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## Original Article

# Using psychodrama to relieve social barriers in an autistic child: A case study and literature review

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## ABSTRACT

**Objective:** To review and update the evidence for the effect of psychodrama for children with autism, and evaluate the effect of psychodrama on an autistic child with severe social barriers, using the theory of mind and psychodrama methodology as the analytical frameworks.

**Methods:** A 5 year-old boy, the research object, was diagnosed as severe autism using behavior observation and autism screening tools, with an DSM-V criteria. Autism symptom severity was usually measured by Childhood Autism Rating Scale (CARS) and Autism Behavior Checklist (ABC) in research of autism. In this study, the autistic boy accepted psychodrama training and was measured with CARS before and after the entire training program. The ABC was adopted to evaluate him after each intervention program. Meanwhile the entire training process was recorded. The evaluation criterion consists of four aspects including eye contact, following instructions, focusing attention and imitation ability. Finally, all live records and changes presented in volume tables were analyzed.

**Results:** The patient's social barriers were relieved at the end of the third month of the training program. The CARS data shows a shift from the severe to moderate level of autism.

**Conclusions:** It was possible for autistic children to relieve social barriers by implementing psychodrama training, then to improve the social cognitive ability and enhance the social function of the autistic children. These results provided basic Clinical implications for exploring a new intervention technique to reduce autistic symptom severity.

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## 1. Introduction

Autism is a kind of extensive developmental disorder; its core symptoms include social barriers, narrow interests and stereotyped behaviors. This kind of disease, resulting from nerve

dysfunction, tends to appear in early childhood, generally around the age of 2 [1–3]. Autism was generally considered to be a lifelong condition. However, recent research demonstrated that, with the help of various interventions, some patients proved to lose their symptoms and the autistic diagnosis as they grew up [4]. Namely, the intervention in

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social function is of far-reaching significance for autistic children.

Theory of mind (often abbreviated as “TOM”) is the ability to attribute mental states—beliefs, intents, desires, pretending, knowledge, etc. to oneself and others and to understand that others have beliefs, desires, and intentions which are different from themselves [5]. In 1981, Simon Baron-Cohen identified the infant's understanding of attention in others, a social skill found by 7–9 months of age, as a “critical precursor” to the development of TOM [6]. In 1985, together with peers, he published a research article suggested that children with autism did not employ a TOM [7]. Individuals who experience a theory of mind deficit have difficulty determining the intentions of others, lack understanding of how their behavior affects others, and have a tough time with social reciprocity. This deficit is caused by their specific cognitive defects stemming from the executive function defects in the brain's frontal lobes, rather than general learning difficulty [8,9].

Psychodrama is a therapeutic discipline, which uses action methods, role training, and group dynamics to facilitate a constructive change in the lives of participants [10,11]. Developed by Jacob L. Moreno, psychodrama includes elements of theater, which is often conducted on a stage where props could be used, and focuses principally on a single participant, known as the protagonist [12]. Protagonists investigate and gain insight into their lives by interacting with the other actors and the leader, known as the director. This is done by using specific techniques, including mirroring, soliloquy, role-playing and role reversal. Psychodrama can be used in a variety of clinical and community-based settings. Combined with cognitive behavioral intervention, the psychodrama process in behavior training can contribute greatly to promote the social cognitive ability [13]. Moreover, TOM is an effective social cognitive instrument, which enables children to adapt to the social environment more effectively and is the foundation of individual to exist in society. Therefore, psychodrama intervention could be relied on to strengthen the

TOM ability and finally improve social skills of autistic children. It is generally believed that the TOM ability of normal children can reach a relatively mature state at the age of 4. Namely, 4-year-old children can understand the behavior of others according to one's wishes, beliefs, etc. [14–16]. This case study demonstrated how the psychodrama intervention was implemented on a 5 year-old boy with autism and relieved his social barriers.

## 2. Methods

### 2.1. Study design

An autistic child was selected randomly as a research object and accepted psychodrama training. According to the observation records and assessment outcomes, psychodrama plots were designed to train the patient mainly in four aspects: eye contact, following instructions, focusing attention, imitation ability. Ranging from 90 minutes to 2 hours, a psychodrama session typically was implemented once every 2 weeks, and the whole training process lasted totally for 3 months (Patient received intensive training in Special-Education Center for the rest of the time). The entire training process was recorded. The patient was measured with Childhood Autism Rating Scale (CARS) before and after the whole experiment, and Autism Behavior Checklist (ABC) was used to evaluate him after each intervention program. Finally, all live records and changes were analyzed to evaluate whether the psychodrama therapy works. The study design was presented in Fig. 1.

### 2.2. Case presentation

Lan, male, the only son in the family, was born in Harbin City Heilongjiang Province in February 2008. He was introverted and had almost no active words. He spoke unclearly with few social interaction behaviors and frequent rigid behaviors. Besides, he had good pulley technology and loved strawberries.

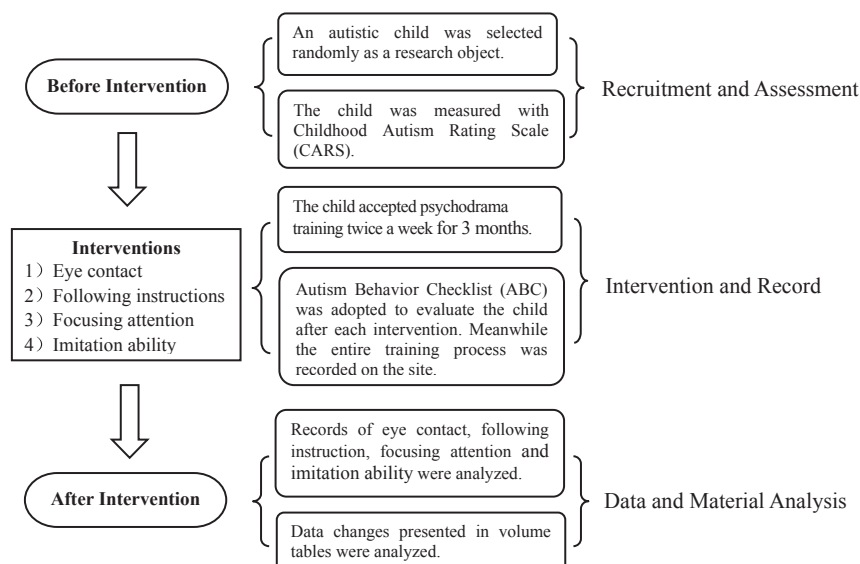


Fig. 1 – Study flow diagram.

His parents both had college degree, creating a decent life with good economic conditions and harmonious relationship. The main care-giver was his mother, who suffered from severe depression disorder from the first trimester of her pregnancy to the third month after delivery. There was no similar family history and other medical history. The patient was diagnosed with severe autism in June 2009, through behavior observation and autism screening tools, with an DSM-IV criteria [17]. He entered pre-school in September 2010, since when the symptoms became more and more serious. He was receiving rehabilitation training in Special-Education Center at that time. He did not participate any other special training program except the activities in the center. Informed consent to the study was obtained from the parents of the patient.

### 2.3. Assessment measures

The Childhood Autism Rating Scale (CARS) and Autism Behavior Checklist (ABC) were used to screen and diagnose autism in this study. CARS was developed by Eric Schopler as a diagnostic assessment method [17]. The original version of this test, the Autism Diagnostic Interview (ADI) was published in 1989 and was correlated to the ICD-10 definition of autism [18–20]. CARS was considered a good screening instrument for adolescents and adults [17]. The scale consists of fifteen items: relationship to people, imitation, emotional response, body, object use, adaptation to change, visual response, listening response, taste–smell–touch response and use, fear and nervousness, verbal communication, non-verbal communication, activity level, level and consistency of intellectual response, general impressions. Grading method is based on the severity of each item and distributed “1”, “2”, “3”, “4” points from light to severe. Patient who scores more than 30 points can be considered as autism, 30–36 points can be considered as moderate autism and over 36 points as severe autism.

The Autism Behavior Checklist (ABC) is one of the most commonly used screening devices. Previous researches indicated that ABC was a useful screening instrument in the identification of children with autism in clinical and educational contexts [21]. ABC was introduced and revised into Chinese with 57 items grouped into the following five subscales: Sensory, Relating, Body and Object Use, Language, and Social and Self-Help skills [22]. Grading method was based on the severity of each item and distributed “1”, “2”, “3”, “4” points. For example, one item is marked 3 points, which means once the autistic children have this behavior, we must write 3 regardless of its severity.

### 2.4. Interventions

#### 2.4.1. Eye contact

Children with autism tend to have defects in eye contact, which is the premise skill for social interaction [23]. Taking the initiative to maintain eye contact could directly influence the development of concentration and social skills. Therefore, the basic training goal of eye contact was to encourage the patient to take the initiative to make eye contact with people, and to prolong the time of eye contact. Psychodrama training could maintain eye contact through good social interaction between trainers and the patient. For example, in plot “The Elder Sister

Comes to Visit My Home”, the sister knocked at the door, mother reminded Lan of the loud knock at the door and guided him to open the door. After entering the door, the sister said hello to Lan actively, shook hands with him, and maintained eye contact, keeping eye contact as long as possible. The sister also gave him the appropriate verbal praise or material rewards to establish good relationship with him. At the end of the training, mother guided Lan to take the initiative to shake hands with sister and say goodbye. The purpose of the training was to cultivate the initiative to maintain eye contact with people in social contact.

#### 2.4.2. Following instructions

Following instructions was a basic ability to associate with people, but autistic children rarely follow instructions given by others. The goal of this intervention was to help the patient build the consciousness of understanding others' willingness in linguistic or non-linguistic competence, and then to promote the development of social skills. Training methods were as follows: trainers gave instructions and guided Lan to complete them. If he needed someone's assistance, an intensive training would be given immediately. In psychodrama training program, the same instruction could be repeated in each training program, whereas instructions would become more and more difficult to understand, and the assistance was gradually reduced as well. For example, in the first training, the sister was thirsty and asked Lan for some water. The mother guided and taught him how to pour the water repeatedly until he completely mastered this skill. Then the mother was thirsty and reminded Lan of pouring water to drink. In the second training, the sister demanded Lan to pour water for her, mother said to Lan: “What does the sister want you to do, to pour water?” In the third training, the mother asked Lan “The elder sister is very thirsty, what will you do?” We could cultivate and strengthen patient's sense of self-identity, and then promote the training effect under the good relationship between the patient and trainers.

#### 2.4.3. Focusing attention

Because of the lack of ability to “filter” irrelevant stimulus, it was difficult for autistic children to focus on a simple operation. Psychodrama, integrating music, games and other elements could strengthen the ability of concentration of autistic children. For example, in the process of psychodrama training, we made Lan play with his mother in the game of tossing basketball back and forth, preparing for the later training. Then, two professional trainers joined them, sitting together in a circle, about half a meter away from each other. The first part, mother threw a basketball to Lan, and reminded him to focus on the movements of the basketball, and instructed Lan to pass the ball to the trainer who was next to him by the same method. The second part, the ball was firstly passed from Lan, who was offered the freedom to toss the ball to whomever he was interested in (research shows that: In most cases, child would like to throw the ball to his mother). Others could try to induce Lan to throw the ball to them. The third part, when Lan began to toss the ball, others could remind him by saying “throw the ball to the sister in white clothes” or “throw the ball to the girl in red”. During the whole course, trainers could use vocal language or body language to

guide the patient to focus on the basketball, as well as his eye contact with others. When patient performed better, trainers could use exaggerated language or facial expressions, even material rewards, to encourage him, thereby creating a relaxing atmosphere and improving training efficiency.

#### 2.4.4. Imitative ability

Imitation is to imitate the behavior of others consciously. Previous research in developmental psychology suggested that the infant's ability to imitate others depended on the origins of both a theory of mind and other social-cognitive achievements like perspective-taking and empathy [24]. Many studies have shown that autistic children had impairment in imitation. Since imitation is essential in establishing and advancing children's social skills, the imitation defects directly affect the development of their social mentality of individuals [25]. Imitative ability training in this study was supposed to progress gradually from simple to complex step by step. As imitative ability training in psychodrama involved more psychological elements, children could easily accept it and concordantly cooperate with trainers. For example, in plot I "My Sister Taught Me How to Origami", firstly, in order to attract Lan's interest, a trainer displayed various kinds of flowers and animals made in paper, helping him to identify their colors and shapes. Other trainers were allowed to teach him to recognize the colors and shapes until he could judge correctly, and then a trainer said: "You're pretty smart and this flower is for you. Do you want to fold a beautiful flower by yourself?" Subsequently, the trainer divided the process of folding paper flowers into several simple steps. While teaching step by step, the trainer tried to encourage him to recall the whole procedure (Before this period of intervention, we knew that Lan had a profound and pleasant memory of folding paper lanterns with his grandmother before, and he had a grounding in technique before setting to training). Plot II "Warm Winter", in a cold winter, Lan with his mother encountered a friendly sister and exchanged greetings while walking on the road. The sister covered her ears with hands, staring at Lan, and said, "It is so cold. Let me help you to cover your ears to keep warm!" Then, trainer could begin teaching him how to cover ears and face with his hands. According to the findings of our study, after mastering the basic skills, Lan would like to warm his mother's ears, but not his own. Act III, Lan did a simple dance with trainers accompanied by light music, the mother functioned as a guide and assistant (Before training, we learned that Lan had a natural interest in light music).

#### 2.5. Participants and site

The training team consisted of a psychologist, an associate professor engaged in nursing teaching and research for many years in XX University, the dean of Special-Education Center who was a mother of an autistic child and had 11 years rich experience in special education, four undergraduates of XX University, four special education teachers and the mother of the patient.

Protagonist: Lan, playing his own role in real life and focusing on a particular situation to enact on stage [26].

Auxiliaries: the patient's mother and other members of training group, supporting the protagonist by playing other significant roles in the scene.

Audience: the members of training group, other autistic children and their parents.

Director: the leader of training group, controlling the progress of the plot and guiding the leading actor to explore his own problems through psychodrama intervention training.

Stage: a music classroom in Special-Education Center, about 15 square meters.

### 3. Results

#### 3.1. Patient assessment before training

Before the intervention, Lan was measured with Childhood Autism Rating Scale (CARS), and was observed naturally for a week without any intervention. The result of CARS demonstrated that Lan was a severe autistic patient before psychodrama intervention, the data were shown in Table 1.

The above performances reflected that Lan's response to the social interaction was very indifferent, indicating that he had severe social barriers.

#### 3.2. ABC data after training

It was approved by his mother and teachers that Lan achieved obvious advancement in social skills after psychodrama interventions. After-training analysis of ABC data showed a shift from the severe to moderate level of autism. The data of ABC after training were shown in Table 2.

#### 3.3. The after-training evaluation

He could smile to person and maintain eye contact with others occasionally when he was excited.

He could focus on one thing for 8 s, which is longer than before.

He did not take the initiative to avoid eye contact with his parents, teachers and trainers.

He could turn to voice after hearing his name was called and had a short eye contact.

#### 3.4. The continuous evaluation

After three months of psychodrama intervention training, Lan made obvious progress in social skills. Firstly, in the fifth week, the eye contact duration could last for 8 s, significantly longer than before. Besides, he was able to follow the requirements of trainer to focus attention on a certain thing. Secondly, following instruction training obtained the good effect as well. Lan was capable of listening to a majority of simple instructions issued by trainers, such as opening the door, shaking hands, pouring water, passing the ball, covering ears and so on, which were quite different behaviors from the beginning when he had no reaction to others' orders. At the end of training, he could throw garbage by himself, but still need some assistance when it came to other instructions. He



**Table 1 – The Childhood Autism Rating Scale (CARS) data before training.**

Observations
Did not respond to others' facial expression; avoided eye contacting with people; short attention (<3 seconds), no active eye contact with others;
Couldn't turn to the direction of the voice when his name was called;
Refused to touch or hug others;
Couldn't use postures or gestures to express what he desired;
Emotional response was easily overexcited, accompanied by screaming and involuntary body shaking; clapped hands to express delight;
Had self-sabotaging behaviors and no risk consciousness.

could be very obedient to trainers and his mother, and strictly followed the orders. Finally, among the whole training period of imitative ability, Lan could understand the instruction immediately and concentrated on imitating folding papers, ending up with a decent product. While dancing with the music, Lan failed to adapt to it in the beginning and couldn't follow the steps. However, due to the interest in music, he could concentrate on study consciously and carefully. Under the guidance of his mother, Lan gradually began a regular dance, presenting a better sense of coordination.

As can be seen from the above continuous evaluation for 3 months, it was obvious that Lan had made great progress in social skills after psychodramatic intervention.

#### 4. Conclusions

There are several ongoing efforts to improve social cognitive ability using psychodrama across the world, as alluded to in our introduction. From our review we found that psychodrama had some beneficial effects on social cognitive ability. However, few had the kind of strong empirical evidence base for autism treatment that we need. It is not clear whether these interventions have a lasting impact and there is a need to conduct further studies.

**Table 2 – Autism Behavior Checklist (ABC) data after training**

Training times	1st	2nd	3rd	4th	5th
Frequently does not attend to social/environmental cues	4	4	4	4	0
Lacks a social smile	2	2	0	0	0
Does not (or did not as a baby) reach out when reached for	2	2	2	0	0
Not responsive to other people's facial expressions or feelings	3	3	3	3	3
Actively avoids eye contact	4	4	4	4	0
Resists being touched or held	4	4	4	4	4
Is (or was as a baby) stiff and hard to hold	3	3	3	3	3
Is flaccid (doesn't cling) when held in arms	0	0	0	0	0
Does not imitate other children at play	0	0	0	0	0
Has not developed any friendships	4	4	4	4	4
Often frightened or very anxious	3	0	0	0	0
"Looks through" people	0	0	0	0	0
Totals	29	26	24	22	14

Through this case study for 3 months, we concluded that it was possible to use psychodrama intervention for autistic children to improve the social cognitive ability, then relieve the social barriers and enhance the social function.

Given the short three-month training time, we were not sure whether the intervention effects were sustainable, and what impact it may cause in the future. Due to the limitations of our own professional knowledge about psychodrama, there may be irregularities in role division, which need improvement. In addition, our on-site records may ignore valuable event. It is recommended that researchers should improve the operability of psychodrama training in further studies, such as setting the best training time and training duration.

With regard to psychodrama training, we found several benefiting advices, according our experience, which could act as references for later researches. Training contents should keep pace with real life. Training them to learn daily life skills, such as opening the door, saying hello to others and so on, could efficiently help them survive in the world. Additionally, training model was advised to put sufficient emphasis on communicating with their parents, who could be helpful in guiding autistic children to perform and also release their own pressure by participating in the drama. Finally, the whole training should be implemented in gentle and clean environment, avoiding objects children are excessively interested in.

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