Group Therapy for Schizophrenia: Research Progress and Comparison between Global and Chinese Studies

Kexin Fan1,*, Xinyanyan Gao2, and Jiayue Zhu3

1Department of Psychology, Chengdu Medical College, Chengdu, 610000, China
2BeijingRiTan senior high school, Beijing, 100000, China
3School of Life Sciences, Peking University, Beijing, 100000, China

Abstract. Group therapy is an effective form of psychotherapy. It is usually organised and led by a professional psychotherapist. In group therapy, a group of people come together to explore and work with each other's problems. The method of group therapy for treating schizophrenia is gradually being widely used in China and foreign countries. The present study summarizes the advantages of group therapy for treating schizophrenia, reviews the existing methods of group therapy for treating schizophrenia in China and foreign countries, analyzes the advantages and disadvantages of different treatment methods in group therapy, and summarizes the types and usage proportions of group therapy for treating schizophrenia in China and foreign countries. At present, group therapy for treating schizophrenia still has certain limitations both in China and foreign countries. The present study suggest that China and foreign countries can learn from each other and make group therapy more effective in treating schizophrenia.

1 Introduction

Schizophrenia is a debilitating illness which involves three groups of symptoms, which is positive, negative and cognitive, and has major public health implications. There are plenty of research support that there is up to 1% of people are affected by schizophrenia. Schizophrenia can highly affect daily life, the most serious aspects are high frequency of relapse, clear reduction of social activity, and lost almost all work participation, finally causes marked impairment of quality of life [1]. Also, there is no clear research study on path-mechanism that get a clear result of it, which caused the situation that current antipsychotics gain limitation treating patients [2]. Actually the antipsychotics are not universally effective. There are research support that the positive and negative symptoms are related to dopamine, and past antipsychotics are developed to trigger resolving and decreasing dopamine to improve the positive symptoms, but there is little drugs that can effectively adjust the central nervous system to release dopamine to a proper standard [3]. Not only did the antipsychotics ameliorate a few on negative symptoms and cognitive symptoms, but also they can have serious side effect that impact compliance [4]. As mentioned before, there are plenty limitation on treatment through antipsychotics, and non-medicine treatment have been put more on as academic and technology more and more mature, there are many non-medicine treatment has been put forward. In non-medicine treatment, numerous previous studies have demonstrated group therapy treatment towards schizophrenia, and group therapy treatment covered CBT, art therapy, and social psychology etc. The aim of

* Corresponding author: kokoKexinFan@ldy.edu.rs

the review is to structure those groups therapy treatment of schizophrenia, and collating previous research to find out what role did group therapy treatment play in the treatment of schizophrenia. After extensive search and study, the review will provide a bird’s eye review of the improvement of group therapy treatment in recent years, and the advantage it gained, also, the review will conclude the comparison of academic improvement between globe and China. Numerous previous studies have demonstrated various group therapy treatment towards schizophrenia.

2 General view of schizophrenia and group therapy treatment

2.1 Schizophrenia

Schizophrenia is a serious mental issue that can cause numerous problems in daily lives of patients. Main symptoms of schizophrenia can be divided into two groups which are positive symptoms and negative symptoms. Detail symptoms of positive one are hallucination, illusion, flight of thoughts, and retardation of thoughts. Patients always got some slain delusion of cant help thinking about their families and friends are trying to threaten and finally killing them. Also they might got some broken words and sentences, which will make the people around them hard to acknowledge the meaning of the sentences, and themselves may lose the connection with other people and ultimately the whole society. Also, the life-time prevalence of schizophrenia is estimated at 0.7% [5].
2.2 Development of group therapy treatment

Group therapy was recognized as a treatment officially by American psychological association by 2018. After that, group therapy treatment is defined as a professional treatment which can be used in clinical situation to treat patients with different mental disorder and cancer, and the psychotherapist who use group therapy treatment need to be trained and get the permission of using it [6]. And in recent 30 years, the field is going through a dramatically expand. 30 years ago, there is research that group therapy treatment can effectively improve life quality of breast cancer and even prolong life [7]. After that, researchers have paying more attention on what result can this kind of psychotherapy lead to, and also how does group therapy affect patients on both mental and physical health. In 2013, Barlow raised up a model explained the question, in the model, general group therapy treatment is divided into three main parts, therapeutic group, psychoeducational group and leaderless groups. therapeutic group can be adjust based on need, it can be manual and time limited, and also it can be principle based. psychoeducational group can be helpful to cancer and bipolar patients, and help them to build up positive belief through CBT [8], leaderless groups mainly be applied to provide support and promote self-help.

2.3 Recent application of group therapy and its advantages

There is evidence showed that group therapy treatment played important role in clinical recover of different mental disorders and, such as depression disorder and bipolar disorder [9]. And group therapy treatment is also be researched to be effective on different emotions and self-awareness, as the influence of covid 19, group therapy treatment has now improved to be both face to face and online, also it provides method of interaction between group members to chat with each other as an intervention. Group therapy treatment is a treatment that expect to provide patients with positive information and psychoeducation, and group therapy treatment also provide support to encourage patients for self-expression and self-exploration. The using of Group therapy in clinical situation has grown in recent years because of the result it gave in recovery of different disorders. The convenience and the growth of awareness in whole society can also be an important reason why psychotherapy showed more preference these days towards it [10].

3. Research on group therapy

3.1 Group cognitive behavioral therapy (Group CBT)

Cognitive behavioral therapy is a classic psychotherapy method, which is widely used in anxiety, depression, obsessive-compulsive disorder and other diseases. Cognitive behavioral therapy believes that an individual's perception of events, others, and oneself determines his mood and further affects his actions. By helping individuals reexamine the connection between their emotions and thinking patterns, therapists can help individuals reverse bad cognition, thus relieving negative emotions and restoring social functions [11].

In the treatment of schizophrenia, cognitive behavioral therapy is also a common method. Studies have shown that CBT reduces the risk of hospitalization [11], and alleviates delusions [12]. Although most CBT treatments are still carried out in the form of individuals, CBT in the form of groups has more advantages in cost. In 2022, guian et al.’s review study, which included 1900 participants, compared the effect of CBT group therapy with that of standard therapy or other psychosocial interventions. The study believes that there is no obvious difference in the early release of the study, service use and general quality of life, but it has more advantages in the overall mental state and global functioning score [13]. In terms of symptom improvement, Lecomte et al. In 2012 compared group cognitive behavioral therapy (CBTP) with social skills training at the level of symptom management, and CBTP with a wait list control group at the level of early psychosis. The study found that one year after treatment, the social support and insight of patients in CBTP group were significantly improved, the negative symptoms were reduced, but the positive symptoms returned to the pre-treatment level [14]. In addition, different treatment methods using CBT have different therapeutic effects. SEVI et al.’s article in 2020 compared the effect differences of two kinds of CBT treatment methods. Researchers additionally treated the two groups of patients with CBT and cope-CBT on the basis of conventional treatment. The results showed that compared with the implementation of conventional treatment only, the additional addition of CBT was beneficial to alleviate patients' hallucinations, and the additional addition of cope-CBT was beneficial to alleviate patients' delusions. In the follow-up after treatment and 3 months later, no matter which additional CBT is added, it can achieve better results [15].

3.2 Group social skill training

The final manifestation of cure includes the recovery of physiological, psychological and social functions. Social skills training aims to help patients acquire the skills of disease management and independent life. The specific contents include accurate understanding of others' emotions, appropriate expression of their own emotions, renting a house, finding a job and other basic social functions.

Most social skills training is carried out in the form of groups. The reason is that in addition to cost considerations, participants in group therapy can also become mutual role models and supervisors to learn from each other how to deal with problems in real life [16]. in 2012, a study involving 692 participants in 19
studies showed that social cognitive training significantly improved patients' facial affect recognition (FAR), and slightly improved patients' ability to understand other people's different thoughts, knowledge and feelings (theory of mind, ToM) [17]. An empirical study in 2021 showed that group social skills training is conducive to improving patients' social skills and social isolation [18].

However, group social skills training can only improve some symptoms of patients with schizophrenia, and it has no significant improvement on social cue perception, attribution style, positive and negative symptoms [16]. Therefore, this method should be combined with other treatments of schizophrenia to achieve comprehensive treatment.

### 3.3 Group art therapy

Art therapy is a non-verbal psychotherapy method based on art. It has a variety of ways to carry out, including music, dance, creative writing, etc. in addition to traditional painting. The advantages of art therapy over traditional psychotherapy are not limited by language ability, rich and diverse ways of carrying out art therapy. In 2019, a literature meta-analysis of 133 participants in 9 RCTs found that art therapy can effectively reduce the negative symptoms of schizophrenia patients, especially in women and young people, but the improvement of positive symptoms is not obvious [19]. Therefore, art therapy is mainly used as an adjuvant treatment for schizophrenia. For example, using group music therapy to reduce negative symptoms and enhance social skills can help patients better adapt to the social environment after discharge [20].

Most art therapy is also carried out in groups. In group music therapy, there are two methods: active structured music making (ASMM) and passive music listening (PML). Research shows that both active music creation and passive music reception can improve the enthusiasm of therapeutic participation and social interest and participation [21]. In addition, functional magnetic resonance imaging (fMRI) studies have found the neural mechanism of the positive impact of music intervention on schizophrenia. The study found that compared with only drug treatment, the functional circuits of the right MTG related to emotion and sensorimotor function in the brain of patients treated with music were improved [22]. In group art therapy, patients are encouraged to use various hand-made materials to express themselves freely, and their overall mental status is improved [23]. In addition, compared with non-verbal art therapy, recent studies have also combined creative writing with schizophrenia treatment. Patients use poetic and creative language to express their hearts in a safe environment, so as to assist treatment [24].

### 3.4 Group psycho-education

The goal of psychological education is to improve patients' understanding and knowledge of schizophrenia, establish disease management skills and improve treatment compliance [25]. At present, many group psychological education are carried out in combination with mindfulness therapy. The core of mindfulness therapy is to enable patients to consciously and non-judgmentally focus on their current internal feelings, so as to alleviate emotional distress and physical pain. Research shows that mindfulness education programs can effectively improve the psychosocial function of patients with schizophrenia and reduce disease recurrence [26]. Studies using MRI have shown that patients who participate in mindfulness education projects have changes in gray matter volume and density in brain regions related to attention and emotion regulation, thereby having a long-term positive impact on patients [27].

To sum up, the research on the use of group therapy in the treatment of schizophrenia mainly involves CBT, social skills training, art therapy and psychological education. In addition, this study also found some special methods to treat the specific symptoms of patients with fine score, such as using group perceptual stimulation therapy to reduce patients' violent behavior, using group narrative enhancement and cognitive therapy to deal with patients' self-disgust [28, 29].

### 4 The pros and cons of group therapy

After consulting the above literature, the review summarized the advantages and disadvantages of group therapy in the treatment of schizophrenia.

The form of group therapy itself endows group therapy with the advantages of low cost, online and offline development, and social attributes. However, the characteristic of social interaction makes group therapy of great significance in improving the negative symptoms of schizophrenia (including lack of speech, social withdrawal, emotional retardation and social function defects). It is worth emphasizing that negative symptoms are more resistant to drugs than positive symptoms, and are highly related to low social function and low quality of life. Therefore, various group treatment methods need to be combined with traditional drug treatment. In the evaluation of the effectiveness of group therapy, drugs combined with group therapy are usually compared with drug therapy alone.

In terms of disadvantages, group therapy generally did not significantly improve positive symptoms (auditory hallucinations, delusions). In addition, there may be a potential risk of deepening patients' wrong thinking patterns, and it is difficult to carry out treatment for patients' personalized problems. To answer the question of how group therapy should participate in which stage of schizophrenia, more comprehensive and in-depth systematic research is still needed.
5 Comparison of group treatment of schizophrenia between China and foreign countries

Group therapy is widely used in the treatment of schizophrenia worldwide, but there are similarities and differences between Chinese and foreign countries on the basis of group therapy. After reviewing a number of literatures, it was found that group art therapy and group cognitive behavioral therapy were adopted at China and abroad [20]. As mentioned above (examples of foreign treatment methods), group art therapy is divided into a variety of art forms, such as music, writing, etc., among which group multi-type art therapy is the first to be applied in China. The method is as follows: first, a number of people with schizophrenia are gathered, followed by a period of warm-up activities, followed by different types of art therapy such as listening to music, movie appreciation, calligraphy training, participating in team sports activities, etc., and finally everyone shares and discusses the harvest of the activity and the change of mood. Group Diversified Art Therapy integrates a variety of art therapy methods into one therapy, in which the therapist can flexibly adjust the time and program according to the patient's physical health, interests and hobbies. According to the research findings, compared with patients who only receive conventional drug treatment, this treatment method can give patients a better sense of belonging and happiness from each other, and enhance patients' self-confidence, so that they can better integrate into normal social life after treatment [30].

In addition to group art therapy, group cognitive behavioral therapy is also used in both China and abroad. Group therapy can help patients with schizophrenia alleviate auditory hallucinations symptoms. The experiment compared the PSYRATS-AH (Psychiatric Symptom Rating Scale-Auditory Hallucinations Subscale) scores between the two groups before and after the intervention [31]. The results showed that the total score of PSYRATS-AH and belief in the origin of sound, the number of disturbing sounds, the degree of distress, the impact on life, and the control scores of sound in group cognitive behavioral therapy were lower than those in the control group [32]. In addition, structured group therapy is one of the representatives of group cognitive behavioral therapy, especially in China, which is used to treat schizophrenia. The main approach of structured group therapy is to allow the patient and therapist to communicate before the treatment to develop a clear treatment plan, so that the patient can have a voice, a sense of participation, and a sense of self-redemption. After communication, a plan will be roughly generated, for example: first, in a completely open environment with a large group outdoors, through outdoor walking, dancing, and group painting. Let the patient lay down the armor in its natural state and integrate into the group. Through the fun sports meeting, enhance the cohesion of the patient's small group, stimulate the sense of teamwork, and pass on the requirements and norms of group activities to everyone under the condition that the patient is completely relaxed and has no psychological defense, so that they are full of expectations for each activity and actively complete each homework, so that the patients can consolidate their feelings and understanding in the activities and deepen their understanding. The whole process is guided by pre-designed treatment ideas, leading patients to start a journey of exploration step by step, helping to overcome avoidance and withdrawal behaviors, so as to help patients recover faster [33].

Focus group therapy is also used in the treatment of schizophrenia in China, and according to literature search, there are few applications of focus group therapy in the treatment of schizophrenia abroad, and more often it is used to auxiliary cancer treatment. However, some therapists in China focus on finding the symptoms and deficiencies of individual cases and setting them as the focus of treatment, such as patients emphasizing positive thinking in this area and attaching importance to changes in cognition and action; Problem solving comes from the client himself, treatment goals are set by the therapist and the client, and behavior-oriented goals are descriptive, measurable, and executable. As a psychotherapy model steeped in the postmodern spirit, cooperation and communication are the key to solving problems, starting from a positive meaning, emphasizing their successes rather than failures [34].

In general, the use of group therapy in the treatment of schizophrenia is gradually being promoted worldwide. At present, the trend of the main group treatment programs is similar, but due to the influence of religious beliefs, historical traditions, national openness and other factors, countries have improved on the basis of the original treatment programs, such as group diversified art therapy in China and mindfulness in European countries. Psychiatric researchers in various countries are also continuing to study group therapy and the curative aid of schizophrenia.

6 Conclusion

Schizophrenia, a complex mental health condition, presents a significant challenge in treatment, with pharmaceutical interventions serving as the primary approach. However, the emergence of group therapy offers promising alternatives. Through a review of global and Chinese researches, various group therapy modalities, including Cognitive Behavioral Therapy (CBT), art therapy, and so on, have demonstrated efficacy, particularly in addressing negative symptoms, at a relatively low cost. Many of these methods are being tailored to diverse cultural contexts, showcasing both mainstream practices and innovative adaptations. Moreover, the integration of group therapy with pharmaceutical treatment underscores the importance of exploring synergistic approaches beyond mere comparative analysis. Moving forward, attention should be directed towards optimizing the integration of diverse treatment modalities to enhance the holistic care of individuals with schizophrenia.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.
References