

## PREVALENCE OF PRIORITY PSYCHIATRIC DISORDERS IN A RURAL AREA IN KERALA

S.SHAJI, ABRAHAM VERGHESE, K.PROMODU, BENNY GEORGE, V.P.SHIBU

*The objective of the study was to determine the prevalence rate of priority psychiatric disorders in a rural area in Kerala and to find out the sociodemographic correlates of the morbidity. A door to door survey had been conducted by trained surveyors to identify individuals with priority psychiatric disorders. The detected cases were examined by a psychiatrist at their houses in the village itself, to confirm as to whether they were having any psychiatric disorder. Out of the 1094 households surveyed (having a population of five thousand two hundred and eighty four), seventy seven individuals were found to have priority psychiatric disorders giving a prevalence rate of 14.57 per thousand. Females in general showed increased mental morbidity. An increased prevalence rate has been observed among Scheduled Castes/Scheduled Tribes. An increased morbidity is noticed among the people belonging to the lower socioeconomic status.*

*Key words: prevalence, priority psychiatric disorders, rural.*

### INTRODUCTION

India is committed to attaining the goal of "Health for all by 2000 A.D.", through the universal provisions of comprehensive primary health care services (National Health Policy: Government of India, 1982). Promotion of mental health forms one of the components of "Primary Health Care" (WHO, 1978). Mental health objectives should be clearly defined for the effective implementation of any mental health program. Identification of a limited range of psychiatric conditions requiring urgent attention, facilitates the effective utilization of services and allocation of resources for the promotion of mental health.

During the past few decades there has been a growing awareness of the wide prevalence and suffering caused by mental illness in the community. House to house surveys to estimate the number of mentally ill in a given community have been conducted in our country as elsewhere in the world. Based on various epidemiological studies done in India, it is estimated that about one percent of our population suffer from severe type of psychoses and another one percent from mental retardation and epilepsy.

Hence, about fourteen million people in India suffer from severe types of mental diseases. This does not include neuroses and less severe types of mental disorders (Vergheese, 1982). The concept of priority psychiatric disorders is new and is emphasized in primary mental health care.

Wig et al (1981) suggested that the following factors should be considered while providing basic mental health services to the community.

- (1) The magnitude of the problem.
- (2) The disability of the population.
- (3) Awareness and perception of the problem in the community.
- (4) The presently existing methods of coping with these problems.
- (5) The amenability of the problems to intervention by proved methods of therapy.
- (vi) Lastly, willingness of the community to accept the offered methods of intervention.

In the existing sociocultural situation based on the above observations, we can consider schizophrenia, manic depressive psychoses, organic psychoses, mental retardation and epilepsy as priority mental health problems in India.

Kerala is the southern most state of India with a population of 25.4 million and a population density of 655 per square kilometer. Kerala has surpassed all the Indian states in certain important measures of health and social development (Park, 1991). Its remarkable achievements in reducing the death rate, birth rate, infant mortality rate and in increasing the life expectancy and literacy rate are worth mentioning. But little is known about the status of the mental health morbidity of this state. The objective of this investigations are to determine the prevalence of priority psychiatric disorders in a rural area in Kerala and to find out the sociodemographic correlates of the morbidity.

## MATERIAL AND METHODS

This study was conducted in Thiruvaniyoor Panchayat, a part of Ernakulam district in Kerala. Two of the ten wards of the Panchayat (i.e., ward No. VI and X) were randomly selected for the study. The Panchayat has a population density of about 948 persons/sq. km. A total of one thousand and ninety four households having a population five thousand two hundred and eighty four were studied. The sample characteristics are given in the Table 1.

The following instruments were used for the survey.

1. The general data sheet for the collection of the socio-demographic data.

2. The "Symptoms in Others" questionnaire - part of Indian Psychiatric Survey Schedule (Kapur et al, 1974) was adapted and used for the detection of psychiatric cases.

This is an instrument to pick up any priority mental illness in the community. The conclusion of the study regarding mental morbidity is applicable only as regards priority mental illness. Cases with anxiety neuroses, personality disorders are likely not to have been picked up in the schedule, as these disorders do not come under priority mental illness in our country. The usefulness of the questionnaire used to pick up priority mental illness in the community was demonstrated by Kapur et al (1978). By the use of this questionnaire, Isaac et al (1980) were able to pick up all adult retarded individuals. According to them, this method is cost effective, time saving and even non professionals can be trained in administering the questionnaire.

3. Manual of Socio Economic Status scale: Rural (Pareek & Trivedi, 1966).

The surveyors selected were either post graduates in psychology or post graduate diploma holders in social work. Both theoretical and practical classes were given to them by a psychiatrist and a clinical psychologist as how to administer the survey schedule. Field training was also given till they learned well to administer the schedule independently. The inter-rater reliability test was carried out among trained surveyors and the inter-rater reliability coefficient was found to be 0.97. The survey schedule was administered by the surveyors to the head of the households or any other responsible adult member of the family. The names and addresses of individuals found to have any of the symptoms mentioned in the schedule were noted.

They were examined by a psychiatrist at their houses in the village itself to confirm as to whether they were had any priority psychiatric disorders.

Case summaries that had been prepared in the field were independently evaluated by another psychiatrist and the diagnosis were made independently by both clinicians according to ICD-10 diagnostic criteria (WHO, 1992). Diagnostic concurrence have been examined before reaching final diagnosis.

Four cases were identified as false negative when the screened population was interviewed by the psychiatrist; 3% of the individuals from the negatively screened population were randomly selected and interviewed by the psychiatrist to identify the false negative rate. One case was detected to be a false negative; hence the screening test had a sensitivity of 98.7 and specificity of 97.5.

## RESULTS

Out of one thousand and ninety four households having a population of five thousand two hundred and eighty four, seventy seven individuals were found to have priority psychiatric disorders giving a prevalence rate of 14.57 per thousand. Sample characteristics are given in Table 1.

Table 1  
Sample characteristics (Thiruvaniyoor Panchayath,  
Ernakulam District)

Population density	: 948 / square kilometer
Total number of houses	: 1094
Population	: 5284
Male	: 2675
Female	: 2609
<b>Caste</b>	
Forward caste	: 3133
Backward caste	: 1532
SC/ST	: 619
<b>Socioeconomic status</b>	
Upper class	: 0
Upper middle class	: 129 (11.8 %)
Middle class	: 484 (44.2 %)
Lower middle class	: 443 (40.5 %)
Lower class	: 38 (3.5 %)

Table 2 shows the prevalence rate of psychiatric disorders by type of illness. Epilepsy shows the maximum prevalence rate of 5.1 per thousand, following by schizophrenia: 3.6 per thousand.

**Table 2**  
Prevalence of priority psychiatric disorders

Category	Male		Female		Total	
	No.	Prev.	No.	Prev.	No.	Prev.
Mental Retardation	8	2.99	7	2.68	15	2.84
Convulsive dis.	11	4.11	16	6.13	27	5.10
Schizophrenia	8	2.99	1	4.22	19	3.6
Affective dis.	6	2.24	10	3.83	16	3.028
Organic psych.	1	0.37	4	1.53	5	0.95

No. indicates the number of cases; Prev. indicates the prevalence per 1000 population.

Prevalence rate of affective disorders is 3 per thousand, for mental retardation 2.8 per thousand and organic psychoses show a prevalence rate of 0.95 per thousand.

Table 3 shows the prevalence rate of psychiatric disorders by age and sex of the population. Though females show a tendency for increased mental morbidity in all age groups when compared to males, this difference in morbidity reaches statistical significance only after the age of 60. After the age of sixty, females show a significant increase in prevalence rate ( $X^2 = 13.6, p < 0.01$ ). Females show a gradual increase in morbidity with increasing age. Males show a gradual increase in morbidity rate up to the age of 44, after which there is a decline.

**Table 3**  
Prevalence of priority psychiatric disorders by age and sex

Age	Male	Female	Total	Prevalence/1000	
				Male	Female
14	572	581	1153	6.99	8.60
15-29	844	853	1697	11.85	15.24
30-44	604	519	1123	16.56	17.34
45-59	390	358	748	15.38	16.76
60 & above	265	298	563	11.32	36.91
Total	2675	2609	5284	12.34	16.87

**Table 4**  
Prevalence according to caste

Caste	Population	No. of cases	Prevalence/1000
Scheduled	619	17	27.46
Non Scheduled	4665	60	12.86

**Table 5**

Socio economic status	Population	No. of cases	Prevalence/1000
Upper class	0	0	0
Upper middle class	658	5	7.6
Middle class	2374	20	3.4
Lower middle class	2084	44	21.1
Lower class	168	8	47.6

**Table 6**

Duration of illness	No. of cases (%)
0-6 months	1 (1.2%)
6-12 months	4 (5.2%)
1-5 years	18 (23.4%)
More than 5 years	54 (70.1%)

Table 4 gives the distribution of cases according to the caste of the households. A significant increase in prevalence rate has been observed in Scheduled Caste / Scheduled Tribes when compared to other sections of the community ( $X^2 = 5.28, p < 0.05$ ).

Table 5 shows the socioeconomic status of mentally ill patients in the community. An increased morbidity is observed among the lower socioeconomic strata. The difference in morbidity between different classes reach statistical significance: upper middle class vs. lower middle class ( $X^2 = 6.35, p < 0.01$ ); upper middle class vs. lower class ( $X^2 = 28.9, p < 0.01$ ); middle class vs. lower middle class ( $X^2 = 5.91, p < 0.05$ ); middle class vs. lower class ( $X^2 = 27.44, p < 0.01$ ), lower middle class vs. lower class ( $X^2 = 10.22, p < 0.01$ ).

## DISCUSSION

Various epidemiological surveys conducted in our country revealed that about 10 per thousand in any community have severe psychiatric morbidity which require active treatment (Sethi et al, 1967; Verghese et al, 1973); including epilepsy and mental retardation it comes to about 20 per thousand. The prevalence rate of priority psychiatric disorders in the present study is 14.57 per thousand. This is within the range of other studies done in rural areas (Dube, 1970; Sethi et al, 1972; Nandi et al, 1979). Mehta et al (1985) studied the prevalence rate of priority psychiatric disorders in a rural area in Tamil Nadu and found it be 14.5 per thousand. Sachdev et al (1986) reported a prevalence rate of 22.12 per

thousand in an epidemiological study of psychiatric disorder in a rural Faridkot (Punjab).

The inclusion of epilepsy in the list of psychiatric priorities has been controversial and may require some justification. Epilepsy should be selected as a priority for active intervention because it usually affects individuals at a young age, leading to a wide range of physical and psychological impairments and social disabilities and effective relatively cheap interventions are available. Any debate about the respective roles of neurology and psychiatry at community level is irrelevant. Epileptic individuals face many of the same problems as the mentally ill and in operational terms (i.e., training, planning of services, drug supplies), it is useful to group them together as a neuropsychiatric problem (Giel & Harding, 1976). The prevalence rate of convulsive disorders as reported from many developing countries is within the range of 6-8 per thousand population. The prevalence rate of convulsive disorders in this study is 5.1 per thousand. This figure is within the range of other Indian studies (Dube, 1970; Sen et al, 1984; Mehta et al, 1989; Sachdev et al, 1986).

The expert group on national planning for mentally handicapped estimates that about 2-3% of the population are mentally retarded. (Murthy, 1982). The prevalence rate of mental retardation in the current study is 2.84 per thousand. Sachdev et al (1986) reported a prevalence rate of 2.51 per thousand, Dube (1970) and Mehta et al (1985) also reported comparable figures. The identified cases of mental retardation only constitute the tip of the iceberg. The technique used in this study identified only the people who needed help and rehabilitation.

The prevalence rate of schizophrenia in this study is 3.6 per thousand. This value is high when compared to the values reported from similar studies in rural areas. Dube (1970), Verghese et al (1973) and Mehta et al (1985) reported lower values. The prevalence of affective disorders is comparatively high in our study i.e., 3.03 per thousand. Dube (1970), Verghese et al (1985) have found very low figures while Nandi et al (1979) and Sachdev et al (1986) reported higher figures.

#### AGE:

A difference has been observed in males and females in morbidity patterns in relation to the age. Males show a gradual increase in morbidity up to the age of 44 after which there is a tendency to decline. The highest rate of mental illness is observed in

30-44 age group in males. A similar tendency was reported by Sethi et al (1976), Dube (1970) and Verghese et al (1973). An increase in morbidity rate with increase in age has been observed in females. There is a sharp rise in morbidity rate after the age of 60. Increased psychiatric morbidity with advancing age has been reported in many studies (Elnagar et al, 1971; Nandi et al, 1975). This is in conformity with the observations made in the West that mental illness increases proportionately with age. This is an observation which needs further exploration. The male - female difference in mental morbidity is very much conspicuous in the elderly population.

Appearance of organic psychoses (dementia) contributes significantly to the mental morbidity in the elderly population. All the five cases of organic psychoses were detected in the elderly population. Four of the five cases of organic psychoses were detected in elderly females and this contributes significantly to the increased mental morbidity of females in the 60 and above age group. It is seen that elderly population is dominated by females. Among the oldest old, females grossly outnumber males. Male female difference is very much apparent after the age of 85 (9 males vs. 17 females in 85-89 age group and 1 male vs. 8 females in the 90 and above age group). The increased life expectancy of females is a contributory factor for the increased morbidity. In an independent study conducted in the same community by the same research team, a definite female preponderance for dementia (male:female ratio = 1:2.9).

#### SEX:

Females in general show a higher mental morbidity than males, but, this difference becomes statistically significant only after the age of 60. Dube (1970) in his field survey in Uttar Pradesh and Nandi et al (1975) in their survey West Bengal reported higher mental morbidity in females. Gove and Tudor (1973) reviewed the literature on the topic and came to the conclusion that mental illness was commoner in females. They suggested that the greater vulnerability of women to mental illness might stem from the social role imposed on them.

The sex ratio in India has been generally adverse to women, i.e., the number of women per thousand men has generally less than a thousand. Kerala is the only state with a sex ratio favorable to females (Park & Park, 1991). In table 3, it is seen that in the age groups of 30 to 44 and 45 to 59, males outnumber females where as the reverse is true for other age

groups. This can be due to a selective out migration of working women from the community, a phenomenon not generally seen in other states.

#### CASTE:

The population was divided into Scheduled castes and Non Scheduled castes. An increased mental morbidity is observed among the people belonging to the Scheduled Caste. In this community, all the people belonging to Scheduled Castes belong to the lower socioeconomic strata of the community. Increased mental morbidity seen in the Scheduled castes can be explained by the increased mental morbidity seen in the lower strata of the community.

#### SOCIO-ECONOMIC STATUS:

The relationship between social class and mental illness has been studied by many workers. In the present study an increased morbidity is observed in the lower socio-economic strata of the community. Ray (1962) and Neki et al (1963) in their studies found a positive relationship between the social class and mental illness, with a higher morbidity in the poorer class. The same finding had been observed in many other epidemiological studies conducted in India (Verghese et al, 1973; Sen et al, 1984).

#### DURATION OF ILLNESS:

About 70% of the patients had their illness for more than 5 years and 23.4% for more than one year. Many of the observations that have been made in this study need further exploration before coming to a conclusion. The most important finding is that Kerala does not differ much from other Indian states in the prevalence of priority psychiatric disorders in spite of the fact that Kerala differs from other states in various health activities.

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**S. Shaji** DPM, Consultant Psychiatrist; Abraham Verghese MD, DPM, FRCPsych, FRANZCP, FAMS Chief Consultant Psychiatrist, Norman Vincent Peale Medical Center, Vettickal P.O., Mulanthuruthy, Ernakulam District, Kerala 682 314. K. Promodu PhD, Clinical Psychologist, S.H. Hospital, Payankulam, Thodupuzha; Benny George BA, DSS, V.P.Shibu BA, DSS, Social Workers, Norman Vincent Peale Medical Center, Mulanthuruthy.

Correspondence