PREVALENCE OF PSYCHIATRY MORBIDITY IN AN URBAN COMMUNITY OF PONDICHERRY

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SUMMARY

A cross-sectional study on psychiatric morbidity was conducted in an urban area of Pondicherry between October 1988 and July 1989. A sample of 225 families covering 1115 people of all ages was selected by simple random technique. The prevalence rate was 99.4 per 1000, the prevalence among children being 58.6 per 1000. It was found that age, education, occupation and marital status had significant correlation with mental morbidity. Out of 90 cases detected among adults, psychosis formed 20%, neuroses 47% and alcohol dependence syndrome constituted 30%. Among children two conditions commonly identified were mental retardation and nocturnal enuresis.

INTRODUCTION

Epidemiological data on mental morbidity are required for National Health Planning, now that mental health has been included as a component of Primary Health care. Some of the studies conducted in India have identified that mental illness are of public health importance (Surya, 1963; Sethi, 1967; Dube, 1970; Verghese, 1973). These estimates however suffer from some methodological problem. For instance, Surya (1963), studied only major psychiatric illness whereas Sethi (1967) interviewed only heads of the family for identifying the mental morbidity in the family. Further, there are no recent epidemiological data as these studies were conducted 2-3 decades ago. To understand the changing trends, it is necessary to conduct more studies in different parts of the country. With this in view, the present study was designed with the following objectives:

1. To study the prevalence of psychiatric morbidity in an urban community.
2. To describe the socio-demographic variables such as age, sex, education, occupation, marital status and family structure of psychiatric cases in the community.

MATERIALS AND METHODS

This study was conducted between October 1998 and July 1989 in the area of the Urban Health Centre, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry. The residents mostly belong to the middle and low income groups. All the families registered at the Urban Health Centre formed the study universe. A sample of 225 families covering about 115 people of all ages was selected by a simple random technique, making use of the family list available in the centre. Persons aged below 13 years were taken as children in the study.

The study was conducted by making a house-to-house survey using a pre-tested questionnaire, which was a modified form of the Indian Psychiatric Survey Schedule and designed in consultation with one of the authors, a consultant Psychiatrist. All the members of the selected families were contacted in their homes and the questionnaire was administered individually providing as much privacy as possible in a field situation. For children, the informants were either the mother or father. Those cases identified through the questionnaire as having psychiatric symptoms, were subsequently evaluated clinically by a psychiatrist. The diagnosis was made based on the International Classification of Diseases (Ninth Revision).

RESULTS

It was possible to contact 1066 (95.6%) of the 1115 people included in the study. In the surveyed population of 273 children and 763 adults, 106 cases were identified, giving an overall prevalence of 99.4/1000. The prevalence of psychiatric morbidity among adults and children were 113.5 and 58.6 per 1000 respectively. The highest rate of

TABLE 1
Age & Sex Distribution of Psychiatric Morbidity

Age Group	Population studied		No. of Cases		Prevalence per 1000		Total
	M	F	M	F	M	F	
0-12	131	142	9	7	68.7	49.3	58.6
13-20	114	95		6		63.1	38.2
21-30	115	110	5	5	43.5	45.5	44.0
31-40	60	62	8	12	133.5	193.5	138.0
41-50	54	53	8	18	148.1	339.6	242.9
51-60	41	43	12	8	292.7	166.0	238.0
60	24	22	4	4	166.7	181.8	173.9
Total	539	527	46	60	85.3	113.9	99.4

M = Male   F = Female

psychiatric morbidity (242.9/1000) was found in the 41-50 (years) age group and the lowest rate (38.2/1000) in the 13-20 age group (Table 1).

Gender and Psychiatric Morbidity: Females showed a higher prevalence (113.9/1000) compared to males (85.3/1000), but the difference was not statistically significant.

Educational Status: The highest rate of mental morbidity was found among those who did not have any schooling. There was a corresponding decrease in the mental morbidity with increase in the educational status (Table 2).

Occupation and Psychiatric Morbidity: Psychiatric disturbance among adults was studied in relation to their occupation. The highest prevalence was noted among the housewives (202/1000) followed by unskilled workers (150/1000) (Table 3).

TABLE 2
Education and Psychiatric Morbidity

Educational Status	Number studied	Psychiatric Morbidity No.of cases	% Prevalence
No Schooling	182	43	23.6
Primary	275	33	12.0
Upper Primary	149	12	8.7
High School	253	15	5.9
Higher Secondary/College	65	--	--
Higher Education (P.G., Professional)	12	1	8.3
Total	*936	104	11.1

Chi square = 35.44; p<0.001
*Children underfive excluded

TABLE 3
Occupation and Psychiatric Morbidity

Occupation	Number Studied	Psychiatric Morbidity No.of cases	% Prevalence
Professional	15	1	6.6
Skilled workers	108	10	9.2
Unskilled workers	180	27	15.0
Housewives	188	38	20.2
Retired	16	2	12.2
Unemployed	128	10	7.8
Students	106	--	--
Others (Clerks, Shop owners)	52	2	3.8
Total	793	90	11.4

Chi square = 41.65; p <0.001
*Excluding children

Income and Psychiatric Illness: No significant difference was noted among the various income groups.

Family Structure and Psychiatric Morbidity: Though the prevalence of psychiatric morbidity seemed to be more in nuclear families (10.6%) as compared to joint families (8.8%), the difference was not statistically significant.

Marital Status and Mental Morbidity: In adult males as well as females, morbidity was higher in the married group (16.9%) compared to those who were single (3.2%). Widows had the highest morbidity (21.7%).

PREVALENCE OF VARIOUS PSYCHIATRIC CONDITIONS:

The prevalence of psychosis was found to be 22.6 per 1000 (Table 4). The two main conditions identified were Schizophrenia and Manic depressive psychosis with a prevalence of 2.5 per 1000 and 20.2 per 1000 respectively. The prevalence of neuroses was 52.9/1000. The prevalence rates for various categories of neurosis are shown in Table 5. It is seen from the table that there is a higher prevalence of neuroses among females (96.1/1000) as compared to males (12.3/1000). When other socio-demographic correlates were considered, it was found that 74.58% neuroses cases were seen in those with no schooling or only primary education and that housewives had the highest morbidity among the various occupational groups.

Anxiety state was more common in the 13-30 yrs group whereas depressive reaction was more in the 30-50 yrs group.

TABLE 4
Prevalence of Various Psychiatric Conditions among Adults *

Diagnosis (ICD-9)	No.of cases M n=408	F	Prevalence/1000 M n=385	F	Total
Psychosis	2	16	4.9	41.6	22.6
Schizophrenia - Paranoid(295.3)	0	2	-	5.2	2.5
Manic depressive psychosis-Depressed (296.1)	2	14	4.9	36.4	20.2
Neuroses	5	35	12.3	96.1	53.0
Anxiety neuroses (300.0)	3	11	7.4	28.6	17.7
Depressive Reaction (300.4)	2	24	4.	962.3	32.8
Hysteria (300.1)	-	2	-	5.2	2.5
Personality disorder (301)	2	-	4.9	-	2.5
Alcohol Dependence Syndrome (303)	27	-	66.2	-	34.5
Epilepsy (345.1)	1	-	2.5	-	1.3
Total	37	53	90.6	137.6	113.5

*Children under 13 years excluded.

TABLE 5
Prevalence of Neuroses in Adults

Type of Neurosis	No.of cases Male n=408	Female n=385	Total
Anxiety	3 (7.4)	11 (28.6)	14 (17.7)
Depression	2 (4.9)	24 (62.3)	26 (32.8)
Hysteria	-	2 (5.2)	2 (2.5)
Total	5 (12.3)	37 (96.1)	42 (53.0)

Figures in brackets indicate prevalence per 1000

TABLE 6
Prevalence of Psychiatric Morbidity among 273 Children

Diagnosis	Number of Cases	Prevalence per 1000
Mental Retardation	5	18.3
Nocturnal Enuresis	11	40.3
Total	16	58.6

Alcohol Dependence Syndrome

Twenty seven cases of alcohol dependence syndrome were identified giving a prevalence of 34.1 per 1000. When only adult males were considered, the prevalence rose to 66.2 per 1000; no case was identified among women. There were more cases among those who had no schooling, those occupied in unskilled jobs and those who were married.

Prevalence of Psychiatric Morbidity Among Children:

The overall prevalence was 58.6 per 1000 with no significant difference between males and females. The common conditions identified were mental retardation and nocturnal enuresis (Table 6). 82% of the cases were in the age group 6-12 yrs with only 18% in the 0-5 yrs group (3

cases). Children belonging to nuclear families had a higher morbidity.

DISCUSSION

The prevalence of psychiatric illness in the present study was 99.4 per 1000. An earlier study by Surya et al (1963), conducted in the same area reported a prevalence of 9.5 per 1000. The low prevalence in the earlier study could be because only major psychiatric disorders were included and neuroses were excluded, though neuroses generally forms a predominant group (Verghese, 1973). Many of the psychiatric surveys conducted in urban areas in other parts of the country report a prevalence ranging between 67 per 1000 and 207 per 1000 (Sethi, 1967; Verghese, 1973; Nandi, 1990).

The wide variations in the prevalence rates in these studies may be due to differences in the case finding techniques. For instance, in the Lucknow study (Sethi et al, 1967), the head of the family was interviewed to detect any psychiatric illness among the family members, whereas in our study and the Vellore study by Verghese et al (1973), each family member was interviewed separately using a survey questionnaire. In the study reported by Sethi, it is possible that only those symptoms which were perceived by the head of the family may have been reported and those who were suffering from minor psychiatric illness may have been missed. Individual interviews help in going indepth into mental health problems and identifying psychiatric illness not obvious to other family members. Compared to the Vellore study, the present one found a higher prevalence, probably because a large number of cases suffering from alcohol dependence syndrome and manic depressive psychosis were identified.

The observation that psychiatric morbidity was highest in the 41-50 years age group is in agreement with that of other workers (Surya, 1963; Sethi, 1967; Dube, 1970). In our study, though prevalence of neuroses was high among females, no significant difference in overall morbidity was noted between males and females. Verghese et al (1973) also reported equal prevalence among both sexes, but Sethi (1967) and Dube (1970) observed higher morbidity among women. Gender status and psychiatric illness is still a controversial area and needs further research. Psychiatric illnesses were found to be more common among those who were married as compared to those who were single. This was true for both males and females; other Indian studies have also reported similar findings. Why married people in India have a higher mental morbidity needs further study.

Educational status was found to be an important variable affecting the mental health of an individual, with high mental morbidity observed among illiterates and those with only primary education. Our findings on the relationship between psychiatric disturbance and occupational status showed that housewives and unskilled workers had the highest morbidity; Dube (1970) and Verghese (1973 have also reported similar findings.

In the present study, the prevalence of schizophrenia was 2.5 per 1000 and this is comparable to the figures of 2.2 and 2.6 per 1000 reported by Sethi (1967) and Verghese (1973), respectively. Our study showed a high prevalence of manic depressive psychosis (20/1000) compared to 3/1000 reported in the Vellore study. Neurotic disorders constituted 47% of the total number of cases detected. On further analysis, it was observed that anxiety neuroses were seen more in the younger age group (20-30 yrs) whereas depressive disorders were identified in slightly older age groups (30-50 yrs). Alcohol dependence syndrome was found to be a major social problem in the study area, affecting 7% of the adult males. This may be partly due to the easy availability and low cost of alcoholic drinks in Pondicherry. The equation of relief of pain or tiredness with intake of alcohol is another important factor for the high prevalence among unskilled workers.

Regarding childhood psychiatric disorders, moderate to serve mental retardation was found to affect 2% of the children and was in agreement with the figure of 1-2% projected by the W.H.O.(1977). Children belonging to the nuclear families had higher morbidity. Similar observations were made by Verghese (1973) and Lal (1977).

To conclude, the prevalence of psychiatric morbidity of ten percent observed in the present study clearly indicates that mental illness is an important health problem in urban Pondicherry. Certain socio-demographic variables such as age, education, occupation and marital status were found to influence the occurrence of mental illness. Being a descriptive study, we are not in a position to generalize how the above factors affect the mental health of an individual; for this, in-depth studies are needed. The relationship between the high occurrence of alcohol dependence in males and major depressive illness in females needs to be explored further. Similar epidemiological studies should be conducted in different parts of the country, in order to further understand the variation not only in the prevalence, but also in the nature and presentation of the various psychiatric disorders.

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