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# Interaction of social role functioning and coping in people with recent-onset attenuated psychotic symptoms: a case study of three Chinese women at clinical high risk for psychosis

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**Abstract:** Clinical high risk of psychosis is defined as the period in which the first signs of psychotic symptoms begin to appear. During this period, there is an increased probability of developing frank psychosis. It is crucial to investigate the interaction between psychotic symptoms and the individual's personality and life experiences in order to effectively prevent, or delay the development of psychosis. This paper presents case reports of three Chinese female subjects with attenuated positive symptoms, attending their initial outpatient assessment in a mental health service, and their longitudinal clinical outcomes. Information regarding each subject's symptoms and life stressors was collected at 2-month intervals over a 6-month period. The assessments indicated that these women were suffering from the recent onset of symptoms in different ways. However, all three hid their symptoms from others in their school or workplace, and experienced a decline in performance related to their social roles and in their daily functioning. They were often excluded from the social groups to which they had previously belonged. A decline in social activities may be a risk factor in the development of psychosis and a mediator of functional sequelae in psychosis. Effective treatment strategies may include those that teach individuals to gain insights related to their symptoms and a service that provides a context in which individuals can discuss their psychotic symptoms.

**Keywords:** prodromal psychosis, ultra high risk, follow-up, functional sequelae, transition

## Introduction

Although it is well known that there is a strong genetic or biological underpinning to psychosis,<sup>1</sup> the role of social factors in the development of psychosis has perhaps been underestimated in clinical practice and research. Clinicians and scientists in the People's Republic of China may overemphasize the question, "What has changed in the brain of a psychotic patient?", and they do not often ask, "How do changes in the patient's social world affect the brain and behavior of a psychotic patient?" In addition, it is difficult to explore underlying problems, such as the interaction between psychotic symptoms and the social role functioning and coping, through quantitative studies that use questionnaires or cross-sectional interviews.

A recent development in psychiatry has the potential to provide a more complete and in-depth understanding of the development of psychotic disorder. The concept of a prodromal stage of psychosis, or clinical high risk (CHR) syndrome, has evolved over the last 20 years.<sup>2-6</sup> According to follow-up studies, the CHR

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transition rate within a year of the first manifestation of symptoms averages approximately 20% and increases to around 35% within 3 years.<sup>3,7-9</sup> Thus, nearly two-thirds of those at CHR may not develop psychosis, at least within a relatively short time span. Biomarkers may ultimately help to identify individuals who are likely to progress to full psychosis, but each individual's unique background may also contribute to outcomes other than the onset of psychotic symptoms.

We present the cases of three Chinese female subjects of different ages and backgrounds who fulfilled the criteria for attenuated positive symptom or syndrome (APSS), one of the CHR syndromes. We collected information on symptoms and life stressors every 2 months for 6 months. We examined these cases to understand the more detailed processes by which the individuals deal with APSS in their everyday lives.

## Case reports

Three cases were selected from a broader research study<sup>10</sup> of CHR in a Chinese clinical population conducted in 2012. This study was approved by the Research Ethics Committee at the Shanghai Mental Health Center. All three subjects were identified via screening with the Prodromal Questionnaire-Brief version<sup>11</sup> and met the APSS criteria in the Structured Interview for Prodromal Syndromes.<sup>12</sup> Subjects returned for follow-up appointments every 2 months to discuss the development of psychosis as well as problems faced in their social lives.

## Background

The subjects included one younger (15 years; Case A) and one older teenager (18 years; Case B) and a young adult (35 years; Case C), each from a typical Chinese household. The recent onset of attenuated psychotic symptoms precipitated a drastic change in their normal lives and social roles. Thus, it was with significant uncertainty and desire that these individuals sought help in a psychological-counseling setting at the Shanghai Mental Health Center (in the People's Republic of China, this setting is associated with less stigma than psychiatric settings). They attended counseling sessions with various kinds of pressure from their families, schools, and workplaces – and from society in general. The subjects had similarly poor interpersonal skills and limited social support outside their families. Their personality traits, family situations, life experiences, and social activities were quite diverse, but none had a prior history of medication use, psychological treatment, hospitalization, serious physical

problems, substance abuse (drug or alcohol), or mental disorders within the family (Table 1).

## Baseline attenuated psychotic symptoms

All three women experienced unusual ideas and perceptions. Each woman described her symptoms differently, in a way that was consistent with her background. For example, Case A was very fond of mystery and suspense stories, and she attributed her hallucinations to supernatural forces. Case B experienced sudden auditory hallucinations, and, consistent with her college background, tended to explain the voices in scientific ways (eg, being implanted with a mind-reading device). Case C had experienced a greater number of changes and hardships than the other subjects. One significant stressor was a recent divorce, which is still a widespread cause for discrimination in Asian societies. Her suspiciousness was primarily related to her divorce. These cases illustrate how psychotic symptoms might reflect individual experiences and environments (Table 2).

## Follow-up

Although 6 months is a relatively short period in the course of a potential psychotic disorder, it is a critical period from the perspective of illness development. The women described here were struggling in their daily lives and suffering with the recent onset of symptoms in different ways. Their social role and daily functioning had declined to varying degrees. They were often excluded from the social groups to which they had previously belonged. In addition, these cases suggest that the older the person is at symptom onset, the greater the difficulties he or she may face in certain social contexts. One potential reason may be that unusual thoughts may be more acceptable in younger than older people because the young are thought to be more imaginative. Thus, society may be more tolerant of certain symptoms in teenagers than in college students or adults (Table 3).

## Summary

Figure 1 shows the course of the women's psychotic symptoms over the 6-month period. Although they seem to follow different trajectories in the early stage of psychosis, it is obvious that medical help may have had some effect on their symptoms. The social functioning of Cases A and C synchronized with the severity of their symptoms. Social inclusion of subjects with recent-onset psychosis may be crucial, especially for the recovery of their social role functioning. Sadly, social exclusion was a large part of each of these women's experiences during the initial period after symptom onset.

**Table 1** Background information on the CHR subjects

Case A	Case B	Case C
<p>Case A is a 15-year-old student born in Shanghai. Her family is not wealthy. She lives with her parents, has a hot temper, and behaves immaturely. She has borderline personality traits.</p> <p><b>School performance:</b> She receives average marks on her class work; she has completed 8 years in school. She performs well in Chinese and English but not in math classes.</p> <p><b>Interpersonal relationships:</b> She has very few close friends, but many acquaintances. She feels that she does not “fit in” at her school and is isolated from her classmates. Displays of intimacy among other people make her feel like she is being ignored.</p> <p><b>Chief initial complaint:</b> Two days before the assessment, she asked her parents if she could quit school because she felt too much pressure from her regular lessons and a remedial math course she attended after school each week.</p> <p><b>Non-psychotic symptoms:</b> She is easily irritated. In the previous 6 months, she has had difficulty concentrating. She described engaging in obsessive–compulsive disorder (OCD) symptoms, such as checking the door repeatedly to ensure that it was locked and obsessively thinking, “What is my life’s goal?”</p> <p><b>Clinical diagnosis:</b> To be determined.</p> <p><b>Treatment:</b> Sertraline (25 mg/day).</p>	<p>Case B is an 18-year-old college freshman. She was born in Shanghai to a middleclass family. She is sensitive and introverted. She lives in student housing. She has avoidant personality traits.</p> <p><b>School performance:</b> She receives average marks in her classes; she has completed 12 years in school. She is shy, and does not often talk in class.</p> <p><b>Interpersonal relationships:</b> She has only one close friend. She always keeps a certain distance from her classmates and roommates. She prefers to live unnoticed and to follow instructions given by her school and family.</p> <p><b>Chief initial complaint:</b> Approximately, 2 days prior to seeking help, she suddenly felt that people around her were talking about her, and she sensed that she was the center of their attention. She was scared of things that might seem absurd to others. Her teacher believed her to be “mentally unstable” and recommended several days of rest.</p> <p><b>Non-psychotic symptoms:</b> She has experienced negative moods, felt physically weak, and has been unable to concentrate on class lectures. She has felt very tired and stressed by everyday life, and has had difficulty falling asleep.</p> <p><b>Clinical diagnosis:</b> Suspected schizophrenia.</p> <p><b>Treatment:</b> Olanzapine (5 mg/day).</p>	<p>Case C is a 35-year-old unemployed woman who has completed 12 years of school. She was born in a Shanghai suburb. She rarely becomes angry. Three years ago, she and her husband divorced because they were incompatible. She lives with her parents, and her daughter lives with her ex-husband.</p> <p><b>Work performance:</b> She had worked in a clothing factory and did her job well. She dressed appropriately for the workplace and behaved conscientiously. She quit 6 months prior to seeking help.</p> <p><b>Interpersonal relationships:</b> She prefers to stay at home and is not socially active. She does not have any close friends.</p> <p><b>Chief initial complaint:</b> She felt that people (eg, neighbors or ex-colleagues) were casting the “evil eye” on her. She felt that they were talking about her divorce and considered her an immoral woman. She quit her job and stayed at home. Her mother and sister asked her to seek help at the hospital.</p> <p><b>Non-psychotic symptoms:</b> She engages in little activity and usually stays at home. She has difficulty concentrating, is irritable, and her mood is unstable.</p> <p><b>Clinical diagnosis:</b> Suspiciousness.</p> <p><b>Treatment:</b> Aripiprazole (5 mg/day).</p>

**Note:** Diagnostic and treatment information were obtained from clinicians’ routine medical records.

**Abbreviation:** CHR, clinical high risk.

## Discussion

We described three cases with recent-onset psychotic symptoms in individuals who appeared at first to be insightful and eager for help. Each struggled with severe pressures in their daily lives. Psychosis has attracted considerable attention in clinical settings in the People’s Republic of China; it is not surprising that all three subjects had been prescribed antipsychotic medication by our clinicians, none of whom had much experience with the concept of “CHR”. Although there is still considerable debate regarding ethical issues with the use of medication in the prodromal stage,<sup>13,14</sup> medication in these three cases resulted in some improvements.

However, the way the women balanced their real-world responsibilities and their psychotic symptoms was quite varied. Moreover, the effectiveness of and compliance with treatment did not appear to rely on a particular (or “just right”) medicine.

Insight during the early stages of psychosis has been associated with better outcomes.<sup>15,16</sup> Yet the quality of insight should be carefully considered and nurtured.<sup>17,18</sup> Individuals with mental illness have limited resources and capability to openly express and manage their confusion about their psychotic symptoms. In the cases presented in this paper, family members were the first resources from whom the

**Table 2** Attenuated positive psychotic symptoms identified in the baseline interview

Case A	Case B	Case C
<p>She had experienced hallucinations and bizarre thoughts for 10 months, and the symptoms worsened in the month prior to assessment. She reported experiencing hallucinations at school, such as a disembodied hand on the window, hearing her name called in the library, and the school bell ringing. She began to suspect that a ghost or supernatural force might be around her. Her parents took her to a sorcerer for help, who said that three ghosts had climbed onto her back, causing her illness. Based on the sorcerer's suggestion, she washed her face with holy water for 2 months. She came to think that if ghosts did exist, it would be advantageous to be someone who could see them. She suggested that her experiences might be illusions or caused by a "yin and yang eye". She acknowledged that this idea was ridiculous, but it would not go away. She also reported being repulsed by one of her teachers, who was pregnant, despite no previous conflicts with that teacher. The feeling of repulsion extended to every pregnant woman, and to people who had the same surname as her teacher.</p> <p><b>Meets SIPS/APSS criteria based on:</b>            P1 (unusual thought content/delusional ideas, rating =4; onset = January 2012);            P4 (perceptual abnormalities/hallucinations, rating =4; onset = January 2012).</p>	<p>She reported beginning to hear voices 3 days before seeking help. She primarily heard negative comments about herself. She asked her roommates if they could hear the voices too, but they could not. She reported knowing that the voices were not real, but that they seemed very real to her. She was not sure of the source of the voices, and they perplexed and terrified her.</p> <p>She said that her ears seemed to be implanted with a mind-reading device. She was very fearful about this. She reported feelings of being controlled that began 3 days before the assessment. Again, she stated that she knew such control was not possible, but the idea still made her very nervous. She thought that these feelings might have been related to her physical condition, as she had participated in a 1,500 m race the week before.</p> <p>At times, she felt that someone was following and monitoring her. Once again, she knew that this was not true, but remained very uncomfortable about the idea. She had experienced this feeling constantly for the previous 3 days.</p> <p><b>Meets SIPS/APSS criteria based on:</b>            P1 (rating =5; onset = November 2012);            P2 (suspiciousness/persecutory ideas, rating =5; onset = November 2012);            P4 (rating =4; onset = November 2012).</p>	<p>Within the 6 months prior to assessment, she began to think that people around her had become spiteful toward her. For example, if she accidentally touched her colleagues, she was concerned that they considered her flirtatious. She thought that her neighbors were talking about her. At times, if her neighbors mentioned something related to divorce in general, she thought that they were insinuating something about her. Sometimes, she felt that someone was stalking her, or that someone would try to harm her, but she did not know why she began to feel this way. When asked whether she might have become too sensitive or suspicious lately, she considered the possibility. However, the suspicion remained for a couple of weeks. These experiences led her to quit her job. In addition, she sometimes heard the sound of ducks quacking outside when none were present. This occurred approximately three to four times per month. She was unsure whether the sound was real, and would ask her sister about it.</p> <p><b>Meets SIPS/APSS criteria based on:</b>            P2 (rating =5; onset = March 2012);            P4 (rating =4; onset = March 2012).</p>

**Notes:** P, positive symptoms (scales P1–P5, Unusual Thought Content, Suspiciousness, Grandiosity, Perceptual Abnormalities, and Disorganized Communication). Each item is rated on a 0–6 scale with 6 indicating "severe and psychotic" and 3–5 indicating a prodromal range symptom.

**Abbreviations:** APSS, attenuated positive symptom or syndrome; SIPS, Structured Interview for Prodromal Syndromes.

women could seek help. After family, professional but less stigmatized institutions were their second preferred option. Services<sup>19</sup> that help individuals interact with society are urgently needed. This reality-based interaction may be particularly important to help CHR individuals build insights into the psychotic nature of their symptoms.

The three women with CHR in this study might have been capable of handling their roles as patients, daughters, or family members, but they had difficulty fulfilling their larger society roles. When faced with greater responsibility outside their immediate support network, they all followed a similar coping style that included hiding their symptoms from others in their school or workplace. Given the very high stigma associated with psychosis in the People's Republic of China, one might think it advisable to avoid exposing psychotic patients to others. However, concealing all feelings and

thoughts about psychotic experiences might lead to erroneous judgments of others' thoughts and interfere with insights about the psychosis. It could also create internal conflicts about their experience and how others perceive them.<sup>20</sup>

None of the cases reported here were treated by a professional clinician skilled at psychotherapy or psychosocial therapy. Generally, Chinese clinicians have a bias to treat psychotic symptoms only with medication. Although the current literature<sup>21–23</sup> on interventions at the prodromal stage does not adequately address what kind of therapy would be appropriate in Chinese society, it is universally agreed upon that some type of treatment for the CHR population is warranted. Given that daily functioning and the overall quality of life for CHR individuals is severely affected by psychotic symptoms,<sup>24</sup> and that these symptoms are often "cognitive" in nature, a cognitive therapy<sup>25</sup> that focuses

**Table 3** Changes in CHR subjects during the 6-month assessment period

Case A	Case B	Case C
<p><b>At the 2nd month follow-up:</b> She still a bit weary about school, but her condition had improved. She had missed only 2 days of school in the 2 months. There was no change in her symptoms (visual hallucinations and unusual thoughts about ghosts). They were still novel to her but surprisingly brought joy to her life. However, her parents confiscated all her mystery novels, which they believed were the cause of her fantasies. She began taking sertraline (50 mg/day), and her OCD symptoms improved.</p> <p>She could not maintain close relationships with her classmates due to sensitivity and suspiciousness. Speaking in a tone of weary cynicism, she tended to have negative impressions of others around her. Her academic achievement remained the same. Although she was in awe of her parents, she complained that they excessively controlled her studies and her life in general. They did put lot of pressure on her to attend school. However, her teachers and classmates seemed indifferent toward her mental status and may not have been aware of her problems.</p> <p><b>At the 4th month follow-up:</b> She felt that her soul was floating lightly behind her back and watching her body carry out activities. She could communicate with her soul. She did not understand how this was possible and was sometimes afraid. She reported that she knew her experience was not possible even though it felt very real. In the month prior to the follow-up, this experience occurred nearly every day, both at school and at home. She had discussed this problem with her clinician, who prescribed olanzapine (2.5 mg/day). She insisted on going to school under the supervision of her parents, and her school performance did not deteriorate further.</p>	<p><b>At the 2nd month follow-up:</b> She regularly attended follow-up visits to the clinic and took olanzapine (20 mg/day) as directed by her doctor. She said that the voices she had been hearing had nearly disappeared. However, she became more silent and morose and generally avoided eye contact. She spoke vaguely of her previous symptoms (eg, feeling that people were reading her mind, singling her out, or watching her), and reported that she no longer had those experiences or that they occurred a "very few" times. She also avoided describing her feelings and experiences in the days just prior to the follow-up, and her emotional reactions were quite different from the first interview. She had a "vacant" look in her eyes and she completely followed her parents' instructions.</p> <p>She spent most of her time at home watching TV and sleeping; others infrequently included her in social activities. Her parents attributed her slow responses to the medication, but also noted that the medication had reduced her psychotic symptoms considerably. She indicated a willingness to return to school, but she was anxious about doing so. Her classmates knew of her mental illness due to her prior unusual behaviors at school at symptom onset. Further, her teachers also preferred that she rest at home.</p> <p><b>At the 4th month follow-up:</b> At the second follow-up interview, she was more passive and avoided discussing her problems. She briefly stated that her symptoms had nearly disappeared. Her parents had contacted her teachers regarding her return to class, but the school rejected the idea and asked for proof of recovery from the hospital. Her parents made a futile attempt to obtain this proof; therefore, she remained at home.</p> <p>She did not try to contact her classmates because she was afraid that they might treat her as a crazy person. She was indifferent when we talked about her future; she only replied that she wanted to go back to school, but remained silent when we asked her the reason for returning to school. For the prior 2 months, she had been taking olanzapine (15 mg/day).</p>	<p><b>At the 2nd month follow-up:</b> She began taking the prescribed medication the day after she returned home. However, it caused unpleasant side effects (nausea and a stomach upset), and she stopped taking it. Her family repeatedly asked her to take the medicine, but she refused. According to her sister, her symptoms were not getting worse, but she was still sensitive and worried about trivial gossip. She felt insecure, but she was able to accept explanations from her relatives. She seldom went out and had no friends. She occasionally heard sounds that were not real but became irritable when asked to see the doctor.</p> <p>Because of her suspiciousness about people around her, she lived with her elderly mother, and her life was monotonous and uneventful. She planned to train for new job the next year.</p>
<p><b>At the 4th month follow-up:</b> Her condition was stable at the start of the new year. Her sister found an easy job (in a factory) for her. At first, she was happy about the new job, but 1 week later, her symptoms worsened. She felt that her colleagues were talking negatively about her. Occasionally, she feared that people might want to harm her and that her neighbors and the people she saw on her way home were laughing at her. She quit the job after only 2 weeks, and locked herself in a room for an entire day. Her behavior became odd and strange. Sometimes she murmured to herself in a feeble and intelligible manner. She would not allow anyone to enter her room and would not dine with others. She would walk stealthily downstairs at midnight and look for food to eat. She had a chaotic life and maintained poor personal hygiene. She resisted help from her mother. C also refused to comply with the treatment and her doctors' advice. Her family felt helpless and decided to send her to a psychiatric hospital. Finally, she was diagnosed with schizophrenia and treated with olanzapine.</p>		

(Continued)

Table 3 (Continued)

Case A	Case B	Case C
<p><b>At the 6th month follow-up:</b> Her symptoms had reduced markedly. She was planning to take graduation exams. She no longer saw the hand on the window, and she spent less time thinking about ghosts. She attended school voluntarily and became more active. She discontinued olanzapine (3 weeks prior to the follow-up) but continued a daily dosage of sertraline. However, subsequent to discontinuing olanzapine, she became anxious to find a boyfriend. Her parents believed she was too young for a romantic relationship. She met many men, including some who were much older than she was, and others who were not serious. This behavior enraged her parents and earned her a stern rebuke. She meekly accepted the rebuke, and promised that she would focus on her exams and not the men.</p>	<p><b>At the 6th month follow-up:</b> She continued to take olanzapine. She answered all questions very briefly (eg, with a “no”). Her parents were satisfied with her condition, but they felt her reactions were slow and that she was sleeping too much. They complained that she was indolent in daily life. After negotiation with the school, she was allowed to return, but only after her parents guaranteed that they would be responsible for all her problems there. However, the school refused to provide any housing accommodations for her. She and her parents rented a room near the school. Although she attended school daily, she did not have any close friends or engage social activities.</p>	

**Abbreviations:** CHR, clinical high risk; OCD, obsessive-compulsive disorder.

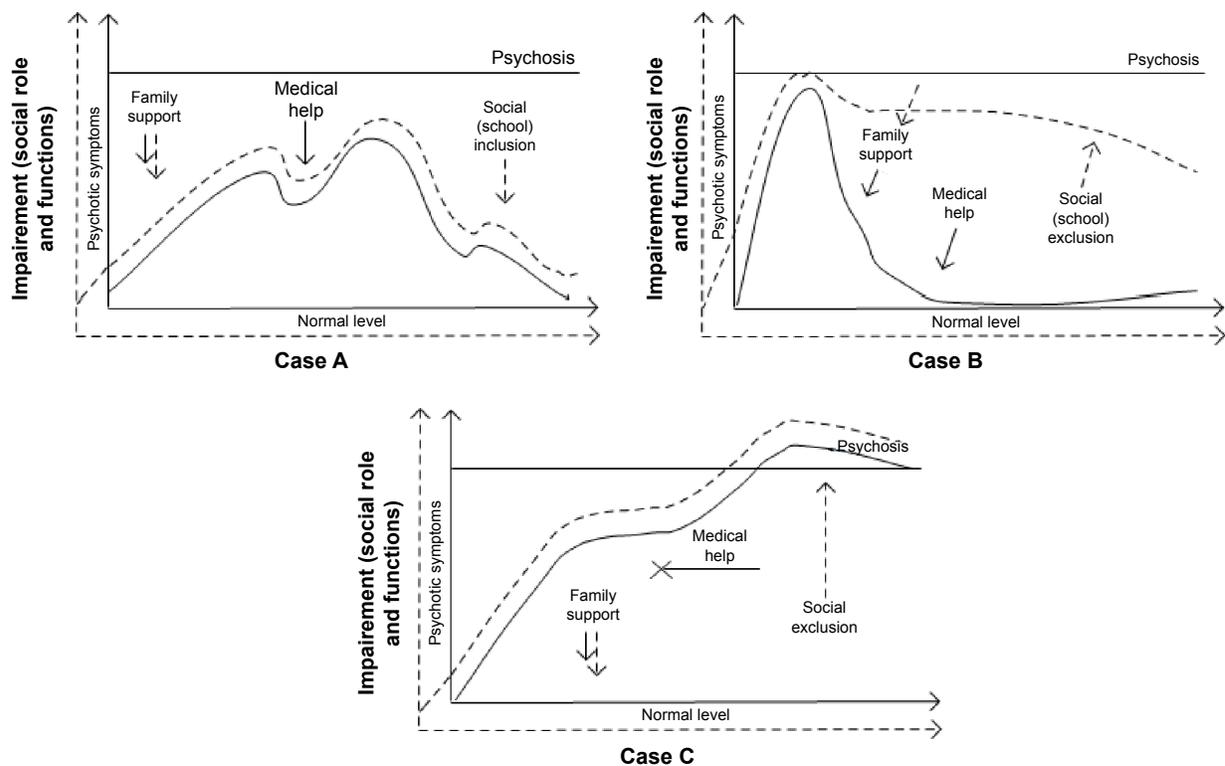
on either clinical symptoms or interpersonal functioning should be implemented. In addition, alternative treatments or adaptations that are sensitive to Chinese culture may be needed. Moreover, since the three individuals in this study all sought help from their families, psycho-education for families is essential and may be especially helpful in the People’s Republic of China.

We offer two suggestions for dealing with the social exclusion of CHR individuals. First, an intervention center that provides early psychosis services targeted toward CHR individuals should be established. These services could be provided by a team of psychologists, psychiatrists, volunteers, and “non-converters” (peers who had previously experienced psychotic symptoms but no longer meet the CHR criteria). The center could then act as a cushion between the pressure experienced from psychotic symptoms and social exclusion. Second, in order to minimize the risk of progression to psychosis, clinicians and family members might consider insight-oriented supportive education<sup>26</sup> for CHR persons, rather than focusing only on the effectiveness of medication or the individual’s performance at school or at work.

Overall, a lack of social activities in CHR individuals may be a risk factor in the development of psychosis and a mediator of functional sequelae in psychosis. Since it may not be feasible for CHR persons in the People’s Republic of China to disclose their psychotic symptoms to colleagues or classmates, therapy that supports greater insights into symptoms or service that provides a forum in which those with CHR can discuss their psychotic symptoms may help these individuals overcome their difficulties.

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**Figure 1** Trajectory of psychotic symptoms and social functioning in the early stage of psychosis.

**Notes:** ---, level of social functioning; —, level of symptoms. Cases A–C follow different trajectories during the course of the women's psychotic symptoms over the 6 month period. The social functioning and severity of psychotic symptoms were impacted by family support, medication, social inclusion, or social exclusion. Social inclusion may be crucial for prodromal stage of psychosis, especially for the recovery of their social role functioning.

## Disclosure

The authors report no conflicts of interest in this work.

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