

## AN EPIDEMIOLOGICAL STUDY OF PSYCHIATRIC DISORDERS IN RURAL FARIDKOT (PUNJAB)\*

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### SUMMARY

Epidemiological study of priority psychiatric disorders in a rural area of Faridkot is described. Prevalence is found to be 22.12 per thousand and this is comparable to figures reported by other studies. The prevalence is highest in age group of 35-44, males are more affected than females, and prevalence is more in widows and divorced. Psychiatric morbidity is found to be more in nuclear families as compared to joint families. Among various diagnostic categories prevalence of Manic depressive psychoses (13.08 per thousand) is found to be most common. The implications of the above observations are discussed and compared with the previous reported studies.

### Introduction

In India, majority of epidemiological studies in psychiatry have been done in urban or semi-urban areas. In a few studies done in rural areas, the rates of prevalence of psychiatric illness have varied from 27 per thousand reported by Elnaggar et al (1971) to 370 per thousand reported by Carstairs and Kapoor (1976). Sethi et al (1972) reported a prevalence rate of 59.4 per thousand in a study of 500 rural families at Lucknow and Nandi et al (1975) have reported a prevalence rate of 102.8 per thousand in their study of 177 rural families in West Bengal. This wide variation in prevalence rate can be attributed to differences in definition of the case and variations in methods used to determine which persons qualify as cases.

Keeping in view the wide variations of prevalence rates, we decided to study the epidemiological features of priority psychiatric disorders in a rural area of Faridkot. The concept of priority psychiatric disorders

is emphasised in primary mental health care and includes categories of schizophrenia, organic psychoses, M. D. P., Epilepsy and Mental Retardation.

### Material and Methods

The present survey was conducted in a village Sadiq about 15 Km away from Medical College, Faridkot. This village was selected because this was the main village in the block of P.H.C. Jand Sahib where specialist services are provided every week by the Medical College. Interns are also given their rural training in P.H.C. Jand Sahib, so there exists a very good rapport between Medical College staff, staff of P.H.C. Jand Sahib and public of Jand Sahib as well as Sadiq.

The survey was carried out over a period of 3 months. The first fifteen days were utilized for getting acquainted with the local people and practising with tools used in the survey. The survey conducted was house to house type and covered the entire village.

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The following instruments were used for doing the survey:

- 1). A house-hold information schedule for demographic data.
- 2). Socio-economic status scale developed by Pareek and Trivedi (1954). This scale is standardised to measure the socio-economic status of rural families in India. Both these instruments were administered by social worker.
- 3). Case detection schedule.

For detection of Psychiatrically ill individuals, the "symptoms in the others" questionnaire part of the Indian Psychiatric Survey Schedule prepared by Kapoor et al (1974) was used. This was administered by a doctor to the head of the house hold or any other responsible adult member of the family. Names and addresses of individuals found to have any of the symptoms as mentioned in the questionnaire were noted, they were examined by a psychiatrist at their homes to confirm whether they had any priority psychiatric disorder (i.e., schizophrenia, M.D.P. organic Psychoses, Epilepsy, Mental Retardation) and in addition any drug dependence. Category of drug dependence was added because of two reasons:

- a) Number of addicts as a whole and those with alcoholic psychoses attending the out patient clinic of the psychiatry department at Medical College, Faridkot was quite high.
- b) Alarming rising trends in drug abuse in recent years in India as a whole.
- 4). Case record schedule gives all relevant information regarding the case detected and records findings of examination and final diagnosis. Final diagnoses were made according to I.C.D-9 criteria in consultation with the consultant.

The term drug dependence was used as

defined by W.H.O. expert committee on drug dependence (1974) and only those cases who had evidence of physical dependence were included in the present survey.

### Results

Out of three hundred and seventy six houses having a population of 1989 which formed the sample of the study, 44 individuals were found to have priority psychiatric disorders giving a prevalence rate of 22.12 per thousand.

There were 31 cases of drug dependence giving a prevalence rate of 15.58 per thousand.

Table 1  
Diagnostic breakup of Index cases, their sex distribution and prevalence rate per thousand

Diagnosis	Index Cases			Prevalence per thousand
	Male	Female	Total	
Schizophrenia	2	2	4	2.01
M.D.P.	15	11	26	13.08
Epilepsy	2	3	5	2.51
Mental Retardation	2	3	5	2.51
Organic Psychoses	2	2	4	2.01
<b>Total</b>	<b>23</b>	<b>21</b>	<b>44</b>	<b>22.12</b>

Table 2  
Age distribution of sample population and Index cases

Age range (in years)	Population	Index Cases	%	Prevalence per thousand
0 - 14	660	7	1.06	3.52
15 - 24	324	8	2.47	4.02
25 - 34	292	1	.34	0.50
35 - 44	229	18	7.86	9.05
45 - 60	319	8	2.51	4.02
More than 60	165	2	.21	1.01
<b>1989</b>		<b>44</b>		<b>22.12</b>

P. Less than 0.01

Table 1 shows the diagnostic breakup of index cases, their sex distribution and prevalence per thousand. Majority of the cases were found to be of M.D.P. Other categories were almost equally represented.

Table 2 shows age distribution of sample population and index cases and their prevalence per thousand. Majority of the cases were in the age group of 35 to 44 and the number decreased with the advancement of age.

Table 3  
Prevalence of Index cases according to sex

Sex	Surveyed population	Index cases	Prevalence per thousand
Male	1045	23	11.56
Female	944	21	10.56
	1989	44	22.12

Table 3 shows that the mental morbidity was almost equal in males and females.

Table 4  
Educational Status

Educational level	Population	Index cases	%
Pre School	181	1	.55
Illiterate	834	20	2.39
Literate	409	4	.98
Primary	301	11	3.65
Middle	108	1	.92
Matric	145	5	3.45
Graduate & above	11	2	18.18
	1989	44	

P. Less than .01

Table 4 depicts the educational status. Maximum number of index cases are illiterate.

Table 5 shows marital status of population and index cases. It is seen that widows and divorced more often get psychiatric illness than single and married persons.

Table 5  
Marital Status

Marital Status	Population	Index cases	%
Married	942	22	2.33
Single	1018	19	1.86
Widow	22	2	9.09
Divorced	7	1	14.29
	1989	44	

P. Less than .02

Table 6  
Type of family

Family	Number of individuals in family	Index cases	%
Joint	1637	26	1.59
Nuclear	352	18	5.11
	1989	44	

P Less than .01

Table 6 shows that majority of cases belonged to nuclear families (7.67%) as compared to joint families (2.3%)

Table 7  
Socio Economic Status

Socio economic class	Population	Index cases	%
I	10	0	0.0
II	48	2	4.17
III	185	11	5.95
IV	926	13	1.40
V	820	18	2.19
	1989	44	

P. Less than 0.1

Table 7 shows that majority of cases are present in middle and lower middle class.

Table 8 compares the prevalence rate of various diagnostic categories with other studies. Most of the findings are within the range of reported studies.

## Discussion

Relationship of psychiatric disorders with various socio-demographic variables.

Table 8  
Comparison of various studies of Psychiatric Morbidity  
(Rate per thousand population)

Diagnosis	Dube (1970)	Verghese (1973)	Sen et al (1984)	Pankaj Mehta et al (1985)	Present study (1985)
Schizophrenia	1.5	1.7	5.9	1.9	2.01
MDDP	.5	.3	.98	.5	13.07
Epilepsy	2.3	-	(Depression) + 17.3 3.44	7.4	2.51
Mental retardation	3.7	8.3	5.07	3.2	2.51
Organic Psychoses	-	-	-	.5	2.01
Drug Dependence	-	-	-	-	15.58
Miscellaneous	3.3	22.1	-	.5	2.51
Total	17.4	34.5	37.55	14.5	37.7

#### 1. Age:

The highest rate of mental illness was noticed in the age group of 35-44 years (9.05 per thousand) and there is a tendency to decline after 45 years. A similar tendency is reported by Surya (1964), Sethi et al (1967) Dube (1970), Verghese et al (1973) and Pankaj Mehta et al (1985). This is in sharp contrast to the observations made in the West that mental illness increases proportionately with the age. The possible reason could be shorter longevity of life in our country as compared to the West. Further, physical disorders over 50 years age are quite common in our country and psychiatric complaints if any are likely to be over-looked because of pre-occupation and concern of individual and his family with a physical illness. A few studies in India also (Nandi et al 1975, Elnagar et al 1971, Sen et al 1984) have shown the rise in psychiatric morbidity with rise in the age. So more studies are needed to confirm this observation regarding age.

#### (ii) Sex:

Prevalence of mental morbidity was found to be almost equal in males and fe-

males. Whereas Sethi et al (1974), Nandi et al (1975), Shah et al (1980) have reported a higher prevalence of mental morbidity among females, Pankaj Mehta et al (1985) found that males had a higher prevalence of psychiatric disorders in the age group of less than 30 years, while females had a higher prevalence as age advanced".

#### (iii) Marital status:

Mental morbidity was found to be higher in widows and divorced (table 5) which is expected because of lack of social support in them. As compared to singles, married persons are more liable to develop mental illness which is comparable to the findings of other studies (Dube 1970, Verghese et al 1973, Sethi et al 1974). Marriage at an early age being not uncommon in India carries the risk of early pregnancy and the responsibility of child in addition to the multiple duties that the housewife is required to fulfil. Such life situations make her more vulnerable to stressful or frustrating situations.

#### (iv) Type of family:

Higher rate of mental morbidity in nuc-

lear families as compared to joint families is significant. Various investigators differ with respect to their impressions relating to the issues of joint family system and mental health, to mental health. Some studies show a greater vulnerability among those belonging to the nuclear family structure. Hysteria however has been found to be more prevalent in joint families. Restrictions of independence in women, dominance of elders and resultant interpersonal maladjustments in these families may seem to breed hysterical manifestations. While joint family system cannot be assumed to be immune to psychiatric illness, it is likely that the system itself provided several built in safety measures which are usually missing in nuclear family system.

(v) *Socio-economic status:*

We found maximum psychiatric cases in middle and lower middle socio-economic class. Ray (1962) and Neki et al (1963) in their studies found a positive relationship between the socio-economic status and mental illness, there being higher morbidity in the poorer class. Shah et al (1985) reported a higher prevalence in the extremes of socio-economic scale and mention that the reason may be because these families are exposed to a greater degree of stressful living. Sen et al (1984) found a higher rate of morbidity in the families of low socio-economic status while Pankaj Mehta et al (1985) did not find any relationship between prevalence of psychiatric disturbance and socio-economic status. Mohan (1970) reported majority of patients to be in lower and middle class where as Thacore et al (1971) found higher morbidity in middle and upper social class. Thus no consistent relationship of psychiatric morbidity and social class has been found in various studies and further studies are needed to find out relationship between social class and mental illness.

*Prevalence of priority psychiatric disorders:*

Prevalence rate of priority psychiatric disorders in the present study is 22.12 per thousand. Pankaj Mehta et al (1985) have also studied the prevalence of priority psychiatric disorders and found it to be 14.5 per thousand. Several studies show that about 10 per thousand in any community have serious psychiatric illness which require active treatment (Sethi et al 1967, Verghese et al 1973, Srinivas Murthy 1982). Including epilepsy and mental retardation, it comes to be about 20 per thousand (Verghese 1982). Prevalence rate in our study is within the range of other studies done in rural areas (Dube 1970, Sethi et al 1972, El-nagar 1971, Nandi et al 1975, Pankaj Mehta et al 1985).

The prevalence of schizophrenia in the present study is 2.01 per thousand. This is comparable with other studies (Pankaj Mehta et al 1985, Verghese 1973, Dube 1970) as shown in Table 8.

Prevalence of MDP was quite high in our study. Majority of the cases were of depression (22 out of 26). Although Dube (1970), Verghese (1973) and Pankaj Mehta (1986) have found very low figures for MDP, our figures are comparable with findings of Sen et al (1984) Nandi et al (1975) and Shah et al (1980).

Prevalence of convulsive disorders in the present study is 2.51 per thousand (Table 8). Though Pankaj Mehta et al (1985) found a high prevalence of 7.4 per thousand our figures are comparable with Dube (1970) and Sen et al (1984).

Prevalence of mental retardation is quite low in our study (2.51 per thousand) as compared to other studies (Varghese 1973, Sen et al 1984). The expert group on national planning for mentally handicapped estimates that about 2-3% of population are mentally handicapped (Srinivasa Murthy 1982). It has to be admitted that it

may be difficult to detect cases of mild and moderate degree of retardation by questionnaire technique. So probably, only mental retardation of relatively severe degree has been diagnosed in the present study.

#### *Prevalence of drug dependence:*

Prevalence rate of drug dependence was found to be 15.58 per thousand. Most commonly abused drugs were found to be alcohol, opium and barbiturate/non barbiturate hypnotics. Majority of the cases had poly-drug abuse but physical dependence on drugs was found for alcohol in 22 cases, opium in 5 cases and barbiturate and Mandrax in 4 cases.

Majority (24 cases) of drug abusers were in the age group of 25-44, all were males, 26 were married and 5 were unmarried. 23 out of 31 drug addicts were either illiterate or had education below primary school only, 16 out of 31 drug dependents were farmers. According to socio-economic status, 24 drug dependants belonged to lower middle and lower class and 7 to middle and upper middle class.

Drug dependence has not been analysed in the studies reported in table 8 although these cases could have been included under the category of miscellaneous in these studies. We have included only hard core addicts in our study and found the prevalence to be 15.58 per thousand. We have excluded other categories like occasional or social users and frequent users of drugs. Most of the rural surveys in drug abuse have included categories of frequent and social users and have found quite high figures e.g., Lal and Singh (1979) found prevalence of drug abuse to be 204 per thousand as current users. Sethi and Trivedi (1979) found the rate of drug abuse to be 21.40%; they defined drug abuse as indulgence in a drug with a frequency of at least once a month. Varma et al (1978) found regular users of alcohol as 11.20% Mohan et al (1978) found users of alcohol to be 34.08% and opium to be 3.75%. All these studies quoted here found prevalence rates after excluding children, Dube and Handa (1971) however defined

drug abuse as compulsive or prolonged use and found the figures to be 22.7 per thousand in whole population. Our figures are quite comparable with findings of Dube and Handa (1971). The present survey shows that the problem of drug dependence is quite high in this area and needs active intervention.

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