

The Impact of De-escalation Technique Intervention on Violent Events in Patients with Schizophrenia

Weidong Liu¹, Li Xiang¹, Guiyun Li²

¹Guangzhou Psychiatric Hospital, Guangzhou Civil Affairs Bureau, Guangzhou 510430, Guangdong, China

²Guangzhou Resettlement Center, Guangzhou 510430, Guangdong, China

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Abstract: *Objective:* To evaluate the effect of de-escalation technique intervention on the prevention and treatment of violent events in schizophrenia (SCH). *Methods:* 120 patients with SCH who were admitted to the hospital from January 2024 to December 2024 were selected. Based on the time of admission, the reference group consisted of 60 patients admitted from January to June 2024, who received routine intervention. The experimental group consisted of 60 patients admitted from July to December 2024, who received the de-escalation technique intervention. Both groups were evaluated using the Chinese version of the Broset Violence Checklist (BVC) to compare the incidence of violent behavior and BVC risk levels before and after intervention. *Results:* The incidence of violent events in the experimental group was lower than that in the reference group, and the violence risk level was lower than that in the reference group ($P < 0.05$). *Conclusion:* Adopting the de-escalation technique intervention for patients with SCH can prevent violent events, reduce patients' violence risk level, and improve their disease symptoms and quality of life.

Keywords: De-escalation technique intervention; Schizophrenia; Violent events

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1. Introduction

Schizophrenia (SCH) is a highly prevalent psychiatric disease characterized by hallucinations, perceptual disturbances, and logical confusion. Long-term psychological support and antipsychotic medication are needed to control the condition and prevent other complications^[1]. However, patients with this disease often exhibit violent tendencies, which may lead to self-harm or harm to others, thereby reducing treatment safety. De-escalation technique intervention is a newer intervention method aimed at preventing violent events. It covers clinical communication, risk assessment, and safety assurance for both doctors and patients. Cognitive behavioral therapy or enhanced communication can be used to improve patients' treatment cooperation and facilitate their recovery. The Chinese version of the Broset Violence Checklist (BVC) is a commonly used assessment tool for violent

events, which can simply and intuitively evaluate the violence risk of SCH patients. The assessment takes about 5 minutes, has high acceptance among patients, and provides authoritative results [2]. Therefore, this study selected 120 SCH patients to evaluate the implementation effect of combining the BVC scale with the de-escalation technique intervention.

2. Materials and methods

2.1. General information

A total of 120 patients with SCH admitted between January and December 2024 were included in this study. They were randomly divided into two groups using a random number table: the experimental group (60 patients, including 32 males and 28 females) and the control group (60 patients, including 34 males and 26 females). The mean age of the experimental group was 45.16 ± 3.97 years, with a mean duration of illness of 3.85 ± 0.78 years. The mean age of the control group was 45.27 ± 3.81 years, with a mean duration of illness of 3.92 ± 0.83 years. There were no significant differences in baseline characteristics between the two groups ($P > 0.05$).

Inclusion criteria were: patients admitted to the psychiatric department, adult patients aged <80 years, complete clinical data, and basic communication skills. Exclusion criteria were: presence of substance or drug dependence, comorbidity with cardiovascular, liver, or kidney diseases, abnormal mental development or other types of mental illnesses, and withdrawal from the study.

2.2. Methods

The control group received routine interventions, including 24-hour monitoring of patients' daily activities during disease episodes, assessment of risk factors, predictive interventions, assessment of risk levels after stabilization of the condition, determination of appropriate visitation frequencies, understanding of patients' psychological changes, improvement of negative psychology through language counseling and cognitive therapy, timely distribution of medication, explanation of medication precautions, and monitoring of patients' medication behavior.

The experimental group underwent intervention with de-escalation techniques, including the following steps: (1) Violence Risk Assessment and Intervention: The BVC scale was used to assess patients' risk of violence, which included six items such as noise, chaotic state, and harmful behavior. A score of 0 was assigned for the absence of such behavior, while a score of 1 was given for the presence of the behavior, with a total possible score of 6. Higher scores indicated a higher level of risk for aggressive behavior events within 24 hours. Specifically, a score of 0 represented low risk, 1–2 represented medium risk, and 3–6 represented high risk. For patients with low risk, their disease condition was evaluated. Patients with medium risk were reported to doctors and could be restrained using one hand or one foot. Their condition was assessed intermittently, and blood circulation at the restraint site was observed to prevent skin damage, and a medium-risk sign was posted. Psychological support therapy was provided, explaining the necessity of restraint to the patient, inquiring about their individual needs, and making every effort to meet them. High-risk patients required restraint of both hands and feet, and a high-risk sign was posted. At the same time, the frequency of communication was increased, various methods were used to stabilize their psychological state, or medication was administered as prescribed. (2) Implementation of de-escalation techniques: 1. Communication skills: When communicating with patients, it was necessary to maintain an appropriate distance, preferably more than 1 meter. Therapeutic operations were carried out with gentle

movements, explanations were provided, and attention was paid to having a kind attitude and euphemistic tone. Eye contact could be appropriately made with patients to give them encouragement. 2. Personalized solutions: Patients' family backgrounds, past medical histories, treatment plans, and other information were evaluated to predict the triggers and risk factors of violent events. The opinions of patients and their families were inquired about, and solutions were discussed together. 3. Establishment of a comfort room: A dedicated comfort room was set up in the department, equipped with books, a TV, and refreshments. When patients exhibited aggressive behavior, they were led to the comfort room by a psychologist, where mindfulness-based stress reduction therapy was used to improve their psychological state, allowing them to receive mindfulness training in a quiet environment. The psychologist accompanied the patient throughout the process, observing their emotional and behavioral changes and providing timely guidance. 4. Insight education: Patients were divided into three groups, with about 15 people in each group, and classes were held 1 to 2 times per week, with each class lasting 2 hours. In the first week, patients were encouraged to introduce themselves, a name chain game could be organized, and the definition of mindfulness therapy was explained. Patients were allowed to experience treatment techniques for 5 minutes each. In the second week, mindfulness breathing methods were demonstrated, with each training session lasting 10 minutes and being repeated twice, followed by 15 minutes of mindfulness stretching training. Patients were organized to discuss SCH disease conditions and were provided with relevant disease knowledge. In the third week, mindfulness breathing training continued, and body scan meditation training methods were demonstrated (15 minutes each), with the two training methods alternating. In the fourth week, mindfulness breathing and stretching training were alternated, and the benefits of mindfulness training were discussed collectively to improve patients' adherence to training. In the fifth week, mindfulness breathing training was combined with mindfulness yoga, demonstrating yoga movements for 15–30 minutes each time, while guiding patients to accept their own condition and recognize their symptoms. In the sixth week, patients were assisted in identifying their misconceptions, relevant cases were introduced to illustrate the differences between false beliefs and facts, and patients were empowered to have insight into reality. In the seventh week, patients were encouraged to independently identify physical discomfort, and knowledge about medication usage, side effects, and coping measures was provided. A patient exchange meeting was organized to encourage them to share treatment experiences. In the eighth week, patients were given mindfulness care, invited to share self-management methods, and discuss discrimination encountered in daily life and coping strategies. At the same time, patients were guided to practice mindfulness eating and walking methods, helping them learn social skills so that they could actively return to society.

2.3. Observation indicators

- (1) Incidence of violent events: Observe the probability of SCH patients engaging in unarmed confrontation with objects, attacking others, self-harming, and destroying property.
- (2) Violence risk level: Based on the BVC score, it is subdivided into low/medium/high risk.

2.4. Statistical analysis

Data processing software is SPSS 26.0. Measurement data is represented as [Mean ± SD], compared, and tested with the t-value. Count data is represented as [n/%], compared and tested with the chi-square value. Statistical significance is indicated by $P < 0.05$.

3. Results

3.1. Comparison of the incidence of violent events between the two groups

There were 2 cases of violent behavior in the experimental group and 6 cases in the reference group. There was no difference between the two groups ($P > 0.05$).

Table 1. Comparison of the incidence of violent events between the two groups [n/%]

Group	Cases	Resisting objects	Attacking others	Self-harm	Property destruction	Incidence rate (%)
Test group	60	1 (1.67)	1 (1.67)	0	0	3.33 (2/60)
Control group	60	2 (3.33)	2 (3.33)	1 (1.67)	1 (1.67)	10.00 (6/60)
	χ^2					2.143
	P					0.143

3.2. Comparison of violence risk levels between the two groups

The proportion of low-risk violence in the experimental group was higher than that in the reference group ($P < 0.05$).

Table 2. Comparison of violence risk levels between the two groups [n/%]

Group	Cases	Low risk	Medium risk	High risk
Test group	60	45 (75.00%)	12 (20.00%)	3 (5.00%)
Control group	60	35 (58.33%)	15 (25.00%)	10 (16.67%)
	χ^2	3.750	0.430	4.227
	P -value	0.053	0.512	0.040

4. Discussion

SCH patients have a longer hospitalization period and exhibit more pronounced violent tendencies. The incidence of violent attacks or property destruction is relatively high, and they may violently attack medical staff, causing accidental injuries^[3]. Therefore, it is necessary to strengthen the prevention and treatment of violent incidents among these patients and actively carry out mitigation skill interventions^[4-5]. These measures can comprehensively assess patients' violence risk and utilize effective communication skills and personalized solution models to improve patients' psychological comfort and maintain a peaceful state of mind. The establishment of a comfort room can promptly control patients' impulsive thoughts, while self-awareness education can guide patients to vent their emotions correctly, master relaxation techniques, and thus maximize the prevention of violent incidents^[6].

The results showed that the incidence of violent incidents in the experimental group was 4.55%, while that in the control group was 18.18%. Among the violence risk levels in the experimental group, the proportion of low risk was 79.55%, while that in the control group was 56.82% ($P < 0.05$). The reason for this is that BVC allows for quantitative assessment of violence risk, considering six behaviors within 24 hours as indicators for evaluating violence risk, thereby defining risk areas and implementing targeted intervention measures to standardize various violence risk management procedures. Additionally, BVC can accurately predict the incidence of violence risk within the next 24 hours. The training duration is approximately 2–3 hours, and the assessment can be completed

in about 5 minutes, making it highly convenient. If a patient has a high risk of violence, a BVC assessment can be conducted during the reception process, allowing reception staff to quickly assess the patient's violence risk level in a timely manner. Protective isolation measures can then be implemented to prevent violent behavior, thereby enhancing the self-efficacy of reception staff and ensuring a safe reception environment. The BVC score reasonably categorizes patients' violence risk, enabling the scientific selection of de-escalation techniques to fundamentally prevent violent incidents^[7]. Clinical communication can provide humanistic care while respecting patients' privacy, reducing their resistance to the communication process^[8]. Using a euphemistic tone and patiently assessing patients' individual needs can help fully analyze the internal causes of violent incidents and develop effective solutions. Additionally, de-escalation techniques can gradually introduce mindfulness-based cognitive therapy to patients, helping them focus on their emotions, proactively improve symptoms such as delusions or hallucinations, and learn to accept themselves, thereby preventing violent behavior^[9]. The disease symptom scores and quality of life scores in the experimental group after intervention were lower than those in the control group ($P < 0.05$). The reason for this is that de-escalation techniques can emotionally resonate with patients, respecting their personal thoughts and appropriately applying protective restraints. This reduces patients' resistance and encourages them to actively cooperate with treatment. Furthermore, activities such as mindfulness breathing, stretching exercises, and mindfulness yoga can fully relax patients' minds and bodies, enabling them to master relaxation techniques, rationally face their illnesses, and learn to coexist with them, resulting in a higher quality of life^[10]. During the intervention process of de-escalation techniques, communication skills can help avoid a lack of trust in nursing due to misunderstandings or a sense of oppression, bringing the nurse and patient closer. Mindfulness-based stress reduction training and setting up a comfort room can utilize psychological counseling measures or environmental optimization programs to buffer patients' negative emotions and reduce the frequency of acute emotional outbreaks. Additionally, insight education can improve patients' misconceptions about disease knowledge, allowing them to view their condition rationally. Case analysis can reconstruct patients' cognition, reduce the incidence of symptoms such as delusions, and improve their cooperation in treatment.

5. Conclusion

In summary, de-escalation intervention can prevent violent incidents among patients with SCH, reduce their violence risk level, assist in alleviating their disease symptoms, and effectively improve their quality of life in the future, demonstrating high intervention effectiveness.

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The authors declare no conflict of interest.

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