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RESEARCH ARTICLE
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"TIME BETWEEN ONSET OF ILLNESS AND CONTACT WITH PSYCHIATRIST IN RURAL VS URBAN PATIENTS"

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ABSTRACT

Background: Late access to psychiatric services is one of the significant health issues in society, especially in low- and middle-income nations. The disparities in the rural-urban access to mental health services, stigma, and accessibility may be a major factor contributing to the interval between the development of a psychiatric illness and the initial encounter with a psychiatrist.

Objective: The purpose of the study is to compare the gap between the onset of the psychiatric illness and the first psychiatric consultation of the rural and urban patients.

Methods and Materials: It was a cross-sectional study that was done at Department of Psychiatry, Khyber Teaching Hospital, Peshawar from January, 2025 to June, 2025. Patients in the first psychiatric visit were included as adults. A structured proforma was used to collect sociodemographic and clinical data, and the length of untreated illness was determined in months. The comparison between rural and urban groups was done by applying relevant statistical tests.

Results: Rural patients took a much longer period to seek psychiatric care than urban patients (14.8 vs 7.9 months, $p<0.001$). Delay was also longer with rural living, distance to hospital, and low educational level.

Conclusion: The delays in referral to psychiatric care are significant among rural patients, and special measures should be taken to increase the early use of mental health services.

Keywords: Psychiatric care delay, rural–urban disparity, mental illness, Pakistan, mental health services

INTRODUCTION

Timely access to psychiatric care in cases of mental illness is another key aspect which determines clinical, functional, and prognosis. It has been found that the effects of the delays in seeking psychiatric help are more severe symptoms, poor psychosocial functioning, relapse and hospitalization. The habitual patterns of psychiatric assistance-seeking among rural and urban residents are constantly shown to differ considerably, and these are influenced by the structural, social and health-system variables. In the city patients have a better chance of getting access to more services and contacting psychological practitioners sooner as the rural patients have to endure the challenges that prolong the duration of illness without treatment. According to Forrest et al., there were pronounced differences between rural and urban psychiatric diagnosis and degree of symptoms and

functional impairment, and the way the delayed access can complicate the clinical presentation during the initial psychiatric interaction (1). Beyond the symptom burden at the individual level, the quality and level of psychiatric care, also differ greatly across geographic settings. The rural populations are likely to be provided with intermittent services, shortages of experts, and worse inpatient care than those in the urban population.

The research by Hung and others states that the rural-urban disparities in the quality of inpatient psychiatric care were still widespread and might be regarded as the deterrent effect of the initial approach and the imposition of the delays in seeking treatment (2). Other indicators of geographic inequity in outpatient psychiatric care are excessive waiting times and a lack of appointments, and this affects the rural community disproportionately. Sun et al. report that outpatient psychiatric services are of low grade and that there is high geographic dispersion of the services, and they indicated that the hindrances to access contribute to a protracted time span between beginning of the illness and the psychiatric consultation particularly outside of the metropolitan regions (3). There is also a difference in the use of psychiatric services in urban and rural regions influenced by population characteristics and environmental factors. Living in urban regions has been associated with the agglomeration of genetic vulnerability to certain psychiatric diseases, which could increase the utilization of mental health services in urban areas. It has been demonstrated by Maxwell et al that individuals who are at high risk of developing psychiatric disorders through genetic factors are likely to live in urban living and this implies that both biological factors and environmental factors are determinants of the care seeking patterns (4).

The rural people generally face huge logistical challenges including long distances to health facilities. The authors of Lankila et al. have shown a strong correlation between the extension of time of travel and the reduction in utilization of mental health services which substantiates the argument that an increased geographic access to psychiatric contacts can delay mental care access (5). The other factor, which is slow, is psychiatric engagement that is also supported by cultural beliefs and social perception, which is more so in the rural settings. According to a Chinese population-based study conducted by Yang et al., the patients with schizophrenia in the rural setting were significantly more likely than their urban counterparts to have never been treated, which was specifically due to the presence of stigma, lack of awareness, as well as informal care structures (6). The fact that psychiatric disorders have not only been diagnosed late and treatment commenced late is not limited to those disorders as the same has been observed in neurological and cognitive disorders. Kvello-Alme et al. found that the time to diagnosis in young-onset Alzheimer disease was extended, which shows that the delay systemically as a potential problem even in well-resource settings and aggravates disease outcomes (7). HSA innovations have also made attempts in the recent past to reduce access barriers particularly through the use of telehealth.

The policies of telepsychiatry have increased rapidly in the COVID-19 pandemic and shifted trends in providing psychiatric care. Lin et al. reported that the evolution of telehealth policy contributed to the increase of access to opioid use disorder treatment, which could potentially be useful in the context of psychiatric delays alleviation (8). However, the use of environmental stressors such as air pollution that is more prevalent in the urban population may have a paradoxical impact on the utilization of mental health services due to the high psychiatric morbidity. A study established that air pollution exposure relative to individuals with first-episode psychotic and mood disorders was in positive relationship with mental health services which indicated that risk-access phenomenon was complicated in urban settings (Newbury et al., 9). The most influential aspect which has led to late psychiatric consultation particularly in South Asian rural regions has been stigma. Indian studies also indicate a high level of mental health stigma, poor delivery of services and poor utilization in rural settings. According to Kaur et al., in the north of India, the same scenario as in the rural regions of Pakistan, stigma and lack of infrastructure are contributing factors to the lack of access to timely psychiatric care (10).

These problems with the provider are the issues that also contribute to the delays since the loss of medication adherence and service engagement is conditional upon the communication gap and follow-ups. As well, Deng et al. discovered that a variety of clinician-reported measures of adherence are

capable of further prolonging untreated disease and delaying prolonged psychiatric involvement (11). The tribe, urban and rural people have different understandings of mental illness in the society. According to a study conducted by Raghavan et al., the level of social stigmatization and exclusion of victims of mental illnesses in rural Indian communities was higher than in urban communities, which had a direct effect on the behavior of seeking help (12). The stigma is not only to the general population but even the healthcare trainees may have some negative attitudes towards the work with patients. Babicki et al. reported that, according to the research, the stigma towards psychiatric patients was high among medical students in the majority of the countries, and this fact could impact early referral and diagnosis (13). The access to the psychiatric care is also predetermined by the preferences of the patients. As much as telemedicine is convenient, it is not very acceptable by various demographic and geographic groups.

Moulaei et al. determined that although the majority of patients were interested in telemedicine, certain individuals, namely, those with low digital literacy, prefer to receive assistance face-to-face, and it is not as accessible in rural regions (14). Crisis oriented use of services is often caused by late outpatient services. In the study conducted by Kurdyak et al., it was found that many people turned to mental health services due to the visits to psychiatric emergency departments, and this showed the untapped potential of early treatment (15). The repeated hospitalization and the revolving-door phenomenon is a habitual outcome of delayed and disaggregated care in most cases. According to Fonseca Barbosa and Gama Marques, poor continuity, and late attendance are among the causes of repeat admission in extreme psychiatric patients (16). There is also a relation between late treatment to increasing the risks of suicidality and the worsening of the symptoms. Elsayed Ahmed et al. conclude the existence of a significant correlation between the symptoms of positive psychotic and suicidal ideations, and correspondingly, they indicate the risks of the untreated illness in the long-term (17). Failure to take medication only adds to these dangers particularly in resource-strained set-ups. Ghosh et al. established that the key issues of non-adherence among severely mentally ill in the case of severely mentally ill is the socioeconomic factors, lack of insight and follow-ups, which upholds the significance of timely psychiatric communication (18).

Objective:

To compare the time interval between the onset of an illness related to psychiatric illness and the first contact with a psychiatrist between rural and urban patients of a tertiary care hospital in Pakistan.

MATERIALS AND METHODS

This was done to determine the difference in the time gap between the development of a psychiatric illness and initial access to a psychiatrist in rural and urban patients. This was done in a systematic manner to ensure a high level of data collection, a good choice of participants, and ethical research practice in a clinical environment in Pakistan.

Study Setting: Cross-sectional observational study

Study Design: Department of Psychiatry, Khyber Teaching Hospital, Peshawar

Study Duration: From January, 2025 to June, 2025.

Inclusive Criteria: The study included patients aged 18 years and older who were initially visiting a psychiatrist. Persons diagnosed with any psychiatric disorder in accordance with the generally accepted diagnostic criteria were eligible. Male and female patients of rural and urban areas, according to official residential classification, were recruited. The participants had to give informed consent and be capable of giving a credible history of the onset of the symptoms.

Exclusive Criteria: Patients who had undergone psychiatric treatment before or were under continuous care with the mental health care professionals were excluded. They did not include individuals whose cognitive impairments, intellectual disability, or acute medical or neurological conditions would not allow them to accurately take history. Patients who were unwilling to participate or those who were incapable of informed consent were also not considered in the study.

Methods

The data were gathered, comprising a structured interviewer-administered pro forma at the initial psychiatric attendance of the patient. The sociodemographic variables were age, sex, education status, job, residence (urban or rural), and distance to the hospital. Primary psychiatric diagnosis and age of onset of symptoms were used as clinical variables. The patient and caregiver reports were used to determine the number of months it took before a psychiatrist was contacted. A national administrative definition was made to identify rural and urban residences. All interviews were done by trained residents in psychiatry under the supervision of the consultants in order to be uniform. Statistical Package of Social Sciences (SPSS), version 26, was used to enter the data and analyze it. Variables were summarized using descriptive statistics. Independent sample t-tests or Mann-Whitney U tests were used to test the difference between the delays of rural and urban, with the p-value of below 0.05 being considered statistically significant.

Results

The number of patients incorporated in the study experienced 180 over the period of the study. Out of this, 92 (51.1) were found in the rural regions and 88 (48.9) in the urban regions. The average age of participants in the study was 34.7 ± 11.2 years, and the age of the participants ranged between 18 and 65 years. Males have been used as 56.1% of the sample, and females have been used as 43.9%. The patients in the rural areas had less education and were more likely to be unemployed than those in the urban areas, whereas secondary or higher education was more commonly reported by patients in the urban areas.

Table **1** also outlines the sociodemographic features of the research population and shows significant differences between the rural and urban populations, especially in terms of education level and employment status.

Table 1: Sociodemographic characteristics of study participants

Variable	Rural (n=92)	Urban (n=88)	Total (n=180)
Mean age (years)	35.9 ± 11.6	33.4 ± 10.7	34.7 ± 11.2
Male (%)	55 (59.8%)	46 (52.3%)	101 (56.1%)
Female (%)	37 (40.2%)	42 (47.7%)	79 (43.9%)
Primary or no education	54 (58.7%)	29 (33.0%)	83 (46.1%)
Unemployed	49 (53.3%)	32 (36.4%)	81 (45.0%)

According to the clinical profile, the most frequent diagnoses that existed in both groups were mood disorders, psychotic disorders, and anxiety disorders. Nevertheless, psychotic disorders were quite common among the rural patients as opposed to urban patients. There was no significant difference in the mean age when psychiatric symptoms began in the two groups, and this is an indication that there was no difference in the onset of illness, whether one lived in the city or lived in rural areas.

Table 2: Distribution of psychiatric diagnoses

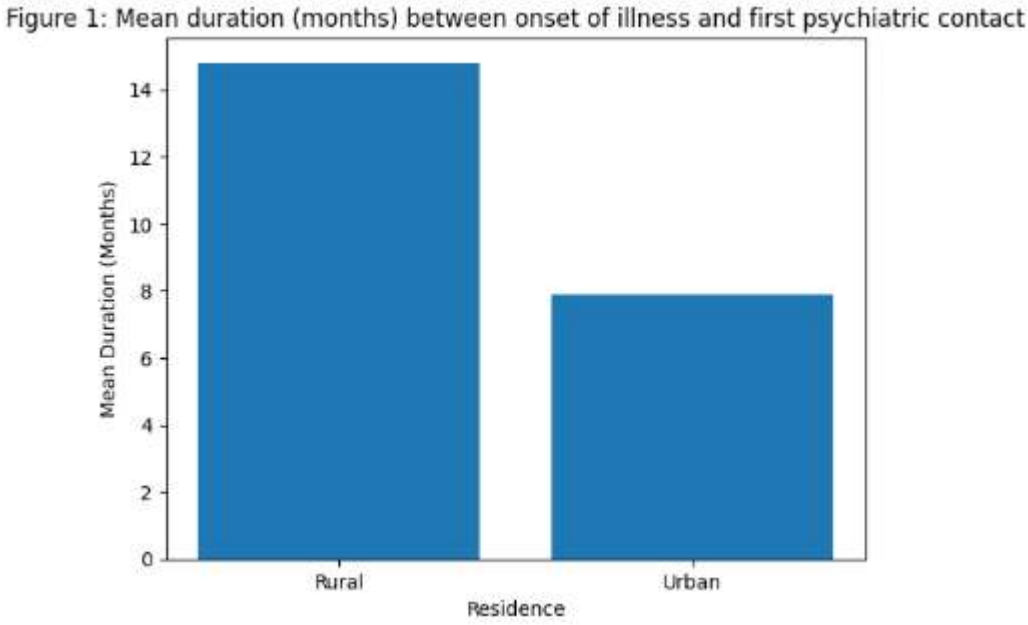
Diagnosis	Rural (n=92)	Urban (n=88)
Mood disorders	39 (42.4%)	44 (50.0%)
Psychotic disorders	31 (33.7%)	22 (25.0%)
Anxiety disorders	14 (15.2%)	17 (19.3%)
Other disorders	8 (8.7%)	5 (5.7%)

The duration of psychiatric illness and first contact with a psychiatrist were used as the primary outcome measure. The delay in rural patients was significantly longer than in urban patients. The average duration of untreated illness was 14.8 ± 7.6 months in rural patients and 7.9 ± 4.3 months in urban patients. This was a statistically significant difference ($p < 0.001$). When the symptoms became

severe and disruptive to the routine operations, a greater percentage of the rural patients sought psychiatric attention.

Figure 1 shows the comparison of the mean duration (months) between the onset of illness and the first psychiatric contact in rural and urban patients, and it is evident that the rural participants showed a longer delay.

Figure 1: Mean duration (months) between onset of illness and first psychiatric contact in rural vs urban patients



Additional examination showed distance to hospital and low level of education to have a significant relationship with the delayed time in seeking psychiatric care. Delay was almost twice as long for patients who lived over 50 kilometers away as for those who lived near the hospital. Also, poorly educated people had prolonged untreated time compared to the secondary or higher educated ones.

Table 3: Factors associated with prolonged delay in psychiatric contact

Factor	Delay >12 months (%)	p-value
Rural residence	61.9%	<0.001
Distance >50 km	58.3%	0.002
Low education	55.4%	0.004
Unemployment	49.8%	0.018

Overall, the findings indicate a substantial rural–urban disparity in the time taken to access psychiatric care, with rural residence emerging as a key determinant of delayed psychiatric consultation.

Discussion

The existing study indicates that the difference between the rural and urban areas in the time lapse between the onset of psychiatric illness and the first visit to a psychiatrist is large with the rural patients having a significantly longer delay. An emerging accumulation of international literature on the subject has supported these findings by confirming that geographic location is a determining factor in the use of mental health services and point of care. The patients visiting rural psychiatric clinics add, according to Forrest et al, report a higher severity of the symptoms and impaired functioning, than patients attending urban clinics, and this tendency can be explained by the fact that the former

patients had untreated diseases, which ultimately led to functional impairment (1). The delay effect of rural patients was higher in the present study, which could be the reason behind the progressive clinical manifestations as the case goes on during the first consultation. This can be attributed to the fact that the infrastructure of the health system is different in the rural and urban regions. The rural regions usually do not have psychiatric facilities, a shortage of services, and proper referral networks. Hung et al. have illustrated that inpatient psychiatric services are of a lower quality in rural areas and this may result in the deterrence of getting formal mental services at earlier stages and encourage the informal or subsequent care-seeking (2). Similarly, Sun et al. have established that long waiting time and high geographic disparities in outpatient psychiatric care were frequent and emphasized that although individuals need outpatient psychiatric care, it may take system-level influences that may lengthen the time to first psychiatric contact (3). Environmental and demographic factors also influence the rural to urban disparity concerning the mental health care pathways. Increased service use in cities has been associated with exposure to environmental stressors and increased genetic clustering of psychiatric risk, which could be a factor in increased service use in urban regions. Maxwell et al. found out that individuals with high genetic morbidity to psychiatric disorders were more likely to live in urban centers and this might translate into an untimely diagnosis and increased service use in urban centers (4). On the other hand, the rural population is likely to be exposed to physical impediments to care, notably, the distance. Lankila et al. also showed that the further the distance of the clinic the smaller the utilization of mental health services, which was in line with the finding that the patients in the country of the current study had to undergo longer waits before seeking psychiatric services (5).

Attitude in the society and cultural beliefs also play a significant role in slowing the process of seeking psychiatric assistance more so in the rural settings. According to Yang et al., there was a high likelihood of the schizophrenics in the rural areas going undetected particularly due to stigma, ignorance, and the fact that family-based or traditional care systems were used (6). This finding can be very important to Pakistan which has rural population with a tendency to explain their psychiatric symptoms in non-medical models and delaying the consultation with a doctor. The unreliability of psychiatric disorders being the sole situations, where the recognition and diagnosis are delayed, is demonstrated by the study conducted by Kvello-Alme et al., who revealed that the diagnosis is postponed in cases of neurological diseases, like young-onset Alzheimer, due to systemic and perceptual barriers to timely specialist care (7). The specific type of innovation that can be applied in addressing rural delays is service innovations, especially telepsychiatry. The COVID-19 pandemic increased telehealth services, resulting in an improved management of access to mental health treatment in different settings.

Lin et al. found that the engagement in opioid use disorder treatment with telehealth policy modification, which could mean that similar models would close the rural-urban gap in psychiatric care in case they are applied respectively (8). However, mental health risks also exist in cities. Newbury et al. determined that air pollution exposure is associated with increased mental health service use and increased urban service use might be an indicator of increased psychiatric morbidity more than accessimprovement (9). The stigma is one of the main prohibitors of a faster psychiatric consultation, particularly in rural South Asia. Kaur et al. highlighted the problem of stigma, lack of adequate service delivery, and mental health literacy in northern India as a formidable barrier to service enrolment, which is very much alike the one in rural Pakistan (10). Provider related factors can make delays even more hectic and impaired treatment adherence and continuity may be the result of poor communication and no follow-up. Deng et al. also emphasized that medication adherence is a patient-related phenomenon along with clinician, which means that the inability to start psychiatric treatment at the right time can also threaten the participation of long-term treatment (11).

Differences between how mental illness is perceived by communities differ greatly in terms of geographical location. The researchers found that the rural and tribal society in India was more inclined to stigmatize mental illness as compared to the urban population and this directly affected the delayed help-seeking (12). Poor mental health training among medical practitioners can support the attitudes. Babicki et al. state that psychiatric patients stigmatize medical students greatly even in

the most developing global medical schools, which is not something to ignore, as a negative attitude toward professionals may disrupt referral and diagnosis, particularly in low-resource rural settings (13). The expectation and preferences of the patients also influence the contact in psychiatry. In spite of the fact, that telemedicine can help to reduce the gap between geographic spread, it does not receive the same welcome everywhere. Moulaei et al. defined that in some patients, it was not possible to use telemedicine due to the lack of trust and communication which may be problematic in patients living in rural areas where face-to-face care is not available (14). In most instances, outpatient care delays result in the use of crisis based services. As Kurdyak et al. determined, many patients were visiting mental health services when they had already been visiting the emergency departments, which showed the missed opportunity to act promptly (15).

The consequences of inappropriate psychiatric treatment are not confined to the initial manifestation. Fonseca Barbosa and Gama Marques described the revolving-door phenomenon as such that is based on severe psychiatric disorders, which are characterized by delayed and discontinuous care leading to multiple re-hospitalizations (16). More symptoms and suicidality are also associated with the long-term untreated disease. Elsayed Ahmed et al. state that positive psychotic symptoms were closely related to suicidal ideation; the time taken to treat is hazardous (17). This is also aggravated by the non-compliance of medications. Ghosh et al. authors demonstrated that the biggest causes of non-adherence in patients with severe mental disorders include socioeconomic factors, lack of insight, and access to follow-up care, which confirms the necessity to ensure timely and continued psychiatric attention (18). Overall, the findings of the existing study are rather aligned with the international and national sources, which proves the fact that the rural residence is one of the main factors that contribute to delayed visits to a psychiatric facility. In order to check these disparities it has been suggested that the issues should be addressed at the system-level, and alleviation of stigmas, amplification of the referral channels and creation of new service delivery models to enable the timely access to psychiatric care services by the rural and urban populations.

Conclusion

The results of this paper show a solid and pronounced gap between rural and urban patients in the duration they require to consult psychiatric care once they develop a mental illness. The first interaction with a psychiatrist took rural patients much longer to occur, and it is important to note that the accessibility and awareness of these services, stigma, and the availability of these services remain barriers. These delays can only add to the severity of the symptoms, worse functional outcome, and risk of complications at presentation. Urban patients, on the other hand, enjoyed a relatively high accessibility to mental health services and a more timely access to psychiatric care. The findings highlight the importance of specific mental health policies aimed at rural populations, such as enhancing primary mental health services, enhancing referral procedures, increasing telepsychiatry, and community awareness in order to diminish stigma. Psychiatric intervention in rural areas and early diagnosis are necessary to enhance clinical outcomes and decrease the burden of mental illness in Pakistan in the long term.

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