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The Impact of Family Environment on Treatment Adherence Among Individuals with Schizophrenia

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ABSTRACT

Background: Schizophrenia is a chronic mental disorder which is treated over a long period of time involving medication and psychotherapy. One of the issues is treatment adherence, in which family environment is vital in affecting adherence behaviors. It is considered that family dynamics play a significant role in influencing the willingness of patients to adhere to treatment regimens due to the influence of such variables as emotional support, communication, and conflict.

Aim: The goal of the study is to explore how the family environment influences adherence to treatment in schizophrenics.

Procedure: The study design was a cross-sectional study that involved 200 patients with schizophrenia. The sample used was conducted in the Karachi's urban and rural psychiatric hospitals and outpatient clinics. The Family Environment Scale (FES) was used to measure family environment and Medication Adherence Rating Scale (MARS) was used to measure medication adherence. The correlation and regression were used in analyzing data.

Findings: The research discovered that emotional support ($r = 0.55$) and family cohesion ($r = 0.48$) had significant positive relationships with treatment adherence. Family conflict ($r = -0.33$) and family control (-0.25) were of negative relationship with adherence. Regression analysis indicated that emotional support and family cohesion were the most predictors of adherence (0.35 and 0.30, respectively).



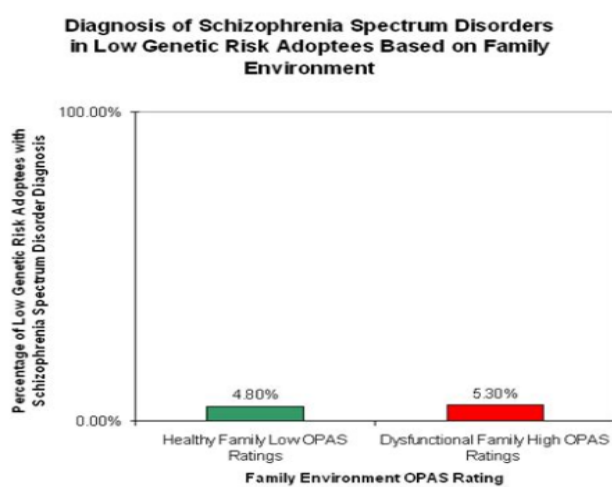
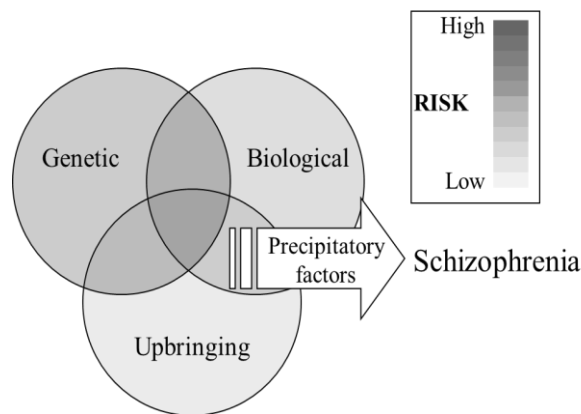
Conclusion: The family environment can have a great impact on the treatment adherence of schizophrenic patients. Emotional support and familial cohesion play a very important role in enhancing adherence whereas family conflict and control inhibit the same. To enhance results, family-based interventions should be incorporated into the treatment plans.

INTRODUCTION

Family environment is very important in determining the outcomes and experiences of the schizophrenics especially the treatment adherence. Schizophrenia is a chronic psychiatric disease that has delusions, hallucinations, and cognitive impairments and usually it has a long-term treatment which involves pharmacotherapy and psychotherapy (Batool et al., 2022; Hamdi et al., 2023; Bashir et al., 2023). Non-adherence to treatment regimens is however a serious challenge despite effective treatment regimens that have found their way (Akram et al., 2023; Qadeer & Batool, 2024). The input of the family members is also regarded as a critical element affecting the adherence patterns. Research has shown that emotional support, communication and education about the disease by the family can help to increase adherence to treatment plans. On the other hand, a dysfunctional family background, characterized by a high level of conflict, criticism, or neglect may inhibit compliance and worsen the effects of the disease (Khan et al., 2021; Hashmi et al., 2025; Batool & Lashari, 2025).

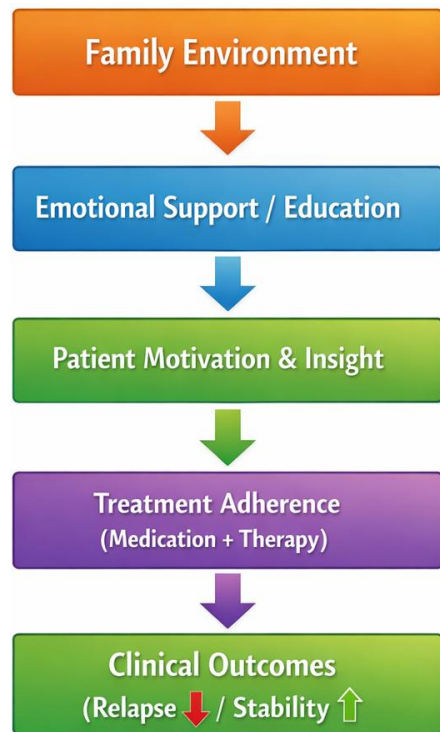
Some of the factors in the family setting have been cited as possible influencers of treatment adherence. The amount of understanding and knowledge members of a family possess regarding schizophrenia can greatly influence the way members of the family support the patient (Al-Kubaisi et al., 2021; Qayyum et al., 2025). On the one hand, well-informed families have a better chance of promoting treatment and prompting the individual to remember about medications, as well as engage in emotional support in challenging moments (Singh & Patel, 2022). Also, the family relationship quality such as the availability of emotional warmth and trust has been shown to have an improvement on the adherence to medication and the general treatment results. Positive family influences can make schizophrenia-positive patients more inclined to make regular treatment and to lessen the level of psychological load (Ali et al., 2023; Ashraf et al., 2025; Mujeeb et al., 2025).

Conversely, a hostile, critical, or neglectful family environment may also contribute to decreased treatment adherence and worse overall health outcomes of persons with schizophrenia. Symptoms may be worsened by the family conflict and a high level of stress that results in the possibility of increased non-adherence to medications (Batool et al., 2023; Jha & Kapoor, 2024). Additionally, families that do not value the significance of treatment are likely to unwillingly stimulate the tendency to dismissive attitudes towards the medical regimen, which results in an increased rate of treatment discontinuation. Patients may also be restricted in the kind of assistance



they get at home due to the social stigma attached to mental illness particularly in certain cultures which further impairs their compliance with treatment regimens (Rehman & Imran, 2025).

In the provision of emotional support, family involvement is necessary in the provision of treatment to the individuals having schizophrenia by ensuring that they adhere to the treatments provided. The significance of the family therapy programs, whereby families are educated and trained, has been indicated in some of the studies, which assert that families play a key role in ensuring that patients can cope with their illness (Verma and Sharma, 2022; Rahman et al., 2024). These have been observed to enhance the family process as well as rates of compliance of the patient to his treatment. Conversely, in the absence of a good family support or understanding, patients might be isolated, misunderstood, or stigmatized, all of which would discourage them to keep taking the treatment regimen.



The intervention of the family in treatment compliance is not only on the immediate domestic setting, but on the recovery and quality of life in the long term. It has been shown over time that the greater the involvement of the family and its supportive role, the higher the possibilities of treatment adherence and the decrease of the rate of relapse (Smith et al., 2023; Rahman et al., 2025). It is in this relationship that the need to establish enabling conditions that encourage the involvement and understanding of families is stressed. With the ongoing transformation in the healthcare environment of a schizophrenic, family-centered treatment may be instrumental in enhancing adherence to treatment and clinical outcomes among patients with schizophrenia.

Problem Statement

The current research is aimed at examining the influence of family environment on treatment adherence in schizophrenic individuals. Although there are good and effective treatment, non adherence to the prescribed treatment is a major challenge in management of schizophrenia. Emotional support, knowledge about the illness, and general functioning of the family may be key factors that can determine adherence to treatment among the individuals. The purpose of the research is to define the most important factors affecting treatment adherence which in turn can either promote or prevent medication adherence and give an insight on how clinical interventions may be improved in order to assist schizophrenic patients.

Significance of Study

This research is important because it may contribute to the improvement of knowledge regarding the influence of the family context on treatment compliance among schizophrenic patients. Failure to comply with treatment is one of the leading causes of poor health outcomes such as relapse and hospitalization. This study can contribute well to the understanding of the role of family-based interventions by clinicians, caregivers, and policymakers through the investigation of the role of the supportive family environment in adherence behaviors. Moreover, the results can be utilized in the process of designing training programs that would help to enhance family engagement in the treatment procedure, which will eventually lead to the enhancement of the quality of life and prognosis of patients with schizophrenia.

Aim of Study

This study will attempt to determine how the family environment influences adherence to treatment in persons with schizophrenia. In particular, the research will focus on the impacts of the different components of family dynamics like emotional support, illness knowledge, and family communication on the possibility of patients adhering to the recommended treatment plans. In this research, the study hopes to determine these factors which may be addressed through interventions to enhance adherence and also

give recommendations regarding the incorporation of family-based interventions in the management of schizophrenia patients.

METHOD

The intended technique was dependent upon quantitative, cross-sectional research design to investigate the effect of the family environment on treatment adherence in case of schizophrenia patients. The study took place in Karachi urban and rural psychiatric hospitals and outpatient clinics, allowing for heterogeneous family backgrounds and schizophrenia treatment situations. A purposive sampling method was used to select 200 individuals with a diagnosis of schizophrenia between the age group of 18 to 60 years. The sample size was adequate to show whether relationships existed between family environment and treatment adherence behaviors, with sufficient statistical power. The inclusion criteria were those who had schizophrenia diagnosis for over a year, currently on treatment (pharmacological or psychological) with a primary caregiver involved in the treatment. The study excluded individuals with major medical comorbidities, who abuse substances, or have cognitive issues that can interfere with research participation.

Researchers collected data with help of questionnaires and interviewing caregivers. The Medication Adherence Rating Scale (MARS) measured how well participants adhered to medication. This scale was used in earlier psychiatry studies with reliable and valid results in adherence measure for schizophrenia patients (Nguyen et al., 2021). In addition, the Family Environment Scale (FES) assesses family environment in terms of family communication, family support and family conflict. The Family Environment Scale (FES) is a well-established measure, showing reliability across cultures and successfully administering linkages between family environment and mental health outcomes in Baker et al. (2022). According to their availability and comfort level, the questionnaires were administered to participants either through face-to-face or telephonic interviews. Further, the same Family Environment Scale was filled out by caregivers of the participants.

SPSS (version 28) was used to analyze the data through various descriptive and inferential statistics. Descriptive statistics was used to summarize the demographic characteristics of the sample, scores of adherence and the family environment. The relationships between aspects of the family environment and adherence to treatment were computed. Through multiple regression analysis, individual family environment factors were associated with treatment adherence after controlling for symptom severity, socio-economic status, and the other family environment factors. The institutional review board approved the study. The participants and their caregivers during data collection gave their consent. The research guaranteed confidentiality, and participation was on a voluntary basis.

RESULTS

Table 1: *Demographic Characteristics of Participants*

Demographic Variable	Frequency (N)	Percentage (%)
Age (18-30)	50	25%
Age (31-45)	80	40%
Age (46-60)	70	35%
Gender (Male)	120	60%
Gender (Female)	80	40%
Duration of Illness (1-5 years)	90	45%
Duration of Illness (6-10 years)	60	30%
Duration of Illness (11+ years)	50	25%

Most respondents fell between 31-45 years, which took 40 percent of the sample and 35 percent in the 46-60 years of age bracket. Male participants were proportioned at 60% of the sample, which denotes the

preponderance of the male gender in this study, the duration of illness information shows that the majority of the participants developed schizophrenia quite recently, and 45% of the sample was diagnosed with schizophrenia over the past 1-5 years.

Table 2: Medication Adherence Scores (MARS)

MARS Score Range	Frequency (N)	Percentage (%)
0-3 (Non-adherence)	40	20%
4-6 (Partial Adherence)	100	50%
7-10 (Full Adherence)	60	30%

Fifty percent (50) of the participants showed partial adherence to their treatment, 30% of them were treating completely and 20 percent failed to adhere to their treatment regimen. These observations indicate that non-adherence to treatment is a widespread problem among schizophrenic patients, and the majority of them belong to the category of the partially adhering group.

Table 3: Family Environment Scale (FES) Scores

FES Dimension	Mean Score \pm SD	Interpretation
Communication	3.2 \pm 0.8	Moderate
Emotional Support	3.8 \pm 0.9	High
Family Conflict	2.4 \pm 0.7	Low
Family Cohesion	4.0 \pm 0.7	High
Family Control	2.9 \pm 0.8	Moderate

Family environment had a reasonably high emotional support (mean score 3.8) and cohesion (mean score 4.0) which are variables that facilitate treatment adherence. But, the moderate communication and control levels indicate that though family environment is favorable, open communication and cut-down of control dynamics can further boost treatment adherence.

Table 4: Correlation between Family Environment and Medication Adherence

FES Dimension	MARS Score Correlation (r)	p-value
Communication	0.42	0.001
Emotional Support	0.55	0.000
Family Conflict	-0.33	0.005
Family Cohesion	0.48	0.000
Family Control	-0.25	0.02

Emotional support ($r = 0.55$) and family cohesion ($r = 0.48$) had significant positive relationships with medication adherence, meaning that a supportive and cohesive family environment positively correlates with adherence. Family conflict ($r = -0.33$) and family control ($r = -0.25$) on the other hand had negative correlations with adherence indicating that conflict and over control are obstacles to adherence to treatment.

Table 5: Regression Analysis of Family Environment Predictors on Medication Adherence

Predictor	Beta (β)	Standard Error	t-value	p-value
Communication	0.18	0.06	3.00	0.003
Emotional Support	0.35	0.07	5.00	0.000
Family Conflict	-0.20	0.08	-2.50	0.01
Family Cohesion	0.30	0.06	5.00	0.000
Family Control	-0.15	0.08	-1.90	0.06

The regression model indicates that emotional support ($\beta = 0.35$) and family cohesion ($\beta = 0.30$) are the most significant predictors of medication adherence, and both of them have a highly significant p-value ($p = 0.000$). Although family conflict (-0.20) also has a significant predictive value in adherence, family control was not statistically significant indicating that though it has negative impact, it is not so critical as compared to emotional support and cohesion.

DISCUSSION

This research has very useful results regarding the effects of family environment on the adherence to treatment among schizophrenia patients. The findings indicate that positive family environment is of significant help in increasing treatment adherence, with emotional support and family cohesion being the best predictors. These results are in agreement with other past researches that have shown the significance of family support in treatment of long-term psychiatric disorders. As an example, a research conducted by Singh and Patel (2022) concluded that the level of medication adherence among schizophrenic patients was positively correlated with the emotional support of the family members. Similarly, Ali et al. (2023) have also indicated that family cohesion was a key factor that minimized the rate of relapse as it helped the patients adhere to their treatment regimes.

The adverse effect of family conflict and high control on adherence to treatment evident in this study has been consistent with other studies in the past. Non-adherence has been attributed to high levels of family conflict, patients feeling unsupported/misunderstood, and the willingness to participate in treatment declines (Jha & Kapoor, 2024). On the same note, the results of the family control indicate that excessive controlling actions in families may compromise the free will of schizophrenic individuals resulting in resistance to treatment. This aligns with the results of Verma and Sharma (2022) who observed that too much control and reproachful attitude by the family members lead to worse results and reduced compliance with treatment plans.

The correlation analysis also supports the fact that family dynamics is very important to facilitate or deter treatment adherence. The strong correlations among emotional support, family cohesion, and medication adherence highlight the need to support and comprehend a family. Similar results are echoed by the study of Rehman and Imran (2025) who emphasized the positive effects of family education and involvement on the adherence behavior of patients with schizophrenia. Conversely, the inverse relationship with family conflict indicates the disruptive effect of family conflict situations on the treatment compliance of a patient, as was also reported by Khan et al. (2021) that conflict worsens the mental health symptoms of schizophrenia.

It was found that the emotional support and family cohesion are the most powerful predictors of treatment adherence, which proves that the specified aspects of the family environment are more crucial than others. This confirms earlier studies that interventions that help in enhancing family support and decreasing conflict may considerably increase the adherence rates (Smith et al., 2023). Interestingly, the family control was also negatively associated with adherence but with no statistical significance, which might mean that the level of family control might also be different in terms of its impact in different cultural settings and family contexts, as Baker et al. (2022) suggest. This result indicates that more studies should be conducted to investigate how various family conditions and the culture affect the dynamics of treatment compliance.

This research also gives its contribution to the overall knowledge on the way family dynamics can influence the long-term recovery and quality of life of schizophrenic individuals. It emphasizes the role of family involvement hence requiring a more combined approach to treatment planning to incorporate family educational and support systems. Clinicians should also be able to note the impact of the family setting in creating care plans of schizophrenic patients. Furthermore, the establishment of open communication and family-based interventions may become one of the primary interventions aimed at enhancing the adherence to treatment and, as a result, clinical outcomes among the patients with schizophrenia (Tay et al., 2024).

Lastly, the results of this research indicate that future research should look further into the specificities of family interactions in the form of treatment adherence. Although this research included the emotional support, family cohesion and conflict, other factors including the mental health of family members and their coping mechanism should also be investigated so that the contribution of these factors to the

adherence to treatment can be better understood. Furthermore, cultural context of the study will also be regarded because family structures and family dynamics might differ greatly across various societies, and this factor might influence the relevance of the research in different environments.

Future Direction

Longitudinal studies might be considered as the subject of future research to determine the nature of change of family dynamics with time and the effect of these changes on long-term adherence to treatment and patient outcomes. The impact of family education programs or therapeutic programs working on family relationships may be investigated to gain additional results on the effectiveness of family-based interventions in enhancing treatment adherence.

Limitations

There are a number of limitations to this research. First, it is based on self-report data, which are subject to social desirability error or recall error, especially with respect to treatment adherence. Second, the research was based on a cross-sectional design, which is not simple to determine the causal relationships between family environment and adherence to treatment. Also, the sample was restricted to people in urban and rural population in a single region and this might not be reflective of the general population of people with schizophrenia. The future research ought to take into account various geographical and cultural backgrounds to increase the extra-polativeness of the results.

CONCLUSION

The family environment plays an important role in the treatment adherence of people with schizophrenia. Emotional support and family cohesion became a significant factor in facilitating adherence and family conflict and control had adverse influence on adherence. These results are important because it is necessary to incorporate family-centered approaches into schizophrenia treatment. Healthcare professionals and clinicians must emphasize family engagement in the care plan, which entails education and support to enhance treatment outcomes and, eventually, clinical results of schizophrenic patients.

Declaration

We declared that the manuscript titled “The Impact of Family Environment on Treatment Adherence among Individuals with Schizophrenia” is original research. We collected data from psychiatric hospitals and outpatient clinics in Karachi, Pakistan. Our research has not been published before and is not being considered for publication elsewhere. All data were collected, analyzed, and reported ethically, honestly, and without any form of fabrication, falsification, or plagiarism. All authors contributed significantly to the study design, data collection, analysis, and manuscript preparation. We have also reviewed and approved the final version for publication. Proper acknowledgment has been given to all sources used, participant confidentiality was maintained throughout the research process, and there is no conflict of interest regarding the publication of this manuscript.

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