ABSTRACT

Background: Proportion of elderly is increasing among the total population of Kerala, and mental health problems of this group are unique. Objectives: To assess the clinical and sociodemographic profile of patients attending Psychogeriatric Clinic in a tertiary care center and to study the correlation of sociodemographic and clinical variables with psychiatric diagnoses in this population. Materials and Methods: A retrospective chart review of patients, who attended the Psychogeriatric Clinic of a tertiary care center over a period of 1 year, was done. The Institutional Ethics Committee discussed and waived clearance for the review. Results: There were 85 cases with a mean age of 69.5 years (standard deviation-7.36). Majority of them were females (56.5%) and belonged to low socioeconomic status (52.9%). Comorbid physical illnesses were seen in 76.5% cases. Diagnoses were made by Junior Residents in Psychiatry and confirmed by a qualified psychiatrist, as per International Classification of Diseases-10 criteria. The most common psychiatric diagnosis was organic mental disorders (24.7%), which included dementias, delirium, and organic mood disorders. This was followed by bipolar affective disorders (22.4%), schizophrenia and related disorders (20.0%), depressive and anxiety disorders (17.6%) and mental and behavioral disorders due to substance use (2.4%). Occurrence of organic psychiatric disorders showed positive correlation with age (Spearman’s $\rho =0.253$, $P = 0.02$) and occurrence of hypertension ($\rho =0.222$, $P = 0.04$). Conclusions: Organic psychiatric disorders are more common in elderly patients attending a tertiary care center. Comorbid physical illnesses are seen in more than three-fourths of this population. Organic psychiatric disorders are seen more commonly with increasing age and occurrence of hypertension.

Key words: Geriatric mental health, major neurocognitive disorders, organic psychiatric disorders
conducted to assess the sociodemographic profile[3,4] and psychiatric morbidities[5-7] in this population. In this background, a retrospective chart review was conducted to assess the profile of psychiatric cases attending the Psychogeriatric Clinic of a tertiary care center.

**Objectives**

- To study the clinical and sociodemographic profile of elderly patients aged 60 years or above attending the Psychogeriatric Clinic of a tertiary care center
- To assess the correlation of sociodemographic and clinical variables with psychiatric diagnoses in this population.

**MATERIALS AND METHODS**

**Study design**

Retrospective chart review.

**Study setting**

Psychogeriatric Clinic, Department of Psychiatry, Medical College, Thiruvananthapuram.

**Study period**

A period of 1 year from January 2014.

Institutional Ethics Committee discussed and waived clearance for the chart review.

**RESULTS**

There were 85 cases assessed over a period of 1 year. The psychiatric diagnoses were made by Junior Residents and confirmed by a qualified psychiatrist, according to the criteria of International Classification of Diseases-10th Edition: Clinical descriptions and diagnostic guidelines.[8] Other clinical variables such as past history of physical illnesses, mental illnesses, and substance use disorders; and family history of mental illness were studied. Sociodemographic variables such as age, gender, religion, educational status, occupational status, socioeconomic status, type of family, and social support were also assessed. Social support was assessed by questions related to support systems available to seek medical care. The analysis was done using SPSS Statistics Student Version 18 (IBM, Armonk, NY, USA). Mean, standard deviation (SD), proportions and 95% confidence interval (95% CI) of the outcome, clinical and sociodemographic variables were assessed as required. Spearman’s correlation coefficient was done to assess the correlation of other variables with psychiatric diagnoses.

The mean age of the cases was 69.5 years (SD: 7.36). Majority of them were females (56.5%) [Figure 1], belonged to Hindu religion (68.2%) [Figure 2], were married (61.2%), and educated up to primary school (35.3%). Illiterate people constituted 18.8% of the sample while unemployed constituted 54.1% of the sample. 52.9% belonged to below poverty line (BPL) group. They belonged mostly to nuclear families (60.0%). Poor social support was reported by 28.2% of the sample [Table 1]. History of mental illness was seen in 51.8% and substance use disorder in 41.2% of the sample. Family history of psychiatric

![Figure 1: Distribution of study sample based on gender](image)

**Table 1: Distribution of sociodemographic variables**

| Variable               | n (%) | Total, n (%) |
|------------------------|-------|--------------|
| Educational status     |       |              |
| Illiterate             | 16 (18.8) | 85 (100.0)   |
| Primary school         | 30 (35.3)  |              |
| High school            | 27 (31.8)  |              |
| +2/Predegree           | 3 (3.5)    |              |
| Graduation             | 6 (7.1)    |              |
| Postgraduation         | 3 (3.5)    |              |
| Occupational status    |       |              |
| Unemployed             | 46 (54.1)  | 85 (100.0)   |
| Unskilled laborer      | 17 (20.0)  |              |
| Skilled laborer        | 6 (7.1)    |              |
| Salaried job           | 8 (9.4)    |              |
| Others                 | 8 (9.4)    |              |
| Marital status         |       |              |
| Married                | 52 (61.2)  | 85 (100.0)   |
| Widow/widower          | 29 (34.1)  |              |
| Unmarried/ separated   | 4 (4.7)    |              |
| Socioeconomic status   |       |              |
| Below poverty line     | 45 (52.9)  | 85 (100.0)   |
| Above poverty line     | 38 (44.7)  |              |
| Don’t know             | 2 (2.4)    |              |
| Type of family         |       |              |
| Nuclear                | 51 (60.0)  | 85 (100.0)   |
| Extended               | 28 (32.9)  |              |
| Joint                  | 6 (7.1)    |              |
| Social support         |       |              |
| Poor                   | 24 (28.2)  | 85 (100.0)   |
| Average                | 51 (60.0)  |              |
| Good                   | 10 (11.8)  |              |
disorders was reported by 44.7% of the cases. Premorbid personality disorders were found in 16.5% cases. This information was not known to 14.1% of the informants. Comorbid physical illness was present in 76.5% of the sample. The split-up of comorbid physical illnesses is given in Table 2.

The analysis of psychiatric morbidity revealed that the prevalence of organic psychiatric disorders was 24.7% (95% CI: 15.5–33.9), which included dementia (16.7%), delirium (5.7%), and organic mood disorder (2.3%). The prevalence of bipolar affective disorders was 22.4% (95% CI: 13.5–31.3), schizophrenia and related disorders 20.0% (95% CI: 11.5–28.5), and depressive and anxiety disorders 17.6% (95% CI: 9.5–25.7). Miscellaneous disorders such as adjustment disorders, somatization disorder, and primary insomnia were seen in 11.8% (95% CI: 4.9–18.7) cases. Correlations were assessed for each major group of diagnoses. Spearman’s correlation coefficient was assessed between psychiatric disorder and various sociodemographic and clinical variables. Overall psychiatric diagnoses did not show significant correlations with these variables. Having an organic psychiatric disorder showed significant positive correlation with age (ρ = 0.253, P = 0.02) and occurrence of hypertension (ρ = 0.222, P = 0.04) and a significant negative correlation with history of substance use disorder (ρ = −0.241, P = 0.03). That is, organic psychiatric disorders were found to be more with increasing age and occurrence of hypertension, and less with positive past history of substance use disorder. Current substance use disorder had significant negative correlation with age (ρ = −0.250, P = 0.02) and history of bronchial asthma (ρ = −0.246, P = 0.02). That is, substance use disorder in this population was found to decrease with increasing age and a positive history of bronchial asthma. Current bipolar disorder showed significant positive correlation with positive family history of mental illness (ρ = 0.404, P = 0.0001). None of the other correlations were statistically significant.

**DISCUSSION**

In this hospital-based study, organic psychiatric disorders were found to be the most common morbidity in elderly population. A community-based prevalence study found that mood (affective) disorders were the most common psychiatric morbidity in a rural population (7.6%). Another study exploring psychiatric morbidity in a hospital and old age home setting found that depressive disorder was the most common psychiatric diagnosis in this age group. The difference observed in our study could be probably due to the fact that elderly with organic disorders are brought to hospitals more frequently. Moreover, community studies might not have evaluated the study sample for organic etiology. The Taiwan Old Age Depression Study (TOADS) was a community-based study conducted to assess the prevalence of depressive disorders among elderly. In this study, assessment for all psychiatric disorders was done by psychiatrists using the geriatric mental state schedule. The study found the prevalence of depressive neurosis to be 15.3% and major depression to be 5.9%. Organic mental disorders were seen in 14.3% while schizophrenia and anxiety neurosis were seen in 0.7% of the sample. Thus, studies which evaluated for organic etiology have reported organic mental disorders to be more common.
Majority of our sample were females. Other studies have also found more psychiatric morbidity in females.\cite{5,9} This could be due to the ratio of females to males being higher in our population and women having a longer life expectancy at birth.\cite{1} Unlike other studies which reported greater psychiatric morbidity in illiterates, majority of our sample were educated.\cite{9} This could be due to the higher literacy rate in Kerala. Similar to other studies which found psychiatric morbidity to be higher in lower socioeconomic strata, majority of our sample belonged to BPL group.\cite{5} As in our study, hypertension was found to be the most common co-morbid physical illness in other studies also.\cite{6} The TOADS study found physical illnesses in 85% of the study sample. Hypertension (24.4%) and coronary heart disease (12.5%) were among the physical illnesses reported commonly in this study. Health problems were reported to be the most stressful life event experienced by elderly.\cite{10}

**CONCLUSIONS**

Organic psychiatric disorders are high in elderly people attending a tertiary care center. High rates of physical comorbidities were observed in this study, and the significant positive correlation was seen between organic psychiatric disorder and hypertension. The role of better management of physical illnesses such as hypertension and diabetes in reducing the risk for such disorders needs to be studied further.

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**Conflicts of interest**

There are no conflicts of interest.

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