

## Early Psychosis in People from Chinese Backgrounds around the World

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### Abstract

Studies of the early phase of psychosis reveal that culturally relevant beliefs and practices are related to attitudes toward these symptoms and to help-seeking behaviors. Therefore, a systematic and comprehensive literature review will help to develop more culturally sensitive clinical approaches to serving patients and their family members and lay a foundation for conducting culturally relevant research. Our primary aim was to provide a review of cultural factors of patients with a duration of fewer than 5 years of illness (early psychosis), from Chinese backgrounds around the world. Five themes were identified related to culturally relevant beliefs and practices and help-seeking behaviors among patients with early psychosis and their families: These themes included expressed emotions, caregivers' experience, help-seeking pathways, quality of life, and duration of untreated psychosis. Directions for future research and clinical practice were presented.

### Introduction

Recently, there has been a growth of evidence that suggests that early detection and intervention in people with psychosis can reduce patient symptoms, enhance patient social and role functioning, and improve quality of life for patients and families. This has led to a greater focus on the earlier stages of psychosis [1-5]. However, studies also indicate that patients and their families often encounter enormous challenges and barriers in seeking mental health services [6]. This is particularly true for individuals from racial/ethnic minority backgrounds in the United States and individuals from Asian cultures, like the Chinese, that highly stigmatize mental illness [7,8].

People from Chinese background constitute the largest population in the world, with 1.3 billion in China and the rest residing in different parts of the world [9]. The Chinese population is the fastest growing immigrant population in the North American continent [10]. There is also a high percentage of Chinese across the Asian continent, with 85% of the Singaporean population being Chinese and 26% of the Malaysian population of Chinese descent [11-13]. Furthermore, Chinese, along with other Asian Americans, are more likely to be diagnosed as having schizophrenia in the United States [14]. With a life-time prevalence rate of 0.7% in China, about nine million Chinese people suffer schizophrenia. People with schizophrenia in China are around 24 times more likely to die by suicide than people who do not have schizophrenia and this high annual suicide rate has become a major public-health problem for China [15]. The homicides committed by untreated patients with schizophrenia in China were also brought to international attention (New York Times). Researchers in Hong Kong showed that the delays in treatment seeking and poor treatment outcome were due to lack of knowledge about the signs of early psychosis and to not understanding or regarding these as indicators of mental illness [16].

There are theoretical reasons to surmise that cultural factors affect the understanding and intervention of psychosis among people from Chinese backgrounds regardless of where they live [7,17]. Therefore, it is important that we review the relevant existing literature on early psychosis in Chinese populations around the world in a systematic and comprehensive manner. As the number of studies on cultural factors is rather limited and their research methods and assessment instruments are quite diverse, it does not allow for a quantitative review of the literature. Therefore, we will conduct a systematic qualitative review of the literature on the cultural and psychosocial factors related to early psychosis in individuals from Chinese backgrounds with the purpose to identify research gaps and cultural relevant approaches to treatment, and to inform clinical practice with the world's largest population.

### Methods

The focus of this review is on psychosocial and cultural factors as related to early (first-episode) psychosis in individuals from a Chinese cultural background. Given the apparent paucity of research specifically addressing these factors, we began our search of the literature by employing a broad range of search terms. These included: schizophrenia, first episode psychosis, and early psychosis, all in combination with the term "Chinese". No exclusionary criteria were used in defining the Chinese population; thus, the sample could be from mainland China, the USA, Canada, or any other area of the world. Data-based (either quantitative or qualitative) published studies written in either English or Chinese were retrieved given that the first author is bilingual. The databases used were PsychINFO and PubMed between 2000 and 2011, as most of the literature on first episode psychosis emerged during the last decade.

This initial search yielded 400 articles (both in English and Chinese). From these, only studies that focused on psychosocial and cultural factors were included for the purpose of the review. A total of 10 studies were found. The rest of the remaining articles were

concerned with biological, genetic and/or pharmacological factors related to early psychosis among Chinese patients. The cited references from each of the 10 selected studies were then searched for additional articles of relevance. Nine studies were identified, resulting in a final total of 19 studies. Three of the 19 studies were not accessible. Of the remaining 16, 14 were in English and 2 in Chinese. Nine of the studies were conducted in Hong Kong, four in mainland China, one in Singapore, one in North America, and one in Malaysia.

Most of these studies recruited their participants from clinics where the participants received treatment. These clinics include the First Episode Psychosis clinic in Beijing, China; the Early Assessment Service for Young People with Psychosis (EASY) program in Hong Kong, China, and the Early Psychosis Intervention Programme (EPIP) in Singapore. Further, most studies restricted their sample to patients with a recent (within two years) onset of psychosis. In the following review sections, we will use the term “early psychosis” when referring to these patients. All subjects were diagnosed using either the Diagnostic and Statistical Manual of Mental Disorders or the International Classification of Diseases and Health Related Problems, 10th version [9,14]. Those with organic or drug-induced psychosis were excluded. Five overall themes related to culturally relevant beliefs and practices and help-seeking behaviors among patients with early psychosis and their families were identified after a thorough review of the 16 studies. These themes included expressed emotions, caregivers’ experience, help-seeking pathways, quality of life, and duration of untreated psychosis. Each of these themes was reviewed in the following sections.

## Expressed Emotion

Expressed Emotion (EE) [18], refers to the “family environment that is based on how the relatives of a psychiatric patient spontaneously talk about the patient” [19] or to the family’s attitude towards the patient with a mental or physical disorder [20,21]. Family members with high levels of criticism, hostility, and emotional over involvement towards an ill relative are considered as expressing high EE. Cross-cultural studies on EE indicate that level and pattern of EE differ based on sociocultural context (Aguilera et al.) [20]. For example, White Americans from European cultural backgrounds are ten times more likely (67%) to have a high EE than Latino families [21]. Lower EE levels were found in Eastern Asian cultural groups [22]. In regards to psychosis, there is considerable cross-cultural evidence that demonstrate the significant negative influence that high EE in a family can have on the course of schizophrenia, including more frequent relapses [19,22-24].

The concept of “Expressed Emotion” is especially relevant among people of Chinese backgrounds as their culture places much emphasis on family and its role in the lives of individuals. Therefore, it is of no surprise that much of the literature on first-episode psychosis in the past decade focuses on caregivers of patients; more specifically, how caregivers relate to the individual with the illness and how they respond to symptoms of early psychosis. Caregivers are usually defined as those who have face-to-face contact with the patient for at least 10 hours per week over the previous 3 months [25].

In the past decade, there were three studies that focused on expressed emotion among Chinese families who had a child with early psychosis. Healey, Vicky, and Chong’s study [26] aimed to cross-culturally validate the concept of expressed emotion and therefore focused on comparing the results of its Chinese sample to findings

from the West. Mo et al. and Li et al. [17,26] on the other hand, focused on how expressed emotion was exhibited in Chinese families.

Similar attitudes were exhibited by Chinese caregivers to those in the West. The low EE Chinese relatives were more sensitive, tolerant, empathetic, and understanding towards the needs and symptoms of the patient than high EE Chinese relatives (Healey et al.) [26]. For example, the low EE relatives seemed to show more understanding that their child had a difficult and uncomfortable time building close relationships and carrying out casual conversations. Therefore, they provided appropriate social support and allowed for more social distance. The high EE relatives, on the other hand, did not show this sensitivity; instead of allowing for privacy and space, they attempted to interact with the patient when he or she was quiet or withdrawn.

Mixed findings were reported regarding whether Chinese male caregivers (fathers/husbands) or female caregivers (mothers/wives) were more intrusive and directive caregivers. Li et al. [17] found that female caregivers tended to have higher expressed emotion than male caregivers, which was consistent with findings of the White populations, where the mothers were found to be the most intrusive caregivers. On the contrary, Mo et al. [27] reported that fathers exhibited higher expressed emotion than mothers. Another disparity in the findings was that Mo et al. [27] found that the more ill the patient, the more likely the caregiver would try to be involved in the patient’s life, whereas Li et al. [17] reported that the degree of expressed emotion was not related to the severity of the illness.

Furthermore, the relatives’ attitudes towards the legitimacy of illness were in turn related to their expectations for the patients’ functioning. Chinese caregivers were found to be more likely to direct the patient’s daily life if the patient was more ill, younger, or unemployed. While this could reflect the patients’ need for care, it could also reflect the caregivers’ dissatisfaction with the patient’s lowered level of functioning and their desire to proactively change the patient’s circumstance (Mo et al.) [27]. Low EE relatives’ exhibited lower expectations while high EE relatives showed little tolerance for their family member’s inability to function at previous levels. Low EE relatives were seen as being easy-going, concerned, not overly anxious, and flexible (Healey et al.) [26]. Therefore, low EE relatives seemed to be more able to diffuse difficult situations and exert a calming influence, which is similar to the findings of Western, studies (Healey et al.) [26].

Lastly, Chinese caregivers’ employment status and family history of psychiatric illness also affected EE. Caregivers who were unemployed had higher EE scores. More face-to-face contact with the patient has been shown to be a risk factor for high EE [28,29]. Caregivers who had no family history of psychiatric illness were also shown to have higher EE scores. A possible explanation for this is that families who have had experience of caring for a relative with psychiatric problems would be more aware of the needs of patients and thus not as overwhelmed [27]. It was also noted that Chinese caregivers’ EE are quite subject to change in the early stages of the child’s illness, suggesting that this period would be optimal for more aggressive treatment and family intervention [27].

The three studies show that expressed emotion is clearly evident in Chinese culture. Overall, there is a lack of studies on expressed emotion on early psychosis and the existing studies suffer from the limitation of small sample sizes. Nonetheless, these findings have laid the foundation for future studies to examine the effects of EE on the recovery of the patient. Future research could cover a broader sample,

including different regions of China and Chinese people from other countries. This would allow for analysis of within group differences, which would in turn lead to a more generalizable picture of EE among Chinese families that have a relative with early psychosis.

## Caregivers' Experiences

There were five articles that described the caregivers' experiences in caring for a patient with early psychosis. Mo et al. [25] investigated the general experience of caregiving while Li et al. [17] focused on specific aspects of the caregiving experience, the caregivers' burden and quality of life. Ryder et al. [30] focused on a wider range of the caregiver experience, measuring not only their perceived burden but also their response and attitude towards the patient's illness. Chen and his colleagues [31] focused on how the family experience contributes to the duration of untreated psychosis (DUP). Lastly, So and colleagues [32] evaluated a brief intervention for caregivers of early psychosis patients.

Several interesting themes emerged in this section on caregivers' experiences. First, caregivers' experiences were related to the gender and symptom of their ill relative. Specifically, caring for female patients was associated with positive appraisal (Mo et al.) [25]. Second, the caregivers of early psychosis patients seemed to be particularly affected by their ill relative's negative symptoms. For example, caregivers of patients with more severe negative symptoms as measured by the Positive and Negative Syndrome Scale (PANSS; Kay et al.) [33] experienced much higher levels of stigma and reported more severe impact by their relative's negative symptoms. Since caregivers were in direct contact with their ill relative who was no longer functioning at previous levels, it is not surprising that family relationships were negatively affected.

Li et al. [17] examined more specifically the caregiver's burden (measured by Caregiver Burden Scale, Montgomery) [34]. The caregivers' subjective stress burden scores were found to be high. Distress about the ill family member's future or concern about medical expenses could have contributed to the subjective burden. In addition, older caregivers tended to report poorer physical health status and caregivers' illness lasted longer when a family member with schizophrenia was more frequently hospitalized [17].

In a cross-cultural comparative study of Chinese Canadian caregivers and Euro-Canadian caregivers, Chinese Canadian caregivers reported significantly more burdensome behaviors and had a more negative conceptualization of the mental illness than the Euro-Canadian participants [30]. Furthermore, in examining caregivers' responses to the symptoms of first-onset psychosis, Chinese Canadian patients with early psychosis were found to take significantly longer to seek help than their Euro-Canadian counterparts [30]. Moreover, in comparison with Euro-Canadian caregivers, Chinese Canadian caregivers were more likely to keep mental illness a secret from others and withdraw from those with mental illness. This indicates that the help seeking behaviors of Chinese Canadian families could be deterred by stigma, which led to delay in treatment and worsened outcome, thereby placing more burdens on the family members.

Previous family experiences of psychotic illness could affect when and whether patients seek help (Chen et al.) [31]. Chen and colleagues found an average duration of untreated psychosis (DUP) of over 18 months in early psychosis patients, with 225 days among those who had another family member with a psychiatric illness and 645 days in patients without family history of psychiatric illnesses. Patients living

alone had a DUP of 816 days while those living with others had a mean DUP of 468 days. In addition, those with an acute onset had a shorter DUP than those with a more insidious onset. These findings highlight the importance of family members' knowledge of mental illness in timely help-seeking, especially when the onset is insidious and symptoms are subtle [31]. So et al. [32] addressed this issue in examining the efficacy of a six-week randomized intervention for caregivers of early psychosis patients, which focused on promoting knowledge of psychosis, its treatment and management, communication skills, and relapse prevention. The results showed significantly increased knowledge of psychosis that was maintained at six-month follow-up. Caregivers coping strategies were also significantly improved.

Caregivers of early psychosis patients in the Chinese culture play a very critical role in the well-being of their ill relative. Studies of Chinese caregiver's experiences, however, are limited. The first three studies of caregivers suggested that caregivers were quite concerned and dissatisfied with their ill relative's low level of functioning and reported great burden in caring for their ill relative. These findings could be partially explained by the Chinese cultural value on hard work, perseverance, and achievement. Furthermore, regardless of whether it is due to an illness, those who fall short, even if it is due to an illness, poorly reflect on not only the inflicted individual, but also the family. Lastly, the caregivers' attitude and conceptualization of mental illness were found to influence how they were emotionally related to the ill relative. Chen et al. and So et al. [31,32] studies further indicated the importance of mental health knowledge of caregivers and the general population in helping the ill relative.

## Help-seeking Pathways

Altogether five studies explored the help-seeking pathways of patients with early psychosis. Tang et al., Chiang et al. and Gill et al. [31,35,36] focus on the pathways to care of patients, while Wong's two studies examined the pathways to care from the perspective of caregivers.

Various sociocultural environments operate to shape the help-seeking pathways of Chinese caregivers across different countries. The three main factors that contribute to shaping the process of help-seeking pathways of Chinese caregivers of relatives with mental illness are individual factors, social institutions, and cultural factors. Individual factors played a critical role in the caregivers' pathway, namely the ill relative's willingness or reluctance to acknowledge that he/she had a mental illness and that he/she needed to seek help from mental health services. Family caregivers may find it difficult to encourage the ill relative to accept the illness and to participate in the treatment process.

Under the category of social institution, school social workers in the Wong et al. [27] study were found to be the most critical in providing a bridge between the informal and the formal networks for the Chinese caregivers, which is inconsistent with findings from studies done in Western countries that suggest family physicians usually serve as the link (Wong et al.'s) [27,37] study supports the importance of directing educational efforts towards social workers to recognize early symptoms of early psychosis as this would enhance prompt referral, leading to a reduction of the duration of untreated illness and of psychosis.

With regard to cultural factors, family members and informal networks were shown to play a significant role. Family members, particularly parents, tended to be the initiators of the pathway, as they

initiated the process as soon as they noticed behavioral and emotional problems and the bizarre and paranoid behaviors of their relatives [27]. This reflects the Chinese value and responsibility of parents to take care of the young and ill family members. However, as mentioned earlier, Chinese family caregivers are less inclined to seek help from people in the formal networks, and they are more ready to seek help from informal networks such as relatives, friends, and other family members. These informal network members usually provided information, advice, and encouragement to the family caregivers. In fact, in most cases it was their recognition of the ill relatives' mental illness that served as an impetus for the caregivers to venture out of this network and seek help from professionals in the formal network [27]. Therefore, informal network members may play an influential role in facilitating the family caregivers to seek external help. The important role of informal network members in the help-seeking pathway reflects the Chinese cultural value on collectivism, with the decision to seek help is not solely made by the individual, but incorporates the views of family members and close relatives and friends [7,38].

In addition, many early psychosis patients from Chinese cultural background reported to have tried at least one type of nonpsychiatric facility before they went to a psychiatrist [31,35,36]. However, the nonpsychiatric facilities and sequence of visits differed based on where the study was conducted. Patients in mainland China visited (from most to least visits) licensed Chinese medicine practitioners (including acupuncturists), qigong (breathing exercise) masters, or other folk healing methods like witch doctors and famous religious places. This was found to be particularly true for women and older patients [35]. Those in Hong Kong (comparatively younger school-age patients) most frequently sought assistance from social workers, followed by primary care physicians, highlighting the importance of social workers as gatekeepers for patients with early psychosis [31]. A majority of the Malaysian Chinese patients with early psychosis had never sought any form of treatment for their psychiatric problems prior to coming to the hospital. Instead, many of them had consulted private general practitioners and visited government primary care clinics and some visited traditional/religious healers for their discomforts [36]. It seems that the widely held view that traditional approaches are popular for the treatment of psychiatric illnesses in the Chinese population still holds true, especially in mainland China and less so in other regions and countries.

Different reasons were reported by patients and families for seeking treatments from nonpsychiatric facilities. The most common reason was feeling shameful or stigmatized about going to psychiatric hospitals (afraid of losing one's face). This reason prevented or delayed receiving of psychiatric treatment for many patients and families. Consequently, it is essential that more effort be put into public campaign to reduce mental illness stigma in order to increase mental health services utilization. Another common reason given by patients and caregivers for delay in seeking psychiatric help is lack of knowledge—"did not consider that the changes were related to mental illness," or "not aware of patients' symptoms" were frequently reported [31]. Inaccessibility to or unavailability of a psychiatric hospital (long distance, no transportation) was also a frequently reported reason for delay. Lastly, a person's financial situation was shown to be a major concern for patients and families who believed that it would be too costly to seek psychiatric treatment [31]. While the findings indicate that Chinese populations from different countries and regions may be reluctant to seek help from mental health professionals, they still utilize informal network and other help or treatment options such as formal

health providers, spiritual healers, and traditional medicine practitioners. Therefore, it may not be surprising that the duration of untreated psychosis (DUP) among many Chinese early psychosis patients in Gill et al. [36] study seemed shorter (12 weeks in Malaysia, Gill et al.) [36], than what was reported in Western countries (one to two years, Seidman et al.) [4]. However, it is important to note that the total cost for the Chinese patients who sought nonpsychiatric facilities as their first contact was significantly higher than of those who sought psychiatric services directly. A possible explanation for this is that nonpsychiatric contacts, though more available and preferred, may not be very effective in the treatment of the illness. Thus the illness in the meantime could become more severe and warrant more costly care. More studies are needed to replicate such findings and to examine the long-term treatment effects among those who initiated services in nonpsychiatric settings versus those in psychiatric facilities.

### Quality of Life

While the treatment of psychotic illnesses in the past mainly focused on the control of active symptoms, in recent decades aspects of the quality of life (QOL) of psychiatric patients has also garnered much attention. The primary determinants of QOL include a range of factors such as living situation, family, social relations, leisure, work, safety, finances, and health, which offer a broad perspective for assessing the needs and outcomes of patients in an early psychosis phase [31]. Three studies met our criteria for review. Law et al. [31] examined the relationship between QOL and DUP and symptoms before treatment commencement in a group of participants in the initial phase of the psychotic illness and treatment process. When compared with normal people in the general population matched for age, sex, educational level and marital status, the early psychosis patients had significantly lower scores in all QOL domains including mental health, functional, social and even physical aspects. QOL was found to be positively correlated with the domains of extroversion and agreeableness in personality assessment, self-esteem, pre-morbid adjustment and social skills, greater autonomy, as well as the size of the patient's social support network. No significant relationship was found between DUP and QOL, nor between QOL and positive and negative symptoms. Negative symptoms tended to be more strongly related to QOL at stabilization than during the acute phase. This may account for the lack of significant findings in this cross-sectional study. More studies are warranted to examine the relationship between DUP, stigma, and QOL in general and in families with low or high EE.

Xiang et al. [39] assessed the changes in the quality of life of Chinese early psychosis patients in Beijing and identified predictors of QOL over a 1-year follow-up. The findings show that the patients' current medication was effective in improving some of the QOL domains, such as improved role functioning and overall physical functioning. However, an unexpected finding was found that patients who were married reported lower levels of role functioning largely due to bodily pain). Schizophrenia could considerably lower the quality of marriage, increasing the likelihood of marriage-related problems which then could contribute to the poor QOL. Furthermore, the social functioning and bodily pain domain of QOL worsened by the end of the study. Severe positive symptoms were found to predict a lower level of physical discomfort, which contrasts with findings from Western studies that QOL is more related to negative symptoms and only weakly related to, or independent of, positive symptoms [40,41]. The authors explain that this discrepancy could reflect the different attitudes of the public toward psychiatric individuals. In Chinese

culture, negative symptoms are more likely to be attributed to transient social or psychological problems and are thus usually better accepted, whereas positive symptoms are usually more stigmatized.

Lam et al. [38] indirectly examined the quality of life of early psychosis patients by asking them to describe what recovery meant. As expected, the participants emphasized their goal to return to their normal role and social functioning; such as keep normal basic daily functioning—eat, sleep, and work, go back to school, get married, socialize with friends and family members. However, the continued need for medication and concentration difficulties seemed to affect their confidence and desire to keep a normal social role (Lam et al.) [38].

While QOL and social functioning are widely used as outcome measures of psychiatric disorders, there is a lack of studies that explain the association between these two factors. More studies are warranted to examine the relationship between QOL and social functioning in Chinese early psychosis patients.

### Duration of Untreated Psychosis

The literature on early psychosis patients reveals that for most patients it takes at least 3 months to receive any type of psychiatric treatment after the onset of symptoms. A substantial delay in seeking medical treatment could greatly influence the outcome of the illness.

To support the effectiveness of early intervention, Chow et al. [42] explored the relationship between DUP and clinical outcomes among patients with first episode psychosis in Hong Kong. Supporting the results of other studies, this study found that a shorter DUP (0 to 90 days) had a higher rate of remission. The authors explain that because patients with a short DUP would have incurred less established brain damage during their DUP, they have a better chance of potentially reversing the damage and having a faster recovery. Long DUP was correlated with poor treatment adherence. Longer DUP allows for prolonged deterioration in cognitive function, which could affect the patients' level of insight and ability to adhere to medication (Heydebrand et al.). There are a number of factors that contribute to delay in treatment of psychosis. The subtle progression of the illness often makes some symptoms difficult to recognize [42]. This corresponds with Chiang et al.'s [31] findings, mentioned earlier, that lack of knowledge about psychosis and not understanding that the symptoms were reflections of mental illness were the main reasons for delay in help-seeking of patients with first-episode psychosis. Another possible reason for delay is social pressure from family members, which inhibits patients from seeking help unless the symptoms worsen [42]. These findings highlight the importance of early diagnosis and treatment of schizophrenia especially since the rapidity of response can promote faster recovery and stronger adherence to medication.

### Discussion

Research findings on Chinese patients with early psychosis in the past decade have shown that psychosocial and cultural factors play a crucial role in the treatment of this debilitating illness. There are five important features of Chinese culture that are apparent in Chinese communities across the world. They are family and collective responsibility; emphasis on the parent-child bond; social interactions in a personal network; emphasis on emotional control and morality; and value of education, employment, and achievement [43]. These cultural values may at least partially explain the great involvement of family members in the help-seeking process. "The emphasis on

collective responsibility leads to a belief that mental illness is a family problem" and therefore family caregivers have a duty to solve the "problem" [30]. While this familial responsibility tends to override the feelings of shame and losing face in seeking out help, stigma still strongly influences the help-seeking pathway of many Chinese families. Although fear of stigma did not go so far as to prevent caregivers from seeking help, it was the most commonly reported reason for delay in seeking help from mental health professionals. The influence of stigma was found to be all the more apparent when Chinese Americans were compared to their White counterparts [44]. Despite country or region of residence, stigma about mental illness still seems to be deeply rooted in Chinese people across the world. However, as more attention is paid to early recognition and treatment of psychosis, more early intervention programs are emerging and slowly changing if not the societal attitude towards and knowledge about psychiatric illness, at least the accessibility of its services. The EASY program in Hong Kong is a prime example of this phenomenon [5]. In Tang et al.'s study, done in Beijing, the majority of subjects (59.4%) sought out a nonpsychiatric facility as their first contact with stigma and inaccessibility to or unavailability of a psychiatric hospital as main reasons for not seeking out psychiatric services. On the other hand, in Chiang et al.'s [31] study, done in Hong Kong, 37.1% directly accessed the EASY program and for the rest the most frequent first contact was a social worker. The difference in these findings could be due to the massive early psychosis awareness campaign in Hong Kong [45]. With studies in the past decade reporting that the most commonly reported first contact for patients and caregivers are informal network members in the community, campaign movements such as those in Hong Kong would prove critical in promoting timely access to appropriate treatment.

Another way to motivate patients and caregivers to more willingly seek psychiatric help is using a term that is less stigmatizing. For example, one of the most widely held casual beliefs of schizophrenia among Chinese people is excessive thinking [7]. Yang et al., propose that this belief could "powerfully shape" both conceptualization and behavioral response toward people who exhibit schizophrenia-like symptoms in China. In fact, they hypothesized that the excessive thinking construct could act as a socially acceptable label that mitigates psychiatric stigma. Therefore, "excessive thinking," its indigenous notion, in contrast to psychiatric illness labels, could act to preserve essential or moral or full adult status in China and encourage supportive and accommodating social responses from others. Recently, "si jue shi tiao"—thought and perceptual dysregulation—was advocated in place of "psychosis" in Hong Kong, with the hope to reduce stigma and promote more open communication of this illness [38]. Therefore, how the illness is conceptualized and interpreted by the family members or explained by clinicians is strongly related to stigma, which in turn could influence how caregivers emotionally relate to the patient and respond to his or her symptoms.

### Limitation of the Current Review

Two limitations of our current study should be noted. First, our review is qualitative in nature. A quantitative review may provide more evidence-based results. That being said, the themes generated from this comprehensive literature review appear to reflect the major areas of research focus. Second, there were some articles that met our inclusion criteria, but we did not have access to. Had we included these articles, our review might have yielded a more enriched picture of the cultural factors related to early psychosis in people from Chinese backgrounds.

## Limitations of Existing Studies and Directions for Future Studies

While the reviewed studies provide important findings regarding the psychosocial and cultural factors related to early psychosis among Chinese people, there are several common limitations across all the studies.

The first major limitation concerns the sample size and selection bias. Most of the studies needed a larger sample. The possibility of selection bias exists in different studies. For example, almost all the studies conducted in Hong Kong recruited participants from the EASY clinic, a special program within a tertiary psychiatric care setting. In other words, the program, which offers a very specialized care, would most likely be different from generic psychiatric services. Moreover, the clinical characteristics of the patient group at the EASY clinic would most likely be relatively homogenous.

Second, there were also limitations regarding the methodologies of the studies. Several studies reported the possibility of recall bias. Qualitative studies using in-depth interviews provided detailed information, but due to its retrospective nature, information could have been lost in the recall process. In addition, reporting bias in these studies might exist as subjects may have unconsciously or consciously wanted to enhance social desirability. A mixed methods approach would offer a richer and cross-validated picture of patient and caregiver experiences.

Next, the location of the studies should also be taken into consideration when assessing the generalizability of the findings. People from Chinese backgrounds reside in different parts of the world. China itself is a geographically vast, economically and culturally diverse country. Tang's study [5], for example recruited their subjects from Beijing, which is more economically developed and more culturally open than other regions of China. Therefore, Beijing itself may not be a good representative of China. In other less developed areas in China, financial factors and availability and accessibility of services may have played a more important role in the help seeking process.

Additionally, our initial literature search yielded an overwhelmingly large number of studies on the biological, genetic, and pharmacological studies of early psychosis in people from Chinese backgrounds. This could indicate that researchers are gradually shifting their views of mental illness from the socio-cultural perspectives to modern psychological and biochemical perspectives. A potential danger of the overemphasis on the latter could be that social and cultural factors are undermined or even ignored in the diagnosis and treatment of early psychosis or other mental illnesses in Chinese populations. This is of great concern, as our review strongly suggests that deeply-rooted cultural values and beliefs about mental illness shape the understanding and help-seeking behaviors of Chinese people. This is reflected in the finding that only 30% of Chinese people with schizophrenia receive treatment as opposed to 80% in Western countries [46]. There needs to be a paradigm shift to well-designed and controlled studies that examine how cultural factors affect the help-seeking pathway and treatment outcomes of patients and their family members in order to inform clinical practice by providing targeted prevention and intervention and enforce a shift in research focus and policy making.

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