

## Psychological Impact Treatment Based on Protective Restraint in Psychiatric Clinical Research

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### ***Abstract:***

This paper discusses the clinical application effect of structured intervention model on protective restraint of psychiatric patients. Methods: The paper selected hospitalized patients from January 2017 to December 2019. The patients were randomly divided into the experimental group and the control group by lottery. The experimental group adopted a structured intervention model for protective restraint. Before and after restraint, the patient's risk level is evaluated, and the evaluation criteria are unified. The patient can be restrained only if the restraint standard is met, and the protection will be released for the patient in time after reaching the release standard; the control group adopts traditional methods for protective restraint. The protection rate, total protection time, day shift and night shift protection time of the two groups of patients were compared. Results: Among the 469 cases of the experimental group, the number of patients who were restrained by protection was 71 cases, and the protection rate was 15.14%; the number of patients who were restrained by protection among the 449 cases in the control group was 92 cases, and the protection rate was 20.49%. The protection rate was significantly lower than that of the control group, and the difference between the two groups was statistically significant ( $P < 0.05$ ). Compared with the control group, the protection time of day shift and night shift of the experimental group was significantly different ( $P < 0.05$ ). Conclusion: The application of structured intervention model to the clinic can effectively reduce the protection rate of psychiatric inpatients and shorten the time of protective restraint for patients.

***Keywords:*** Mental disorder, structured intervention model, protective restraint, psychological impact of protective restraint.

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### **I. INTRODUCTION**

The structured intervention model refers to the analysis of risk factors related to violent aggressive behavior, using effective and standard risk assessment of violent aggressive behavior,

and classifying patients into different attack risk levels based on the evaluation results, and using different intervention treatments for patients of different levels. At the same time, improve and strengthen the hospital management system to reduce the incidence of violent and aggressive behaviors of inpatients, reduce the use of compulsory drug treatment and restrained isolation by patients. Suicide, self-injury, impulsiveness, injury, destruction, and non-cooperation of treatment in psychiatric inpatients under the influence of mental symptoms occur from time to time. In order to protect the safety of patients and others, protective restraint is one of the effective measures. One is to use the method of restraining the body to protect patients from accidents.

Protective restraint in a narrow sense refers to physical restraint, while in a broad sense it includes psychological, drug, and physical restraints. In 2002, the United States Medical Institutions Review Committee defined the restraint specification mainly as physical restraint, which refers to the use of any physical method to restrict the patient's freedom of movement, movement, and normal movement. Psychiatric patients may experience behaviors such as excitement, restlessness, injury, damage, self-injury or suicide. In the care of psychiatric patients, protective restraints are often used to prevent accidents. The essence of protective restraint of psychiatric patients is to use restraint tools to physically restrain the patient to avoid damage to the patient and the surrounding people and the environment, but it is not a simple bundling technique and requires professionals to perform special nursing operation techniques. The acceptance of protective restraints by psychiatric patients is of great significance for ensuring the safety of patients' lives and ensuring the smooth progress of treatment [1].

Protective restraint is a compulsory medical care measure. In the process of implementing protective restraint, the patient's excitement, agitation, hostility, etc. are likely to cause harm to the patient or medical staff. Article 40 of the Mental Health Law of the People's Republic of China (hereinafter referred to as the Mental Health Law), which was implemented on May 1, 2018, stipulates that patients with mental disorders occur or are about to cause harm to themselves, endanger the safety of others, and disrupt the medical order in medical institutions. If there are no alternative measures, medical institutions and their medical staff may implement restraint, isolation and other protective medical measures. However, most medical staff's restraint assessment of patients only relies on personal past experience and lacks a unified evaluation standard. Therefore, the patient's protective restraint rate cannot be effectively reduced. This shows that it is particularly important to strictly grasp restraint indications when protecting mental patients. In this study, the structured intervention model was applied to the clinic to optimize the restraint standards of patients, aiming to effectively reduce the protection rate of patients with mental disorders and reduce the occurrence of adverse events.

## II. OBJECTS AND METHODS

### 2.1 Research Object

A total of 918 inpatients from the Psychiatry Department of our hospital from January 2017 to December 2019 were selected as the research objects. The patients were randomly divided into two groups by lottery, namely the experimental group 469 cases and the control group 449 cases. The general information of the two groups of patients is compared in TABLE I. There was no statistically significant difference in general data such as gender, age and diagnosis between the two groups of patients ( $P>0.05$ ), and they were comparable. All patients in this study had their family members signed an informed consent form and volunteered to participate in this study [2].

## 2.2 Method

The control group used traditional methods for protective restraint. The experimental group adopts a structured intervention model management method for protective restraint, and grades the risk of patients before protective restraint. The protection can be implemented only when the standard of protective restraint is met. After protection, the symptoms, signs and emotions of the patients are observed every 15 minutes. Changes, etc., score the patient's condition at any time, and release the restraint in time after meeting the criteria for releasing the restraint. The details are as follows: the patient's symptoms before and after protective restraint are refined and evaluated on a scale of 1 to 4. If any of the following scores reach 3 points or more, protection can be implemented or released. See TABLE II for specific scoring content. The protective restraint method is: the restraint tool is a cotton restraint belt, the restraint method is mainly the restraint of the functional position of the limbs on the bed, and the restraint parts are mainly the upper limb wrist joint and the lower limb ankle joint [3]. The notification method used for protective restraint is mainly oral. After the emergency is over, the patient and his family are informed in detail, and the patient's symptoms are relieved in time, and the effect is evaluated. During the protective restraint period, the nursing staff can regularly observe the patient's limb activity, limb blood circulation and the tightness of the restraint belt, and meet the reasonable needs of the patient.

**TABLE I. Comparison of general information of the two groups of patients  
(example)**

Group	Number of cases	age	gender	
			male	Female
test group	469	27.18±10.14	460	9
Control group	449	25.57±11.26	443	6
Group	diagnosis			
	Schizophrenia	Affective disorder	Obsessive-compulsive disorder	other
test group	242	143	39	45
Control group	230	152	35	32

**TABLE II. Evaluation content for implementing or removing protective restraint**

evaluation items	fraction	Implement protective restraint evaluation	Evaluation of removal of protective constraints
Excitement and hostility	1	More agitated speech and no physical movement	Speech excitement and physical resistance are significantly reduced
	2	Excited speech and excessive speech	No verbal agitation and physical resistance
	3	Excessive speech and physical behavior	Non-aggressive speech has partial self-control
	4	Uncontrollable physical behavior	Self-control without excessive speech
Impulsive anger	1	Self-controllable occasional impulsive behavior	Self-controllable occasional impulsive behavior
	2	Impulsive behavior can be self-control	Impulsive behavior to persuade
	3	Impulsive behavior can be persuaded	Impulsive behavior can be controlled automatically
	4	Impulsive behavior that must be stopped immediately	Impulsive behavior
Self-harm and suicide	1	Suicidal self-harm	Self-control of suicide self-harm
	2	Suicidal thoughts and mild self-harm behavior	Self-control of suicidal self-harm
	3	Suicidal self-harm	Self-control of suicidal self-harm
	4	Strong suicidal self-harm	No suicide or self-harm
Degree of treatment cooperation	1	Simple persuasion can cooperate	Simple persuasion can cooperate
	2	Repeated persuasion can cooperate	Repeated persuasion can cooperate
	3	Cooperate under semi-forced	Barely able to cooperate
	4	Compulsory	Cooperate
Anxiety level	1	anxious	Extreme nervousness improves
	2	worrying and nervous	Nervous fear improvement
	3	Nervous fear	Reduced irritability
	4	Extremely nervous	Calm mood
gait	1	Smooth but slow	Instability requires special care
	2	Unstable but self-control	Unstable but self-control
	3	Instability requires special care	Steady but slow
	4	Can't walk on their own	smooth

## 2.3 Evaluation Index

(1) Incidence rate of implementing protective restraint (protection rate): the percentage of the number of patients subject to protective restraint in the total number of hospitalizations. (2)

Duration of protective restraint: the duration from the beginning of the protection to the removal of the protection, based on the time recorded in the protection observation record sheet (recorded once every 15 minutes), in hours. Including the comparison of the total duration of protective restraint between the two groups and the comparison of the duration of protective restraint of day shift and night shift in the two groups.

## 2.4 Quality Control

Regarding the specific methods for implementing or removing protective restraints, the head nurse shall conduct unified training for all nurses in the department. During the data collection process, two senior nurses supervised and managed [4].

## 2.5 Structured Model

### 2.5.1 CS Model

CS theory states that if a signal is sparse or compressible under a certain transformation, it can be recovered by a small amount of projection on a space basis that is not related to the transformation matrix. The matrix representation of the CS model is:

$$y = \Phi x \quad (1)$$

Where  $y \in R^{M \times 1}$  represents the observation vector,  $\Phi$  is the measurement matrix of  $M \times N (M \ll N)$ , and  $\Phi$  is fixed and does not depend on the signal  $x$ . Its column vector is called an atom.  $x \in R^{N \times 1}$  is a discrete real-valued signal vector of  $N \times 1$  and is sparse under base  $\Psi = [\psi_1, \psi_2, \dots, \psi_N]$ , namely

$$x = \sum_{i=1}^N S_i \psi_i \text{ or } x = \Psi s \quad (2)$$

Where  $\Psi$  is the coefficient matrix of  $N \times 1$ , and  $S_i$  is the inner product  $S_i = \langle x, \psi_i \rangle = \psi_i^T x$ . The vectors  $x$  and  $s$  are equivalent representations of the same signal, but the expressions are different [5].  $x$  is in the time domain or space domain, and  $s$  is in the  $\Psi$  domain. Substituting formula (2) into formula (1), we get:

$$y = \Phi x = \Phi \Psi s = \Theta s \quad (3)$$

Among them,  $\Theta = \Phi \Psi, \Theta \in R^{M \times N}$  is called the CS information operator. Due to the observation dimension  $M \ll N$ , it is very difficult to solve the signal  $x$  from the  $M$  observations of  $y$ . Since  $s$  has only  $K$  non-zero coefficients in formula (3), this provides the possibility to solve  $x$ . Solve  $s$  by solving the inverse problem of equation (3), and then substitute  $s$  into equation (2) to obtain  $x$ . Therefore, the essence of the reconstruction problem of CS theory is how to reconstruct the original signal  $x$  quickly, accurately and stably under the condition of known measurement vector  $y$  and measurement matrix  $\Phi$ .

### 2.5.2 Modeling Method Based on Wavelet Tree Structure

Research has found that under the same sparsity and number of measurements, the subspace (SP) algorithm and the compressed sampling matching pursuit (CoSaMP) algorithm in the greedy algorithm are better than other algorithms in overall performance. This chapter proposes Mb-SP algorithm and Mb-CoSaMP algorithm based on wavelet tree structure model [6].

After wavelet transformation, the image naturally forms a quadtree structure of wavelet coefficients. Large coefficients corresponding to edges and textures and small coefficients of smooth parts are usually gathered on the branches of the tree. Specifically, if the coefficient under a certain scale is small, then the sub-coefficients of this coefficient are usually small, which shows that the wavelet coefficients have tree structure sparsity. The tree structure sparse signal with sparseness  $K$  is defined as:

$$\Gamma_K = \left\{ x = v_0 v + \sum_{i=0}^{1-1} \sum_{j=1}^{2^i} w_{i,j} \psi_{i,j} : w|_{\Omega^c} = 0, |\Omega| = K \right\} \quad (4)$$

From equation (4), it can be seen that the wavelet coefficients in  $\Omega$  form a connected subtree set, and the wavelet coefficients that do not belong to  $\Omega$  are approximately zero, that is,  $\Gamma_K$  is a tree structure sparse signal composed of wavelet coefficient subtree sets in  $\Omega$ , and Satisfy the sparsity as  $K$ . To achieve tree structure sparse signal  $\Gamma_K$  reconstruction, the best  $K$ -term tree structure sparse approximation needs to replace the ordinary  $K$ -term sparse approximation, that is, to solve the following optimization problem:

$$S(x, K) = \arg \min_{\bar{x} \in \Gamma_K} \|x - \bar{x}\|_2 \quad (5)$$

Using the compressed classification selection algorithm (CSSA) to solve equation (5). First calculate the absolute value of the average value of the wavelet coefficients of each subtree rooted at each node in the tree, and use the maximum value of the absolute value as the energy of the node (called this energy The largest node is the super node), and all the coefficients of the subtree corresponding to the super node are retained. The optimal subtree set is composed of these coefficients, so as to realize the idea of optimal tree structure [7].

Combine the modeling method based on the wavelet tree structure with the SP algorithm to form the Mb-SP algorithm. Mb-SP algorithm steps:

- (1) Initialization: the initial residual  $r_0 = y$ , the candidate vector  $\theta_0 = 0 \in R^N$ , the number of iterations is  $t_0$ , and the structured sparse estimation of the iteration variable  $t = 1$  is  $S$ .
- (2) Update index: Calculate  $\hat{\theta}_t = \Phi^* r_{t-1}$ , find the position  $\Lambda_t = \sup(\hat{\theta}_t|_K)$  of the  $K$  largest elements in  $\hat{\theta}_t$ , and the new index  $\bar{\Lambda}_t = \Lambda_t \cup \sup(\theta_{t-1})$ .
- (3) Update candidate vector: Calculate  $\bar{\theta}_t = \Phi_{\bar{\Lambda}_t} y$ , new candidate vector  $\theta_t = \bar{\theta}_t|_K$ .
- (4) Update the residual:  $r_t = y - \Phi \theta_t$ .
- (5) Update the estimated signal:  $\begin{cases} x = \Psi \theta_t \\ x_t = S(x, K) \end{cases}$ .
- (6) Add 1 to the number of iterations to verify the conditions for stopping the iteration. If  $t < t_0$ , return to step (2); otherwise, go to step (7).
- (7) Output the reconstructed signal  $x_t$ .

Similarly, the Mb-CoSaMP algorithm is obtained by combining the CoSaMP algorithm and the modeling method of the wavelet tree structure. Aiming at the shortcomings of traditional discrete wavelets that do not have translation invariance and poor direction selectivity, King

Shury et al. proposed to use two independent wavelet transforms in parallel to implement complex wavelet transforms on the same data. The two-dimensional dual-tree complex wavelet transform is shown in Figure 1. It contains two parallel wavelet trees, where the filter bank of tree a represents the real part of the complex wavelet transform, and the filter bank of tree b represents the imaginary part of the complex wavelet transform. It is easy to know that it is composed of four parallel 2-dimensional discrete wavelet transforms, which can obtain subband information in 6 directions of the image. Among them, the first two 2-dimensional discrete wavelet transforms produce real parts in 6 directions, and the last two 2-dimensional discrete wavelet transforms produce imaginary parts in 6 directions. No matter how deep the decomposition tree of the two-dimensional double-tree complex wavelet transform is, the overall the data redundancy is 4:1, so that the 6 high-frequency detail parts in each layer of decomposition correspond to 6 different direction information in the image. Therefore, the two-dimensional dual-tree complex wavelet transform has better direction selectivity.

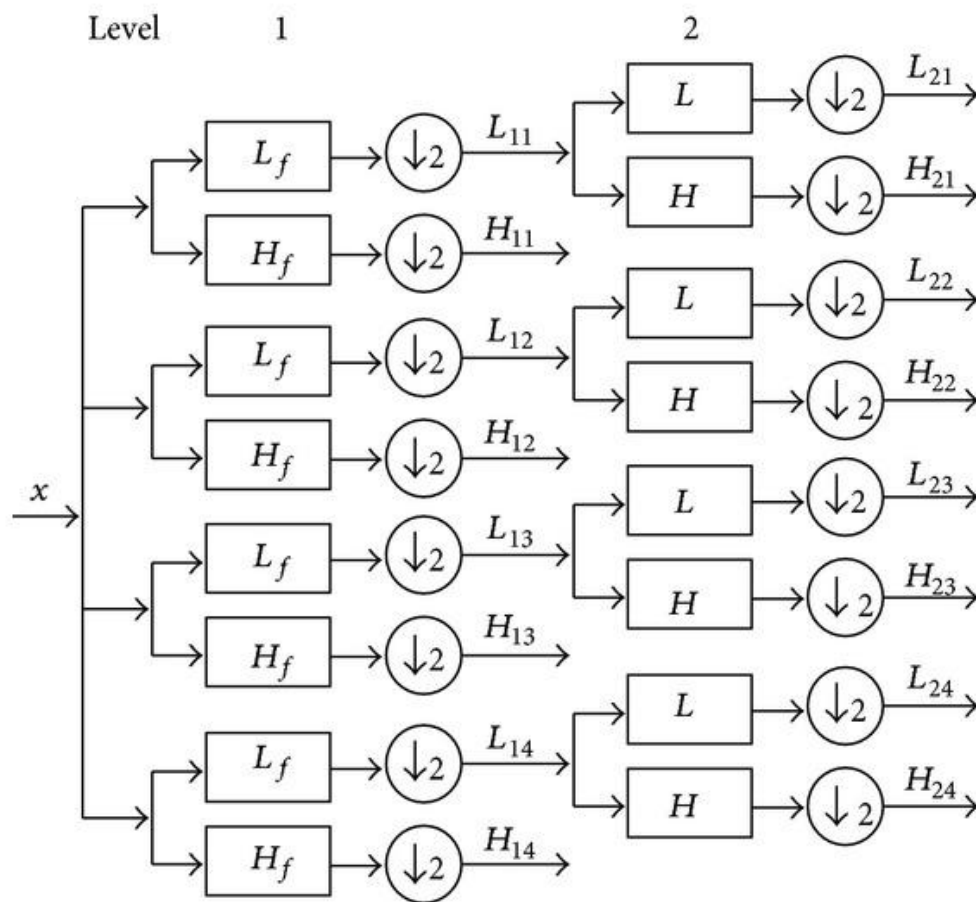


Fig 1: Two-dimensional dual-tree complex wavelet transform

## 2.6 Statistical Methods



Use SPSS17.0 software package to process and analyze the data. Enumeration data is expressed by percentage (%), classification data is expressed by chi-square test, normal distribution is expressed by t test, and the result is expressed by mean  $\pm$  standard deviation; non-normal distribution is expressed by rank sum test, and the result is expressed by median (M), Interquartile range (Q) representation.  $P < 0.05$  means the difference is statistically significant.

### III. RESULTS

General information of the two groups of patients receiving protective restraint: see TABLE III and Figure 2.

**TABLE III. General information of the two groups of patients receiving protective restraint**

Group	Number of protections	Protection times	Minimum protection time (h)
test group	71	107	0.25
Control group	92	150	0.5
Group	Maximum protection duration (h)	Total protection time (h)	Average protection time (h)
test group	29.5	518.2	4.84
Control group	22	686.34	4.58





Fig 2: General data of the two groups of patients receiving protective restraint

Comparison of the protection rate of the two groups of patients: see TABLE IV and Figure 3. The use rate of protective restraint in psychiatric patients is relatively high, the patient's compliance is poor, and the use rate of protective restraint is relatively high during the active period of mental illness. The results showed that the protection rate of the experimental group was lower than that of the control group, and the difference between the two groups was statistically significant ( $P < 0.05$ ).

**TABLE IV. Comparison of the protection rate of the two groups of patients**

Group	Number of cases	Number of people protected	percentage (%)
test group	469	71	15.14
Control group	449	92	20.49

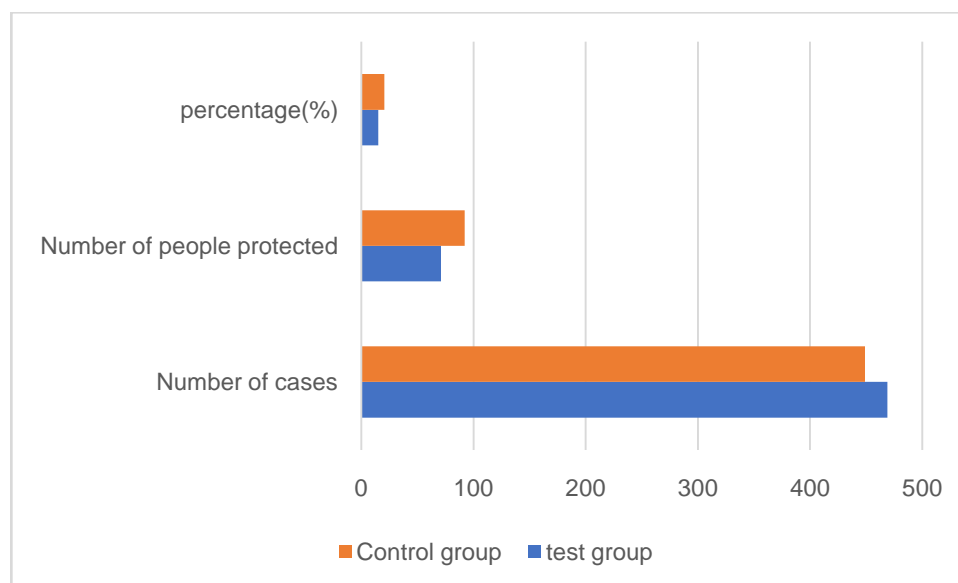


Fig 3: Comparison of the protection rate of the two groups of patients

Comparison of the duration of protective restraint between the two groups: see TABLE V and Figure 4. The average duration of protective restraint is 6.2 h, of which the average duration of daytime restraint is 3.69 h, and the average duration of night restraint is 9.83 h. The duration of night restraint in 33 patients was more than 10 hours, accounting for 28.95% of the total restraint cases. The results suggest that night restraint has the nature of preventive protection. The results showed that there was no significant difference in the total duration of protective restraint between the two groups ( $P > 0.05$ ); the protection time of the experimental group's day shift was lower than that of the control group, and the difference was statistically

significant ( $P < 0.05$ ); the experimental group The protection time of night shift was lower than that of the control group, the difference was statistically significant ( $P < 0.05$ ).

**TABLE V. Comparison of the duration of protective restraint between the two groups**

Group	Number of cases	Total time protected	Day shift protection time	Night shift protection time
test group	469	3.0 (1.25-6.625)	0.125 (0-1.250)	12.0 (0-6.0)
Control group	449	3.0 (2.0-6.50)	1.0 (0-3.0)	0.85 (0-4.0)
Z		0.87	3.152	2.459
P		0.385	0.002	0.014

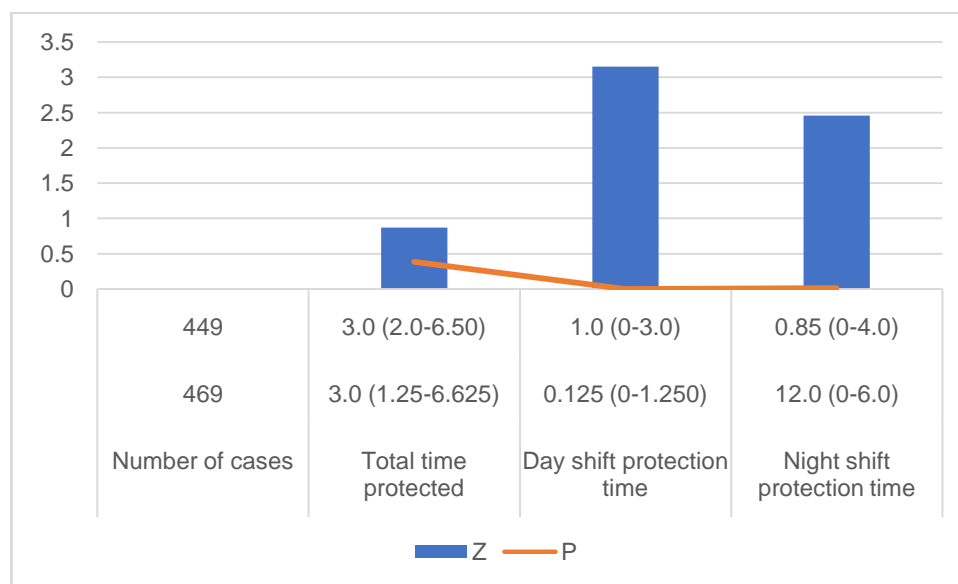


Fig 4: Comparison of the duration of protective restraint between the two groups

## IV. DISCUSSION

Psychiatric patients are subject to damage, injury, self-injury, suicide, non-cooperation with treatment, etc. under the control of mental symptoms. Therefore, it is necessary to restrain the patient's body through protective restraint to protect the patient, surrounding personnel and the environment. From damage. Protective restraint is a special nursing operation in the psychiatric department. It is not a simple binding and has certain medical risks. Protective restraint is of great value for ensuring the safety of patients' lives and ensuring the smooth progress of treatment. Although it is a direct and simple intervention, it involves the patient's physiology, psychology, law and ethics, and is somewhat complicated. Sex. In China, the tools of protective

restraint are mainly traditional cotton restraint belts, which are simple to make, but the effect is poor [8]. In actual clinical work, in order to improve the effectiveness and safety of the restraint belt and to ensure the comfort of the patient, it is necessary to continuously improve the restraint belt. At present, domestic improved restraint belts mainly include three types of wrist integrated protective restraint belts, three-piece restraint appliances, and new shoulder-chest restraint belts. Others include restraint gloves, restraint chairs, restraint pants, and large restraints. The most commonly used in Hong Kong is the German magnetic buckle restraint tool, which is scientific, practical, effective and comfortable. Clinically, different restraint tools can be used individually or in combination according to the specific conditions of the patient, mainly based on limb restraints, and shoulder and limb restraints are shared. In this study, it was found that most of the patients admitted to our department were young and middle-aged men, most of whom were patients with schizophrenia. Studies have suggested that the incidence of aggressive behavior in male patients with psychosis is three times that of female patients, and the incidence of aggressive behavior in schizophrenia patients is as high as 49.38% to 80%. Some scholars believe that age is negatively correlated with the occurrence of aggressive behavior, that is, young mentality. The patient has more obvious violent aggressive behavior. The main reason for restraining patients is the occurrence of aggressive behavior. In the past, the restraint rate of patients was high and the time was long. However, restricting the patient to a certain range for a long time cannot move freely, which has a greater impact on the patient's body and psychology, and is prone to pressure sores, disuse muscular atrophy, venous thrombosis, nerve damage, urinary tract infection, etc. In addition, long-term restraint on patients sometimes creates a bad psychological shadow for patients, causing them to have hostile emotions towards medical staff, and then unable to actively cooperate with treatment. Protective restraints are mostly mandatory measures against the wishes of patients, and some patients' families often do not understand protective restraints. As a result, there is a greater misunderstanding between nurses and patients and even disputes. How to improve the effectiveness and safety of restricted nursing is the key to improving the quality of restricted nursing. Effectively reducing the protection rate and shortening the protection time of patients with mental disorders have become urgent problems in psychiatry.

Neurological patients must strictly grasp the indications to use protective restraints, follow certain medical care procedures, and cannot abuse them. The "Shanghai Mental Health Regulations" stipulates that temporary protective safety measures for mental patients who are hospitalized for accident prevention and medical needs must be determined by psychiatric practitioners, recorded in the course of the disease and explained. Relieve in time when the patient's condition is stable. When the situation is urgent, the nursing staff can take restraint measures first, and promptly notify the doctor to issue a medical order after it is over. The nursing staff cannot release the restraint without authorization, and the consent of the psychiatrist can be carried out. Psychiatric patients also have the right to know, so before or

after protective measures are taken, they must communicate with the patient's family in a timely manner to obtain the patient's consent and sign [9].

The nursing content of protective restraint for psychiatric patients includes: (1) Observation and nursing: closely observe the skin color, temperature, blood circulation of the restrained part of the patient, and the tightness of the protective belt. When the patient is asleep or quiet, the protective belt can be properly loosened according to the doctor's advice, and only the necessary restraint parts can be kept. With the doctor's permission and without affecting the treatment, the patient's restraint posture can be changed frequently. Assign a dedicated person to take care of the patient, closely observe the patient's condition, and release the restraint belt regularly. For patients who have been in bed for a long time, massage the compressed area or help the patient to turn over regularly. Keep the bed clean, tidy and comfortable, observe whether the patient's skin is abraded, compressed, etc. It is strictly forbidden to make rough damage to the patient's skin and prevent bedsores; (2) Ensure the intake of food and water: when the patient's condition allows, Under the supervision of a special person, eat according to the patient's condition, try to keep the patient in a sitting position, patients who are relieved can loosen the protective belt to allow them to eat autonomously, and patients who take passively should feed in small mouths to prevent choking while using language Persuade and encourage patients to ensure that patients cooperate in eating. For patients whose persuasion is useless, they are treated acutely according to the doctor's advice. Water intake is carried out according to the patient's condition, and the intake is guaranteed to be around 2500 mL/d. For patients who are physically exhausted, excited and agitated, water should be added in time; (3) Communication and exchange: the nursing staff will treat the patient during the restraint period. Observe thinking, language, etc., strengthen communication through language, understand the patient's perception of surrounding food, understand whether the mental symptoms such as hallucinations and delusions have been reduced, understand whether the degree of hostility has decreased, etc., and timely feedback to the doctor for help Determine whether to end the constraint. Nursing staff should pay attention to using comforting, polite and encouraging language when communicating with patients, and use some communication skills to ensure the cooperation of patients, gain trust, and prohibit arguing with patients. After the patient's symptoms are relieved and the mood is calm, strengthen the communication with the patient to help the patient regain insight and face the disease; (4) Medication care: For patients who need treatment and medication to take protective restraints, they must be patient Obtain trust and cooperation in a timely manner. When taking the medicine, sit in a sitting position. If the amount of medicine is large, you can take a small amount several times to prevent aspiration and coughing. After taking the medicine, check to prevent the patient from hiding the medicine. When the patient refuses treatment and takes the medicine, doctors and nursing staff to take corresponding measures to deal with. After taking the medicine, the nursing staff closely observe the patient's symptoms and the occurrence of adverse reactions. For patients who are unable to complain, they should closely monitor their

vital signs and communicate with the doctor in time; (5) Life care: The purpose of life care and basic care is to Promote patient comfort. The focus of life care is oral care. Secondly, because the patient is inactive for a long time, it is prone to urinary retention and constipation. At this time, the patient's defecation situation should be closely recorded. Especially for patients who cannot communicate, effective measures should be taken to prevent complications. occur. For patients with poor diet and long restraint time, nursing staff should communicate more, accompany them throughout the process, and move slowly when getting up for the first time to prevent orthostatic hypotension and falls. When the protective belt is used, it is necessary to make observation records and handover work to prevent it from becoming a tool for patients to injure, self-injure or commit suicide. The patient should be in an isolation room when restrained, and adequate nutrition, water supply and related nursing work should be done to prevent it from causing harm to others.

At present, the application of protective restraint measures on patients is more common in clinical practice, and the accompanying problems also follow. It can be seen from the results of this study that compared with the structured intervention group, the protection rate of patients in the traditional method group is higher. In clinical work, if the nurse fails to correctly assess the risk of the patient before imposing protective restraint on the patient, the patient's protection rate is higher. According to foreign reports, in the treatment of 36690 patients with mental illness, 9.3% of patients experienced mandatory measures. The average number of mandatory measures was 5.4 times, with an average time of 9.7 hours each time, and the average total time of using mandatory measures was 50.6 hours. When traditional methods are used to protect patients, the protection time of patients in day shift and night shift is longer than that of the structured intervention group. After the patient is restrained, if the nursing staff cannot dynamically observe the patient's condition changes, and the protection is not released in time, the patient will be protected for a long time. In this study, a structured intervention model was strictly adopted. Before implementing protective restraints on the patients, the risk level of the patients was first evaluated, the symptoms were accurately determined, and the protection was implemented after meeting the restraint standards. Therefore, the protection rate of patients has a certain degree. decline. After protecting the patient, a dedicated nurse observes the patient's symptoms and mood changes every 15 minutes, dynamically evaluates the patient's state, and releases the protection in time for the patient after meeting the release criteria, thereby shortening the patient's protection time. In the results of this study, the average protection time of the experimental group was longer, mainly because the study object had a patient who implemented protective restraint for 45 hours. The patient was hostile to others when admitted to the hospital, impulsive behavior was uncontrollable, and the patient was physically strong, the protection is enforced under the coercion of many people. During the weekend, the manpower on duty is weak. After the protection is lifted, the patient is at risk of recurring impulsive behavior. During the period of protective restraint on patients, the nurses of each shift

take over and dynamically observe the patient's physical condition, mental symptoms and emotional changes, and regularly assist the patient in eating, drinking, and toileting, and reduce in time as the patient's symptoms and emotions stabilize. The number of protective belts is to loosen the limb protective belts in turns every 2 hours. After the patient is in a stable state, the protective restraints are released for the patient in time.

## V. CONCLUSION

In clinical work, some patients with mental illnesses, under the control of psychiatric symptoms such as hallucinations and delusions, often have a clear target, meticulous planning before the attack, and sudden aggressive behavior, which also increases the difficulty of predicting and intervening aggressive behavior. Nurses act as contact with patients the most professionals are the most likely to be the main targets of attack. 90% of psychiatric nurses have been attacked at least once in their professional career. Therefore, it is essential to train nurses to correctly assess the risk of attack. In the study, it was found that the use of structured intervention methods to implement protective restraints on patients and implement unified protection standards has significantly shortened the protection time of day shifts and night shifts. Therefore, if it can improve the professionalism of nursing staff in protecting patients Knowledge and the ability to correctly assess the risk of patients, and rational use of structured intervention methods, there is still a lot of room for reduction in the duration of protective restraints on patients, which is of great significance for reducing the adverse effects of restraining patients.

## ACKNOWLEDGEMENTS

Formulation and analysis of curative effect of individualized treatment for severe mental illness by gene detection technology (No. WJ2019F026).

## REFERENCES

- [1] Chaplin, R., Farquharson, L., Clapp, M., & Crawford, M., (2015). Comparison of access, outcomes and experiences of older adults and working age adults in psychological therapy. *International Journal of Geriatric Psychiatry*, 30(2), 178-184.
- [2] Oster, C., Gerace, A., Thomson, D., & Muir-Cochrane, E., (2016). Seclusion and restraint use in adult inpatient mental health care: an Australian perspective. *Collegian*, 23(2), 183-190.
- [3] Smart, A., (2019). Thumigerchiara and singerp. n. (eds), *mental illness in ancient medicine: from celsus to paul of aegina*, studies in ancient medicine 50 (Leiden and Boston: Brill, 2018), pp. xv, 479, €143,00, hardback, isbn: 9789004362727. *Medical History*, 63(4), 515-517.

- [4] Elena, S., Tracy, S., Kelly, T., Douglas, M., Dawn, J., &Edny, B., et al., (2015). Preventing obesity in the military community (pomc): the development of a clinical trials research network. *International Journal of Environmental Research and Public Health*, 12(2), 1174-1195.
- [5] Mckenna, B., Mcevedy, S., Kelly, K., Long, B., Anderson, J., & Dalzell, E., et al., (2017). Association of methamphetamine use and restrictive interventions in an acute adult inpatient mental health unit: a retrospective cohort study. *International Journal of Mental Health Nursing*, 26(1), 49.
- [6] Lampure, A., Schlich, P., Deglaire, A., Castetbon, K., Peneau, S., &Hercberg, S., et al., (2015). Socio-demographic, psychological, and lifestyle characteristics are associated with a liking for salty and sweet tastes in french adults. *Journal of Nutrition*, 145(3), 587-94.
- [7] Ilgen, M. A., Zivin, K., Mccammon, R. J., &Valenstein, M., (2017). Mental illness, previous suicidality, and access to guns in the united states. *Psychiatric Services*, 59(2), 198.
- [8] Rozel, J. S., & Mulvey, E. P., (2017). The link between mental illness and firearm violence: implications for social policy and clinical practice. *Annual Review of Clinical Psychology*, 13(1), 445.
- [9] Gold, P. B., Macias, C., &Rodican, C. F., (2016). Does competitive work improve quality of life for adults with severe mental illness? evidence from a randomized trial of supported employment. *Journal of Behavioral Health Services & Research*, 43(2), 155-171.