main character, as the result, the only way he can protect or adjust his emotions is through creating other alters to help him. There are also some reasons that could cause complex trauma and lead to dissociative identity

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disorder if not given support on time. These factors include poor emotional regulation, lack of perceived safety, a weak sense of direction, and an impaired ability to detect danger signals, all of which heighten vulnerability to trauma. Those defects could result an unstable characteristic of a child, leading to vulnerability to trauma. As the result, they will try to protect themselves through creating an alter [3].

Many patients with Dissociative Identity Disorder also develop Post-Traumatic Stress Disorder (PTSD), and untreated PTSD can exacerbate emotional dysregulation and aggression through heightened stress responses. One of the strongest reason for dissociative identity disorder is that patients had trauma when they were children, and they did not have a chance to be treated on time. As the result, they are more easily to have PTSD, so the possibility of violent behavior of dissociative identity disorder patients is higher than general [3].

From a biological perspective, patients with Dissociative Identity Disorder often exhibit dysfunctions in the frontal lobe, which governs executive control and emotional regulation. So for dissociative identity disorder patients, they are hard to control their behaviors. Moreover, dissociative identity disorder patients' hormones and neurotransmitters are also irregular, causing they have much more aggressive behaviors when they are facing normal stimuli [3].

Besides traumatic experiences, which include child abuse, psychological and physical abuse, neglect, sexual abuse, and witnessing domestic violence, there are other factors that could cause dissociative identity disorder patients to engage in criminal behaviors. Through the reason that dissociative identity disorder patients would have more aggressive behavior to normal stimuli, external factors for example, alcohol and drug abuse, social relations, and economic problems, those small factors to general would cause criminal behaviors of dissociative identity disorder patients [3].

From another case report article, Schema Therapy is a very effective treatment method for dissociative identity disorder. Dissociative identity disorder is mostly caused by childhood trauma and PTSD, which schema therapy is used to tackle trauma and Imagery Rescripting (ImRs). Interestingly, schema therapy could also effectively solve the problem of dissociation of Borderline Personality Disorder (BPD), which also happens on dissociative identity disorder. Borderline personality disorders also have other similar symptoms with dissociative identity disorder, like extremely unstable emotions and cognitions, which schema therapy provides as a tool to solve those problems. Also according to an article, a recent RCT showed that ImRs is highly effective in a case of a patient with childhood trauma leading to PTSD. All of those are showing that schema therapy could be an effective treatment method on dissociative identity disorder [11].

Overall, this research faces limitations in generalizability, as case reports cannot represent all patients, because different patients may show different symptoms. Future studies should incorporate longitudinal data and larger clinical samples to verify these findings. Second, one of the case reports is about the film, which still has some variations with real-life examples.

6. Discussion

The reasons that schizophrenia and dissociative identity disorder have a higher possibility to engaging criminal behaviors in common are that the deficit of frontal lobe, deficit in cognition, and their aggressive responses to normal stimuli. The frontal lobe plays a crucial role in human cognition, as it is responsible for planning, decision-making, attention, and emotional regulation. However, schizophrenia individuals and dissociative identity disorder patients are lack of those abilities. Their deficit in cognition leads them to perceive people's emotions or facial expressions differently than general, as the result, they have more aggressive behaviors when there is a normal stimulus [3,5]. In the future, researchers should develop more refined diagnostic measures to assess

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illness severity and inform ethical frameworks for treatment and supervision within legal contexts. For future researches, I want to know the early symptoms of schizophrenia and dissociative identity disorders, as the result, patients can be treated earlier, and there will be fewer criminal behaviors from them.

7. Conclusion

This paper has introduced schizophrenia and dissociative identity disorder, also discussed the relationship between schizophrenia and dissociative identity disorder with criminal behaviors. Schizophrenia and dissociative identity disorder patients are at higher risk of engaging in criminal behaviors than usual. Through cognitive aspects and biological perspectives, people now could know that schizophrenia and dissociative identity disorder patients perceive others' moods or emotions differently, and they also have some severe deficits in their brains. Both of them have three main reasons: brain function deficit, external incentives (such as drug abuse), and their own cognitive deficit or deficit in mood regulation. This paper also gives some intervention or treatment methods to help patients to recover their cognition.

Future research will focus on recovery methods of cognitive and control of those at high risk of criminal behavior of schizophrenia and dissociative identity disorder individuals, as the result, the society will be more secure, negative reports about mental disorder individuals will reduce, and the public will gradually envisage mental disorder individuals objectively. The aim of this paper is to help more people to understand the reasons why mentally unhealthy people are at a higher risk, and to help the society to be safer.

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