

## PREVALENCE OF PSYCHIATRIC DISORDERS IN AHMEDABAD (AN EPIDEMIOLOGICAL STUDY)

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### SUMMARY

A psychiatric survey was carried out in an urban area of Ahmedabad which consisted mainly of middle class population. 461 families were surveyed which consisted of a total number of 2712 persons.

The data was collected in a predetermined form. The index cases were individually evaluated in detail with the help of a structured Psychiatric proforma, case work and psychiatric examination by a consultant for psychiatric diagnosis. Out of the total of 2712 persons surveyed, 128 were found to be suffering from psychiatric disorders, the prevalence rate being 4.7% (47.2 per thousand).

Many epidemiological studies about psychiatric disorders have been published by different workers from different countries, Lin, 1953; Larson and Sjogren, 1954; Essen-Moller, 1956; Hollingshed and Redlich, 1958; Myers and Roberts (1969). Different methodologies, e.g. hospital record survey, door-to-door survey have been employed. Different types of population, e.g. urban, rural, industrial etc. have been studied.

In India few studies have been published by investigators, e.g. Ganguli (1968), Dube (1970), Elnaggar *et al.*, (1971), Sethi *et al.*, (1967, 1972, 1974), Nandi (1975), Carstairs and Kapoor (1976). The prevalence rates in these studies carried out varies greatly, from 18 per 1000 (Dube, 1970) to 370 per 1000 (Carstairs and Kapoor, 1976). This wide variation can be attributed to improper definition of clinical criteria, lack of uniformity in classification of demographic data, diversity of methodology and differences in statistical manipulation of the data collected. It is

essential that all these factors are standardised, if comparison between rates reported in such studies is contemplated.

### AIM

Though few studies have been reported from various parts of India, no prevalence study from the Western Region of India has been reported. Hence the present study was designed to determine prevalence rate of Psychiatric disorders in Ahmedabad which has population of 1.7 million and is one of the largest textile centres. It has undergone rapid industrialisation and urbanisation with heavy migration from the surrounding areas as well as from rest of India.

### MATERIAL AND METHOD

The geographical area of Asarwa (Ahmedabad) was selected as it is within two kilometres distance from Institute and the population could be studied easily and visited repeatedly. In addition, there al-

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ready existed good rapport between the population and the institution on account of preventive, therapeutic and social services rendered.

Family records maintained by the Health Centre which consisted of 461 families constituted the sample of "this survey. The survey was carried out in 3 stages. In the first stage, list of names of inhabitants of the area was obtained from the Health Centre and demographic data was collected by the Research team. In the second stage a house-to-house survey was carried out by interviewing the Head of the Family. The detection of the index cases was done by the senior post-graduate students using 58 question symptom check list and were further evaluated by consultants. The total population surveyed was 2712.

## RESULTS AND DISCUSSION

### (a) Prevalence Rate

TABLE NO. 1

Surveyed Population	2712
Index Cases	128
Prevalence Rate	47.2 per thousand

The prevalence rate of mental illness in the present study is 47.2 per 1000. (Refer Table No. 1). The other epidemiological surveys conducted in India by other investigators along with the type of sample and rates are given in Table 2. The findings of

the present survey is within the range of reported rates of urban studies.

The findings of the present survey, i.e. prevalence rate of 47.2 per 1000 is within the range of the reported rates of urban studies.

### (b) Diagnostic Breakup :

The diagnostic breakup of index cases and prevalence rates are shown in Table-3.

TABLE NO. 3

Diagnosis	Diagnostic Breakup		
	N	%	Prevalence Rate per 1000.
1. Neuroses	58	45.3	21.4
2. Affective Disorder	40	31.3	14.8
3. Schizophrenia	4	3.1	1.5
4. Mental Retardation	5	3.9	1.8
5. Miscellaneous	21	16.4	7.8
	128	100.0	

The diagnostic break-up of index cases revealed that the neurotic disorders were 45.3% and affective disorders were 31.3% and their prevalence rate was 21.41 and 14.80 respectively. These findings are close to the findings of Sethi and Gupta (1970), who reported a prevalence rate of 27.2 per 1000 for neuroses in their urban survey. Verghese and Beig (1974) reported higher

TABLE NO. 2

Sr. No.	Investigator	Year	Type of Area	Prevalence Rate.
1.	Sethi et al.	1967	Urban	72
2.	Ganguli	1968	Industrial	140
3.	Dube	1970	Urban/Rural	18
4.	Elnaggar et al	1971	Rural	27
5.	Sethi et al	1974	Urban	67
6.	Sethi et al.	1972	Rural	39
7.	Nandi	1973	Rural	102.8
8.	Carstairs & Kapoor	1976	Rural	370
9.	Verghese and Beig	1973	Urban	20
10.	Shah et al. Ahmedabad	Present study	Urban	47.2
11.	Shah and Agarwal (Palanpur)	1977	St.	104.00

prevalence of 48 per 1000 for neuroses. Prevalence rate of 37.2 for neurotic disorders was reported by Shah and Agrawal (1977) in their urban survey of North Gujarat city. Further analysis of present study revealed that the prevalence rates for anxiety state, hysterical and depression were 12.20, 1.5 and 7.7 respectively.

The prevalence rate of 31.3% for affective disorders falls between the range of 21% to 34.9% reported by the various researchers in the country, viz. Davis *et al.* (1965, 1967), Sethi *et al.* (1970). Wig *et al.* (1978), and Singh (1979) reported low rates of depressive disorders (8.7% and 12% respectively). The findings of the present study suggest that the rate of affective disorders is high in Ahmedabad (31.25%).

The prevalence rate of Schizophrenia in present study is 1.5 per 1000 which is comparable to the reported prevalence rates of 105 (Dube, 1970), 1.7 (Verghese and Beig 1974), 1.9 (Thacore, 1973), though Sethi has reported 2.5 per 1000 rate in 1974. Schizophrenia constitute 22.4% of the hospital out-patient population. This can be explained by the greater need felt by the community for the treatment while there is a tendency to avoid psychiatric treatment for depressive disorders.

(c) *Socio-demographic variables :*

Table-4 gives the distribution of various socio-demographic variables in the surveyed population and index cases.

In the present study highest rate of mental illness was noticed in old age (60 and above). The second highest was in the age group 45 to 59. Psychiatric disorders are more significant problems in middle and old age. The distinct increase in prevalence rate after the age of 45 years warrants for more attention and stress for planning services for older people. This finding of increase in mental morbidity with advancing age is in harmony with other studies. In

TABLE-4

	Surveyed Population (N=2712)	Index Cases (N=128)	%
Age (in yrs.)			
upto 14	1089	9	0.8
15-44	1263	61	4.8
45-59	260	39	15.0
60 and above	100	19	19.0
	$\chi^2=143.24, p<0.001$		
Sex			
Male	1395	54	3.9
Female	1317	74	5.6
	$\chi^2=4.61, d.f.=1, p<0.05$		
Education			
Illiterate	178	39	21.9
School	1571	86	5.5
College	581	3	0.3
Post Graduate	34	—	—
	$\chi^2=126.66, d.f.=3, p<0.001$		
Occupation			
Skilled Worker	514	38	7.1
White Collor	43	4	9.3
Shop Keeper	72	—	—
Un-skilled Worker	34	1	2.9
Retired	34	5	14.7
Unemployed	10	6	60.0
	$\chi^2=52.69, p<0.001$		
Family Structure			
Nuclear	285	60	21.0
Joint	176	61	34.7
	$\chi^2=10.40, d.f.=1, p<0.01$		
Family Size			
Upto 5 members	219	41	18.7
More than 5 members	242	80	33.1
	$\chi^2=12.20, d.f.=1, p<0.01$		
Caste			
Socially higher	250	54	21.6
Socially lower	114	21	18.4
Socially backward	97	46	47.4
	$\chi^2=28.87, p<0.001$		
Socio-Economic Status (Kuppuwsami Scale)			
Upper	—	—	—
Upper Middle	69	31	44.9
Middle	294	54	18.4
Lower Middle	94	33	35.1
Lower	4	3	75.0
	$\chi^2=28.23, d.f.=3, p<0.001$		

\*Children below 4 yrs. (N=348) have been excluded from this analysis.

India Elnaggar *et al.* (1971), Nandi *et al.* (1975, 1976), Shah and Agrawal (1977) have obtained similar findings. Some of

the western studies done by Hagnell (1966), Srole *et al.* (1962), also confirm the present findings. But Sethi *et al.* (1974), Dube (1970), Verghese and Beig (1974) have reported increase in morbidity after 30 and fall after 50.

The prevalence was found to be higher in females than males. This difference in morbidity between males and females was observed to be statistically significant.

Sethi *et al.*, (1974), Nandi *et al.* (1975) have also reported a higher psychiatric morbidity particularly of neurosis and depression in females (house-wives). Shah and Agrawal (1977) have also observed higher prevalence in females though their results were statistically insignificant. In the west, Hagnell (1966), also found higher morbidity among females. This observation is positively linked with universal phenomena of physiological and psychological changes occurring in females after menopause, making them more vulnerable for depressive reaction.

A higher prevalence of mental illness was noticed in illiterates than literates. This can be explained by the fact that illiteracy is linked with lower economic condition and hence a predisposing factor for psychiatric breakdown.

Occupation wise the highest rate of mental illness is in unemployed group followed by retired persons, white collar and skilled workers. It is needless to add that unemployment serves as maximum stress on individuals in our country as there are no support systems. Further, old age and retired living leads to unavoidable economic and psychological dependence on relatives specially in urban society, which may produce sufficient stress for mental break-down. Old age in rural society should not be compared with retired living in urban area. It may not be a source of similar stress in rural areas, as old people are more valued and respected in rural set-up as the head of family. Moreover, the joint family system, which is more pre-

valent in rural areas, provides psychological support to them, whereas this system is breaking in urban areas.

Higher rate of mental illness was observed in joint families than in nuclear families as shown in Table No. 4. These findings are statistically significant. In a small city survey of Shah and Agarwal the findings were that 70% of unitary families were index families for mental illnesses.

This paradoxical relationship between family system and rural/urban area for Psychiatric Morbidity may be attributed to poor integration of joint family in urban area and poor integration of unitary system in rural area. Most of the studies have shown greater vulnerability amongst those who belong to unitary family structure (Sethi and Manchanda, 1978).

The castes of the persons were grouped broadly into three categories, higher, low and backward according to the traditional concept of caste system operating in this area.

It was observed that prevalence rate was highest in socially backward castes. This can be explained on the basis of higher social stress to which this group is exposed on account of social isolation and social distance experienced by them in addition to other usual life stresses.

The analysis in terms of socio economic status shows that 75% of the lower class families and 44% of the upper middle class families were index families while only 18% of the middle class and 35% of the lower middle class families were index families. These findings are statistically significant and hence it is concluded that the extreme poles of socio-economic scale i.e. lower class families and upper middle class families are more susceptible to psychiatric disorders, possibly because these families are more exposed to stressful living. But Ray (1962), Neki and Kapoor (1963) did not find any positive relationship between social class and mental illness in their studies. Mohan (1970) reported that

majority of his index cases belonged to the lower and middle class. His findings are similar to our findings. Thacore *et al.*, (1971) found higher morbidity in middle and upper social class. Hollingshead and Redlich (1958) in the New Haven study found a relationship between social class and mental disorder. Higher the social class, higher the neuroses and lower the social class, higher the psychoses. Sethi and Manchanda (1978) rightly points out that "There is lack of uniformity in classification of demographic data, socio-economic class; Western standards of classification are not suitable for studies in Indian situations". Difficulties in classifying demographic data also seriously impair the comparability of such studies. Definitions of social status vary greatly from country to country. To compare the incidence of mental disorder in relation to social class in different societies require special care as the stress experienced by each social group may vary markedly against the different background. According to Lin and Standley (1962) even within the same society the standardisation of demographic criteria is subject to considerable observer error.

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