



SCHIZOPHRENIA AND PSYCHOSOCIAL FACTORS: A SYSTEMATIC REVIEW ACROSS ASIA AND PAKISTAN

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Abstract

Background: Schizophrenia is characterized as disturbances in thinking, emotional responsiveness, and behavior. This psychiatric condition involves a wide range of symptoms which can be characterized into two categories; positive and negative symptoms. Whereas, psychosocial factor is defined as the interaction among the social environment, behaviors, emotions, and thoughts of individuals. The aim of this review was to identify the psychosocial factors that play an important role in the manifestation of schizophrenia.

Methods: The following research utilized PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) as a checklist and guideline.

Results: The review consisted of a total of 20 studies which were selected through the PRISMA screening process and extracted 4 different themes serving as psychosocial factors which were; Cultural practices/aspects, religion, social support and gender difference.

Conclusion: The findings indicated that, in Pakistan and Asia the most common psychosocial factors which were reported to contribute in the symptoms of schizophrenia were; culture as the nature of hallucinations and delusions as well as their thoughts and behaviors were influenced by cultural and social practices which in turn affect their compliance towards treatment. Moreover, religion not only affected the beliefs and attitudes of patients but it also disrupted their psychopathology. Additionally, patients with lack of social support were reported to have higher relapse rate, more complications, and non-adherence to treatment. Lastly, gender difference was a notable psychosocial factor that demonstrated the differences in the recovery and onset of schizophrenia in men and women and their subsequent treatment outcome. S

Keywords: Schizophrenia, Psychosocial Factors, Culture, Religion, Social Support, Gender Difference, Mental Health, Psychotic Illness

Introduction

Recent researches on schizophrenia indicated that around 21 million people worldwide are suffering from this chronic mental health problem, whereas, the exact prevalence in developing countries such as Pakistan is yet unknown. However, it is reported that 1 to 2 % of the population may suffer from this disorder. ^[1] Additionally, it was also reported by WHO that the ratio of individuals affected by

schizophrenia worldwide was approximately 24 million which makes 1 in 300 people to have schizophrenia.^[2]

As defined by APA, “a psychotic disorder characterized by disturbances in thinking (cognition), emotional responsiveness, and behavior, with an age of onset typically between the late teens and mid-30s.”^[2] It is defined as a mental disorder which targets the persons’ thoughts, emotions, and behavior and they may lose touch with reality, which is known as disassociation. It may cause confusion and frustration for the patients and their families. In this particular mental illness, the individual is unable to perform day to day tasks and participate in social gatherings. This psychiatric condition involves a wide range of symptoms which can be characterized into two categories; positive and negative symptoms.^[4]

Positive symptoms are the ones which can be observed by others such as hallucination, delusions, confused thoughts and disorganized speech, trouble concentrating, movement disorders etc. On the other hand, negative symptoms are identified by abnormal mental health functioning, there is markedly diminished interest in activities that the person previously used to perform. These symptoms include; lack of pleasure, trouble with speech, flattening, withdrawal, struggling with the basics of daily life, unable to complete tasks, and decreased desire to socialize.^[3]

There are different types of schizophrenia. The most common are; Paranoid schizophrenia, disorganized schizophrenia, and catatonic schizophrenia. Paranoid schizophrenia was once known as the subtype of schizophrenia.^[8] It was the most common type that was portrayed in the media. This type mainly causes psychotic or positive symptoms such as; hallucinations and delusions. The most common type of hallucinations in this type includes auditory hallucinations in which they hear voices that are not real. Moreover, they have strong delusions that are fixed or persistent false and rigid beliefs which conflict with reality. Previously, if a person had these two symptoms they were diagnosed with paranoid schizophrenia. However, paranoia is now one of the symptoms of schizophrenia.^[6]

The next type is disorganized schizophrenia which is also known as *Hebephrenic Schizophrenia*. This subtype is specifically characterized by disturbance with the individual's communication and thinking patterns. They also have disordered behaviors and are mostly emotionless or are said to have flat emotions. This subtype is oftentimes marked by negative symptoms of schizophrenia such as; difficulty with maintaining personal hygiene and completing tasks, flight of ideas, word salad, racing thoughts, limited speech, restricted expressions, isolation and minimal socialization etc.^[5]

The third type is known as catatonic schizophrenia which is majorly diagnosed if the person has the signs of catatonia. Limited or excessive movement which impacts the behavior and speech of the individuals is known as catatonia. The prominent symptoms of this type of schizophrenia include catalepsy (person is unable to move on his own, due to muscular rigidity, and stays in a particular position in which they were placed), mutism, grimacing (holding inappropriate facial expressions mostly by stiffening or tensing their facial muscles), bizarre postures, echolalia (repeating what other people say), echopraxia (imitation or mimicking other people's movements or actions).^[7]

According to APA psychosocial factors are defined as, “social, cultural, and environmental phenomena and influences that affect mental health and behavior. These influences include social situations, relationships, and pressures, such as competition for education, health care, and other social resources; rapid technological change; work deadlines; and changes in social roles and status (e.g., of women and minority groups).”^[2] It is defined as the interaction among the social environment, behaviors, emotions, and thoughts of individuals. Our surroundings have a great impact on how we think and feel, and our behaviors can be affected by the physical and social settings in which we are residing. Psychosocial factors have two main elements; psychological and social

components. When a persons' behaviors and responses such as their fundamental beliefs, views, emotions, worries, and self-image, they come under the psychological element. On the other hand, the cultural and social norms, workplace, societal institutions and relationships are all examples of social factors which impact individuals mental and social health.

Methods

The following research utilized PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) as a checklist and guideline.

Inclusion criteria

The following study included the participants who had schizophrenia specifically or were relapse patients of schizophrenia. Moreover, the study focused on the psychosocial factors which were in any way related to schizophrenia. This systematic review solely focused on the researches that were conducted in Pakistan and Asian countries. The researches that were added in this article were mostly qualitative, quantitative, or mixed method approaches as the main aim of the study was to explore and understand the different psychosocial factors and their impact on schizophrenia.

Exclusion criteria

The studies that consisted of individuals with any other psychological illness or disorder were excluded. The researchers that discussed or reported the caregivers' perspective or the impact on them were also excluded. Furthermore, the studies from any other countries except Pakistan and Asian countries were excluded as well. The studies that solely focused on schizophrenia and do not highlight any psychosocial factor as the contributor of schizophrenia were eliminated.

Search strategy

Different search engines were utilized to conduct an extensive search for the related topic such as; PubMed, Springer, Google scholar, Cambridge University Press, and the Lancet Psychiatry. As for the terms that were used for searching the participants were the following; Schizophrenia OR psychosis OR schizophrenic patients OR mental health disorders. Whereas, the next term was psychosocial factors for which the following ways were used; Psychosocial factors and Schizophrenia OR Psychosocial and Psychological interventions for Schizophrenia OR Psychosocial functioning in Schizophrenia OR Socioeconomic factors and Schizophrenia OR Religion and Schizophrenia OR Psychosocial wellbeing of patients with Schizophrenia. Lastly, for the specific region, the names of countries were utilized such as; Pakistan OR India OR China OR Russia OR Indonesia OR other Asian countries. The inclusion criteria was limited to articles that were published in English. However, no restriction was imposed in terms of age range, type of the study approach, or the publication year of the articles.

Data screening and study selection

The following diagram 1 summarizes the study selection procedure. A total of 40 researches were taken from the literature search, however, in the selection process, the excluded articles due to similar or duplicate content were 5, 8 articles fell short of meeting the inclusion requirements due to which they were excluded, moreover, 7 more articles were also omitted due to their low validity and generalizability. In the final review, 20 researches were added.

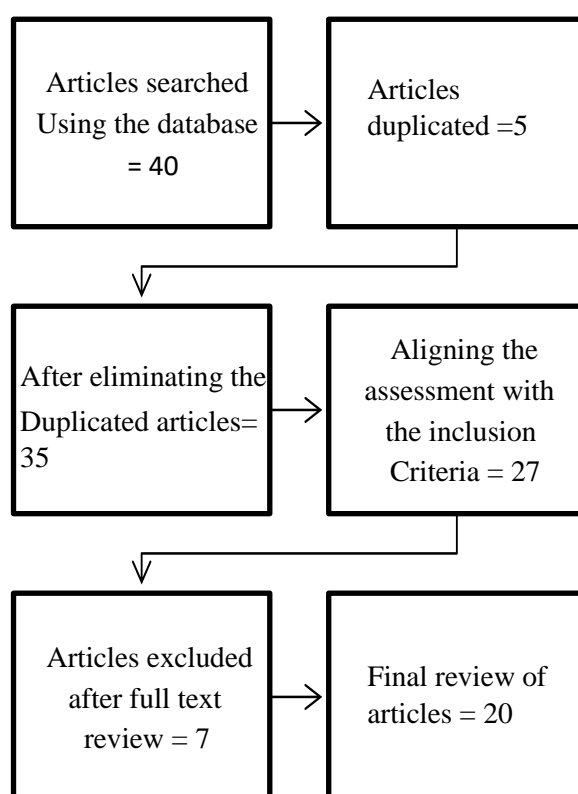


Diagram 1. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)

Data Extraction

The retrieved information from the studies comprised the author, year of publication, intervention employed, country, research methodology, data collection, conclusion, sample size, and the age range of the participants. Three independent reviewers cross checked the collected data.

Table 1- Summary of the studies included in the review

Study	Sample N	Type of study	Data collection method	Age Range (years)	Country	Intervention	Result
Association between social support and self-esteem in people with schizophrenia (Umara & Uzma, 2017) ^[44]	52	Quantitative correlational study	Self-report measures	18-55	Pakistan	It was a non-experimental, correlational study, and no intervention was employed.	The research indicated that social support plays an important role in influencing the self-esteem of schizophrenic patients. Support from significant others, friends and family contributed to 25%, 7% and 5% variance in self-esteem, respectively.

Psychoeducation and the family burden in schizophrenia: a randomized controlled trial (Nasar & Kausar, 2009) [18]	108	Randomized controlled trial	Self-report measures	18-45	Pakistan	Family Psychoeducation	The results of this study revealed that family psychoeducation is a significant intervention for schizophrenic patients. The relatives of 99 patients in the psychoeducation group, who completed the treatment, revealed a significant reduction in their burden at post-intervention evaluation.
Psychosocial rehabilitation training in the treatment of schizophrenia outpatients: A randomized psychosocial rehabilitation training and monomedication-controlled study (Wang et al., 2013) [19]	140	Controlled study	Self-report measures	16-50	China	Psychosocial rehabilitation training	It was found that psychosocial rehabilitation training proved to be an effective intervention in reducing the relapse rates, and enhancing the social functioning of patients with schizophrenia.
Phenomenology of delusions and hallucinations in schizophrenia by religious convictions (Suhail & Ghauri, 2009) [21]	53	Correlational study	Clinical interview	Not specified	Pakistan	It was a non-experimental, correlational study, and no intervention was employed.	This study found that individuals who practiced Islam experienced grandiose identities and abilities. The paranormal sounds and images were also more prevalent in pious patients. Therefore, to improve a patient's therapeutic outcomes their religious views should be understood.
Gender differences in recovery and Quality of life	70	Comparative study	Self-report measures	15-66 & above	Pakistan	There is no traditional intervention, instead	The findings of this study showed significant variations in the

among schizophrenic patients in Karachi (Zill-e-Huma & Siddiqui, 2018) ^[22]						assessment tools were used in this study.	recovery scores of male and female participants. Female patients had greater recovery scores as compared to male patients, in terms of better quality of life, physical and psychological health, environment, and social relations.
Culture and the prevalence of hallucinations in schizophrenia (Bauer et al., 2011) ^[23]	1080	Cross-sectional, comparative study	Clinical interview and questionnaires	Not specified	Globaly inc. Pakistan	No intervention was employed.	This research indicated that culture plays an important role in investigating the pathophysiology of psychotic symptoms. Elements such as clinical characteristics and cultural patterns interact to produce various types of hallucinations in schizophrenia.
The nature and efficacy of culturally-adapted psychosocial interventions for schizophrenia: a systematic review and meta-analysis (Degnan et al., 2018) ^[20]	7828	Systematic review and meta-analysis	Systematic screening of articles	Not specified	Globaly inc. Pakistan	Culturally adapted interventions were used.	The results imply that culturally-tailored interventions are more effective than conventional treatment, with the degree of effectiveness varying with the degree of adaptation.
Observed social support and willingness for the treatment of patients with schizophrenia (Jameel et al., 2020) ^[28]	34	Cross-sectional survey	Semi-structured interview	18-32	Pakistan	The study does not directly implement any intervention.	The findings of the study demonstrated the crucial role of social support helping in the recovery of schizophrenic patients.
Family interventions for schizophrenia and the psychosis: A Review	Not specified	Literature review	Secondary data analysis	Not specified	Globaly	Family Psychoeducation	Family psychoeducation proved to be an effective intervention in the treatment of

(McFarlane, 2016) ^[24]							schizophrenia. Teaching coping mechanisms and communication techniques help the families to better take care of their patients. A decreased relapse rate by 50-60% have been observed.
Culturally Adapted Psychosocial interventions for schizophrenia: A review (Maura & De Mamani, 2017) ^[25]	Not specified	Systematic review	Secondary data analysis	Not specified	Global	Psychoeducation, CBT, Multi-Family Group Therapy (MFGT)	This review highlighted the evidence that group-based psychosocial interventions that are culturally relevant enhance the lives of individuals with schizophrenia and their loved ones.
Factors associated with psychotic relapse in patients with schizophrenia in a Pakistani cohort (Ahmed et al., 2017) ^[9]	60	Observational study	Semi-structured interviews and Psychometric measures	Not specified	Pakistan	Evidenced based therapies were suggested, such as family and behavior therapies as well as Cognitive behavioral therapy (CBT)	The results of the research indicated that; non-adherence to the treatment, any other psychiatric illness which is occurring comorbidly, poor social relations, cultural and social myths and norms played an important role in the relapse of the patients with schizophrenia.
Perceptions about the cause of schizophrenia and the subsequent help seeking behavior in a Pakistani population - results of a cross-sectional survey (Zafar et al., 2008) ^[10]	404	Cross-sectional Research	Self-reported measures	18-72	Pakistan	Intervention was not implemented as such; the aim of the study was to raise awareness related to this particular disorder.	It was found in the study that only 30% of the population agreed on the fact that schizophrenia is a mental illness, whereas the rest of the population claimed that it is due to non-medical reasons such as; God's will, superstitious thoughts, unemployment or from being alone.

Religion, Spirituality, and Schizophrenia: A Review (Grover, Davuluri & Chakrabarti, 2014) ^[11]	Not specified	Literature review	Review of existing evidence-based data.	Not specified	Pakistan and globally	Role of religion in context to schizophrenia was studied, no such interventions were used.	Through this study it was concluded that for some people religion is a beacon of hope and it instills a purpose and meaning of life, whereas for most it causes hopelessness. Religion affects the psychopathology of the patients too, moreover, religion and spirituality affect the treatment adherence of the patients.
The relationship of psychosocial well-being of patients with schizophrenia with clinical, socio-demographic and neurocognitive characteristics (Sofronov et al., 2020) ^[12]	300	Observational study	Psychopathological assessments, mathematical modeling and psychometric tools	18-50	Russia	The mathematical model was used to study the relationship between the socio-demographic, clinical and neurocognitive factors affecting the lives of the patients.	This study developed and concluded that the B- factor which was “the burden of disease factor” played an important role in explaining the quality of life and the functioning of schizophrenic patients socially. Additionally, the patients with severe symptoms and cognitive deficits correlated with the B factor.
Vocational, social, and cognitive rehabilitation for individuals diagnosed with schizophrenia: a review of recent research and trends (Kurzban, Davis, & Brekke, 2010) ^[13]	Not specified	Literature review	Evaluation of recent trends and studies: a critical review	Not specified	Pakistan and globally	Suggested social and vocational rehabilitation, training new skills and cognitive training for enhancing the cognitive and vocational abilities of the patients with schizophrenia.	This study highlighted that social and vocational rehabilitation is helpful and improves the functioning of the patients however, there were some limitations such as; the lack of generalizability of the treatment results in real life and difference in responses of individuals.

Neuropsychological functioning as a moderator of the relationship between psychosocial functioning and the subjective experience of self and life in schizophrenia (Brekke, Kohrt & Green, 2001). ^[15]	40	Correlational study	Self-reported measures were used to measure satisfaction with life and self-esteem. Global assessment scale and neurocognitive measures.	Not specified	Not specified	No direct intervention was applied.	The result indicated that in the patients with schizophrenia the higher functioning i.e. the executive functioning controls the association between the subjective experience of the individual's life and self and the psychosocial functioning.
Psychosocial and psychological interventions for relapse prevention in schizophrenia: A systematic review and network meta-analysis (Bighelli et al., 2021) ^[16]	10,364	Systematic review and meta-analysis	Randomized control trials,	Not specified	Global	Family interventions, relapse prevention programs, family psychoeducation, integrated interventions, cognitive behavioral therapy and psychoeducation of patients.	
Phenomenology of delusions and hallucinations in schizophrenia in central Punjab, Pakistan (Sajid et al., 2011) ^[27]	80	Case series study	Clinical assessment using standardized criteria from DSM-IV	14-35	Pakistan	No intervention was employed.	The results of this study concluded that in the patients with schizophrenia the phenomenology of hallucinations and delusions appears to be influenced by socio-cultural background. The variety in the themes may be caused by factors i.e.; social class, dominant cultural beliefs, surroundings, and overvalued notions.

Gender Wise clinical response of antipsychotics among schizophrenic patients: a prospective observational study from Lahore, Pakistan (Asif et al., 2017) ^[29]	180	Prospective observational study	Structured assessment scales and tools	20-60	Pakistan	No particular experimental intervention was used.	The findings of the study indicated that after 1 year, there was a decrease in the positive and negative symptoms in both males and females. Males reported a greater number of cumulative adverse effects as compared to females. Therefore, sex-specific aspects i.e.; hormonal changes, socioeconomic circumstances should not be ignored in prescription procedures.
The pathoplastic effect of culture on psychotic symptoms in schizophrenia (Stompe et al., 2006) ^[30]	1080	Cross-cultural, observational study	Structured clinical interview and semi-structured questionnaire	18-60	Globally inc. Pakistan	No particular intervention was used.	The results concluded that 30-40% of variation in the psychotic symptoms is explained by culture and the remaining percentage is non-specific to culture. It was also reported that the likelihood of misclassification is increased by 14.3% due to grey zone impact.

Results

In this review, a total of 20 studies were selected through the PRISMA screening process. Four major themes were extracted from different studies.

Theme 1: Cultural practices/ aspects

Culture can be defined as “the values, beliefs, language, rituals, traditions, and other behaviors that are passed from one generation to another within any social group.” ^[2] Through the analysis it was observed that culture is a significant psychosocial factor which not only affects the manifestation of symptoms of schizophrenic patients but it also plays an important role in the treatment. According to the research mentioned above the nature of hallucinations and delusions are also influenced by the cultural and social practices as well as norms and traditions of the patients. The findings indicate that the culture of the patients impact their thoughts and behaviors which in turn affects their compliance towards treatment.

Theme 2: Religion

Religion is defined as an individual's personal belief which particularly involves believing and worshipping the higher power controlling the world. The second theme that was extracted was religion. It was noted that specifically in Pakistan schizophrenia was closely related to religion as patients had an increased sense of grandiosity. Moreover, it was also observed that a huge number of reported cases were either considered as possession by an evil spirit or being cursed for not practicing the religion properly. Religion not only affects the belief and attitude of the patients but it also disrupts their psychopathology particularly of those who are more religious.

Theme 3: Social support

Social support is defined as “the provision of assistance or comfort to others, typically to help them cope with biological, psychological, and social stressors.”^[2] It was noted that research aimed at outcomes of schizophrenia treatment in regards to social support from close family, relatives and friends had positive results. Patients showed lower relapse rates and a smoother social reintegration with significant support from family and friends in terms of psychoeducation, learning coping mechanisms and enhancing self-esteem.

Theme 4: Gender Difference

Gender difference is defined as “typical differences between genders that are specific to a particular culture and influenced by its attitudes and practices.”^[2] Gender differences were noted to play a significant role in the outcome of the treatments with females showing greater recovery scores while males showed increased cumulative adverse effects one year after the treatment.

Discussion

This systematic review focuses on the psychosocial factors contributing to schizophrenia. Four themes were extracted which highlighted the factors that commonly manifest the symptoms of schizophrenia. The findings indicated that cultural aspects were an important aspect in elevating the symptoms of schizophrenia. In Pakistan and across Asia, the stigma associated with mental health issues was the main hurdle in seeking professional help specifically, in the backward areas, people associate hallucinations and delusions as a major symptom of schizophrenia with their superstitious beliefs. These strongly upheld beliefs were the biggest obstacle during the course of their treatment and their acceptance towards mental illness. According to the studies, it was highlighted that culture plays an important role in the manifestation, prevalence, outcome, and expression of schizophrenia which is considered as a disease of the brain. Moreover, it plays an important role in understanding the patient as well as formulating an effective diagnosis and treatment plan. Also, recent researches emphasize on the need of culturally- relevant therapies or interventions which will prove to be more beneficial than the traditional methods. By treating the patient in their cultural context, keeping in mind their norms, traditions, beliefs, biases, and stigmas we can better understand their problems, course of development, and devising effective treatment methods.^[31, 32, 33] Additionally, in this research along with the other recent research, it was noted that religion played an important role in the expression of schizophrenia. It was observed that people with schizophrenia not only in Pakistan and Asia, but also in other countries reported religion as an important psychosocial factor in the manifestation of schizophrenia. In the recent researches, it was reported that religion is a significant psychosocial factor of schizophrenia having both positive and negative effects. On one hand, it is believed that schizophrenia is caused by possession of a demonic entity or other evil spirits which causes delusions and hallucinations in the patients therefore, seeking help from religious or spiritual healers rather than from some professional. However, on the other side, it was observed that religion can also positively contribute in the course of schizophrenia. By adding religion in the biopsychosocial model, a holistic approach can be utilized in the treatment of schizophrenia where it instills hope, purpose, resilience, and meaning in the life of the patient.^[34,35,36,37]

Furthermore, social support was observed to be another contributing psychosocial factor of schizophrenia. The studies emphasize the significance of having strong social support for these

patients to deal and overcome with this psychotic illness. It was observed that the individuals who lack social support tend to have more complications and worse symptoms as to the ones having strong social support. The studies significantly highlighted the need for understanding the social support from friends, family, and significant others to aid in the recovery process of the patients, and to boost their self-esteem and willingness towards treatment compliance. It was also highlighted that religious and cultural aspects of the society hindered providing the needed social support to the patients due to stigmas, taboos, and biases. Therefore, there is a need to understand that giving the appropriate social support to the individuals already struggling from disturbed mental states is crucially important. ^[38,39,40] In addition to other factors, one notable psychosocial factor was gender difference. Research highlights that schizophrenia is more prevalent in men than women. Women have a late onset of symptoms than men. The studies showed a noticeable difference in the onset in both genders, where men had an early onset of schizophrenia and women had a late onset because of estrogen serving as a neuro-protective factor that delays the onset till menopause. The studies also highlight that the expression and severity of the symptoms also differ in both genders with men experiencing more negative symptoms such as; social withdrawal, lack of pleasure, decreased emotional expression, and poor hygiene etc. Whereas, women showed more positive symptoms such as; paranoia, delusions and hallucinations but were said to function and adapt better than men. It was also observed that, there was a difference in social factors across the genders with females subjected to more sexual violence and socio-economic disadvantage whereas, men experience less support from family, and unfavorable or harsh environment. However, more extensive research is required to better understand the gender differences and its manifestation in schizophrenia. ^[41,42,43]

Limitations and suggestions

This review had some limitations which should be catered in future. The very first limitation would be the population specifically being from Pakistan and Asia due to which the global trends were not observed. Moreover, the study only discussed the patients with schizophrenia. Additionally, due to the limited data from a specific population the generalizability of the results was compromised.

The themes extracted from this review and discussion will help in understanding the psychosocial factors that affect the schizophrenic patients. By utilizing these themes, better intervention and rehabilitation strategies can be generated for schizophrenic patients in the future. Future research can be improved by adding more studies to give a diversified understanding of the contributing psychosocial factors in schizophrenia.

Conclusion

Schizophrenia is a psychotic illness which requires attention specifically in developing countries like Pakistan and Asia where different psychosocial factors play an important part in worsening the patients' condition. Through this research, some psychosocial factors were highlighted, but there is a need to identify other common and usually overseen factors that contribute to the symptoms of schizophrenia. However, further research is required to recognize other contributing psychosocial factors and work on developing a more holistic treatment and intervention by keeping in mind these different aspects.

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