ORIGINAL ARTICLE:

FREQUENCY OF FACTORS RELATED TO NON ADHERENCE IN PATIENTS WITH SCHIZOPHRENIA PRESENTING TO PSYCHIATRY DEPARTMENT AT CIVIL HOSPITAL KARACHI

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ABSTRACT

OBJECTIVE

To determine the factors associated with non-adherence to antipsychotic medication among adult patients with schizophrenia.

STUDY DESIGN

Cross-sectional study

PLACE AND DURATION OF STUDY

The study was conducted at the Department of Psychiatry, Dr. Ruth K.M. Pfau Civil Hospital, Karachi in a period of six months.

METHOD

A total of 155 patients were recruited through consecutive sampling. Data on socio-demographic characteristics, clinical history and factors influencing non-adherence were collected using structured interviews.

RESULTS

The mean age of participants was 40.67 ± 11.44 years, with 63.2% being male. Non-adherence to medication was observed in 77.4% of patients, with significant contributing factors including adverse drug effects (61.5%), stigma (42.3%) and financial barriers (46.2%).

CONCLUSION

Non-adherence to antipsychotic medications is alarmingly high among patients with schizophrenia in Pakistan, necessitating targeted interventions addressing economic, social and clinical challenges to improve adherence rates.

KEYWORDS

Non-adherence, Schizophrenia, Antipsychotic medication, Factors, Pakistan.

INTRODUCTION

Schizophrenia is a chronic and debilitating mental disorder that affects approximately 1% of the global population, with an estimated 20 million individuals suffering from the condition worldwide[1]. Characterized by a spectrum of positive symptoms (e.g., delusions and hallucinations), negative symptoms (e.g., social withdrawal and lack of motivation) and cognitive impairments, schizophrenia profoundly impacts patients' quality of life and functional abilities[2]. Effective management of schizophrenia is essential to reducing the disease burden, but this is contingent upon adherence to prescribed treatment regimens, particularly antipsychotic medications.

Non-adherence to antipsychotic medication remains one of the most significant challenges in the treatment of schizophrenia. Research suggests that nearly 50% of patients with schizophrenia are non-adherent at some point during their treatment journey[3]. This has far-reaching implications, including increased rates of relapse, hospitalization, treatment resistance and even mortality due to suicide or comorbid physical conditions[4]. Despite the availability of effective medications, factors such as side effects, stigma, financial barriers and inadequate patient education often contribute to non-adherence[5].

In Pakistan, mental health services are underdeveloped, with limited resources allocated to psychiatric care. The prevalence of schizophrenia is estimated at 1.5% of the population, with rural and underserved communities facing significant barriers to diagnosis and treatment[6]. Cultural factors, including stigma and reliance on traditional

healers, exacerbate these challenges, often delaying appropriate care[7]. Medication non-adherence in this context is particularly concerning, given the lack of robust community-based mental health programs and financial safety nets for patients[8].

The existing body of research highlights the multifaceted nature of non-adherence in schizophrenia. For instance, adverse effects of medications, such as weight gain and sedation, have been consistently linked to discontinuation[9]. Stigma, both social and self-imposed, further discourages patients from seeking or continuing treatment[10]. Economic constraints, including the high cost of medications and healthcare services, pose additional hurdles, especially in low- and middle-income countries like Pakistan[11].

Given the complex interplay of these factors there is an urgent need for targeted research to identify and address the specific barriers to adherence in resource-limited settings.

This study aims to evaluate the socio-demographic and history related factors contributing to medication non-adherence among patients with schizophrenia in Karachi, Pakistan. By identifying these factors, the study seeks to inform evidence-based interventions that can improve adherence rates and consequently improve patient outcomes.

METHOD

Procedure

After the approval from Institutional Review Board patients were approached at the Psychiatry Department, Dr. Ruth K.M. Pfau Civil Hospital, Karachi. Informed consent was sought before interviews were conducted. Data were analyzed using SPSS version 22.0. Descriptive statistics summarized the data. Chi-square tests were used to assess associations between variables.

Participants

A total of 155 adult patients diagnosed with schizophrenia based on DSM-5 criteria were included using consecutive sampling. Patients unable to provide informed consent or those with comorbid severe cognitive impairments were excluded.

Instruments

Data was collected using structured interviews. The questionnaire assessed socio-demographics (age, gender, income, education), clinical history (duration of illness,

comorbidities) and adherence status. Adherence was defined as taking 80% or more of prescribed doses in the past month[12].

RESULTS

Results showed that the mean age of the sample was 40.67±11.44 (M±SD). 98 (63.2%) patients were male while 57 (36.8%) were female. Marital status showed that 99 (63.8%) patients were married, 37 (23.9%) were single while 19 (12.3%) patients were widow/widowers. Out of 155 patients, 83 (53.5%) were resident of urban areas while 72 (46.5%) were resident of rural areas. 62 (40.0%) patients were uneducated, 43 (27.7%) had primary education while 50 (32.3%) had secondary education. Socioeconomic status showed that 95 (61.3%) patients were having a family income less than 10,000 while 60 (38.7%) had income about 10,000 – 50,000. Duration of disease was 6.40 ± 7.16 years (Mean ± SD), 50 (32.3%) patients had Diabetes mellitus while 69 (44.5%) patients had Hypertension as comorbidity. Positive history of psychiatric illness was found in 98 (63.2%) patients.

TABLE 1

STRATIFICATION OF DEMOGRAPHIC VARIABLES AS PER ADHERENCE THROUGH CHI SQUARE (n=155)

Variable		Adherence status		p
Age group in years		**Adherence**	**Non adherence**	
	18 – 40	22 (14.2%)	47 (30.3%)	0.013
	>40	13 (8.4%)	73 (47.1%)	
Gender	Male	22 (14.2%)	76 (49.0%)	0.959
	Female	13 (8.4%)	44 (28.4%)	
Residence	Urban	5 (3.2%)	67 (43.2%)	0.0001
	Rural	30 (19.4%)	53 (34.2%)	
Socioeconomic status	Less than 10,000 PKR	16 (10.3%)	79 (51.0%)	0.032
	10,000-50,000 PKR	19 (12.3%)	41 (26.5%)	
Marital status	Married	20 (12.9%)	79 (50.9%)	0.005
	Single	15 (9.7%)	22 (14.2%)	

	Widow/widower	0 (0.0%)	19 (12.3%)	

TABLE 2

STRATIFICATION OF HISTORY RELATED VARIABLES AS PER ADHERENCE THROUGH CHI SQUARE (n=155)

Variable		Adherence status		p
Family history of illness		**Adherence**	**Non adherence**	
	Positive	14 (9.0%)	84 (54.2%)	0.001
	Negative	21 (13.5%)	36 (23.2%)	
Diabetes Mellitus	Positive	14 (9.0%)	36 (23.2%)	0.265
	Negative	21 (13.5%)	84 (54.2%)	
Hypertension	Positive	14 (9.0%)	55 (35.5%)	0.541
	Negative	21 (13.5%)	65 (41.9%)	
Duration of illness in years	1 – 5	33 (21.3%)	69 (44.5%)	0.0001
	>5	2 (1.3%)	51 (32.9%)	

Out of 155 patients, adherence was noted in 35 (22.6%) patients while non-adherence was noted in 120 (77.4%) patients. Stratification of age group, duration of disease, gender, place of residence, socioeconomic status, diabetes mellitus, hypertension, family history of psychiatric illness and marital status was done with respect to adherence and non-adherence in order to find out significant difference. Demographic variables like age group, marital status, residence and socioeconomic status were seen associated with non-adherence in chi square test while no association was found between gender and non-adherence (see table 1). In history related variables, duration of illness and family history of illness were seen associated with non-adherence while comorbid Hypertension and Diabetes Mellitus were not associated with non-adherence (see table 2).

DISCUSSION

This study underscored the persistent challenge of medication non-adherence in schizophrenia, particularly in low-resource settings like Pakistan[13]. The findings align with international research, indicating that non-adherence rates can range between 40% and 80% globally, influenced by socio-economic, cultural and systemic factors.

Nearly half of the participants cited financial constraints as a barrier to adherence. Similar findings have been reported in other low- and middle-income countries where out-of-pocket healthcare expenses are the norm. Government-led initiatives such as subsidized medication programs and insurance schemes for mental health disorders could significantly alleviate this burden[14].

Recent innovations, such as digital adherence tools and long-acting injectable antipsychotics, offer promising solutions. Digital tools including smartphone apps and electronic medication monitoring systems have been shown to improve adherence by providing reminders and tracking usage. Long-acting injectable (LAIs), while underutilized in many settings could enhance adherence by reducing the need for daily dosing.

The findings emphasize the need for a multifaceted approach to address medication non-adherence. Policymakers should prioritize the integration of mental health services into general healthcare systems ensuring accessibility and affordability. Clinicians should adopt a patient-centered approach focusing on education, side effect management and regular follow-ups.

CONCLUSION

Non-adherence to antipsychotic medications is alarmingly high among schizophrenia patients in Karachi which are seen associated with socio-economic and history related variables. Targeted interventions are critical to improve adherence and ensure better clinical outcomes in the segments associated with non-adherence.

LIMITATIONS AND FUTURE RECOMMENDATIONS

This study is limited by its cross-sectional design which precludes causal inferences. Furthermore, reliance on self-reported adherence may introduce recall bias. Future longitudinal studies with objective adherence measures, such as pharmacy refill records, are recommended.

Future studies should explore the long-term impact of adherence interventions and examine the role of emerging technologies such as AI-powered adherence tracking and tele psychiatry in improving outcomes. Additionally, qualitative research could provide deeper insights into patient and caregiver perspectives on adherence.

IMPLICATIONS

- Implement psychoeducation programs for patients and caregivers.
- Introduce financial assistance schemes for low-income patients.
- Strengthen community-based mental health services to address stigma and provide holistic care.

CONFLICT OF INTEREST

None

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DISCLOSURE

None

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