

## PSYCHIATRIC MORBIDITY IN AN URBANIZED TRIBAL (SANTAL) COMMUNITY - A FIELD-SURVEY

TAPAS BANERJEE<sup>1</sup>  
S. P. MUKHERJEE<sup>2</sup>  
D. N. NANDI<sup>3</sup>  
G. BANERJEE<sup>4</sup>  
AMITAVA MUKHERJEE<sup>5</sup>  
BISWAJIT SEN<sup>6</sup>  
G. SARKER<sup>7</sup>  
G. C. BORAL<sup>8</sup>

### SUMMARY

Psychiatric morbidity was studied in an urbanized tribal (Santal) community comprising 205 families in the district of Nadia, West Bengal by the method of door to door survey of each family by a team of psychiatrists. Total morbidity was 519/1000. Depression was the commonest type of illness. Neurotic illness, epilepsy and mental retardation had a very low rate of prevalence. Married individuals were more affected than the unmarried ones. Males had a slightly higher rate of mental morbidity. The population showed a general tendency of greater vulnerability to mental illness with advancing age. Results are discussed in the perspective of relevant studies.

### Introduction

Stresses associated with complex life pattern are known to influence the rate and pattern of psychiatric morbidity. Among the tribals in Ghana, Fortes and Mayer (1966) observed that there was more psychoses in persons exposed to the conditions of life in the alien or largely urban environment than among those who had remained in the traditional social culture. In a study on the prevalence of psychiatric morbidity in two tribal (Lodha and Munda) communities settled for generations in certain rural areas of West Bengal (India) Nandi *et al* (1977) observed that obsession-compulsion and anxiety (two stress dependent mental disorders) were absent in the tribal communities they surveyed. Dube (1968) at Agra (India) found high rates of mental morbidity among Punjabi refugees who had undergone difficult experiences during their migration. A mental morbidity study in an uprooted and rehabilitated community

showed that this community having a higher level of aspiration than a native-born neighbouring community of similar socio-economic status and higher rate of stress dependent mental disorders (neurosis, psychosomatic illness etc. Nandi *et al* 1978). Cox (1977) points out that urbanization involves migration which in itself is associated with an increased risk of psychiatric disorders, though the exact reasons for this are complex. The effects of migration on psychiatric disorder has been reflected in Odegaard's study (1932) of Norwegian immigrants to the United States.

### Aim and Objective

This paper presents the important findings of the psychiatric morbidity study in an urbanized tribal (Santal) community in West Bengal. It was hypothesized that urbanization would modify (1) the rate of mental disorders and (2) the pattern of mental disorders particularly the stress

1. Medical Officer under W. B. H. S.

2. Professor of Statistics, University College of Science and Technology, Calcutta University, Calcutta.

3, 5-8. Consultant Psychiatrist, Girindra Sekhar Clinic, Calcutta.

4. Assistant Professor, Department of Psychiatry, N. R. S. Medical College, Calcutta.

dependent ones. A tribal community was selected for the study as it could more faithfully represent the effects of urbanization on psychiatric morbidity in having no intermediate exposure to alien situations.

### Material and Methods

#### Introduction

A number of Santal families left their original place of abode mainly at Mayurbhanj of Orissa and Singhbhum of Bihar about twenty to twenty five years back. They ultimately settled to Santal Para No. 5 at Kalyani in the district of Nadia about 40 km from Calcutta. A philanthropical organisation in collaboration with the Government of West Bengal helped in the rehabilitation of those families by providing them with dwelling places, sanitation, drinking water, medical aids etc. These Santal families form the sample of the present study (Two hundred and five families). This rehabilitated Santal community lives within the boundary of Kalyani Township in the District of Nadia. It is about 2 km away from the nearest Railway Station and can be easily approached by Cycle rickshaw along a pitched road extending from the station. Just at the centre of the settlement are situated the health clinic and the primary school. They get drinking water from tube-wells in the community and use community latrine. In and around the township there are several important industrial establishments, three big hospitals and two Universities where many santals are employed. Recently they have shown interest in their children's education. Many boys and girls go for higher studies at colleges in Calcutta and Burdwan and remain there in hostels. Though they have settled here over two decades ago, their traditional faith, belief and taboos have undergone no appreciable change. They are sensible, sober and show cooperative attitude and restraint in social life.

#### Collection of data

For the present study a team consisting of seven psychiatrists, a social worker and a statistician was formed. Members of the team visited the area to be surveyed and made personal contact with local educated Santals, aged Santal leaders, teachers of the primary school and other influential persons of this community to gain confidence of the people. The purpose of the study was explained to them. Four schedules were used to collect and tabulate the data: i) Household schedule. (ii) Socio-economic status schedule - The schedule developed by Kupuswamy (1976) for use in urban area was used in this study with minor modifications. (iii) Disease identification schedule - This was the schedule used by Nandi *et al* (1975). (iv) Case record schedule - the schedule gives all the relevant information regarding the case detected and records the findings of the examination as also the final diagnosis.

The operational definition of a 'case' mentioned in the W. H. O. Technical Report Series (1969) No 185 was accepted with minor modification for use in the present study. A glossary of the diagnostic criteria has been used after Nandi *et al* (1975). The method adopted for the study was a door to door survey. The team interviewed each family as a unit and each individual member of the family separately. The data were first collected from the head of the family and then from each adult member, to make sure, by cross validation, that all the facts were obtained. Whenever a probable case was detected, thorough physical and psychiatric examination was carried out independently by two senior psychiatrists in the team and diagnosis was made separately. In case they differed in their diagnosis, re-examination was carried out and an agreed diagnosis was reached. The agreement between the two psychiatrists was very high. The data were statistically analysed.

## Results

Processed data have been presented in Tables 1 to 5.

Table 1

Distribution of different types of illness by sex			
Illness	Sex		Total
	Male	Female	
Depression	12 (30.84)	18 (47.12)	30 (38.91)
Manic Psychosis	3 (7.71)	-	3 (3.80)
Schizophrenia	-	-	-
Hysteria	-	1 (2.61)	1 (1.29)
Anxiety	2 (5.13)	-	2 (2.59)
Obsession compulsion	-	-	-
Phobia	-	-	-
Epilepsy	2 (5.13)	-	2 (2.59)
Mental Deficiency	2 (5.13)	-	2 (2.59)
Total	21 (53.98)	19 (49.74)	40 (51.88)

Figures in parenthesis indicate rate per thousand.

This table shows that overall morbidity is 51.88/1000. Depression is the commonest type of psychiatric illness. Females are more prone to be depressives. The total number of neurotic cases is 3. No cases of obsession-compulsion is found. Schizophrenia is also absent in the present study population. Mental deficiency and epilepsy cases show a low prevalence rate.

Table 2

Distribution of affected and non affected persons by sex			
Sex	Affected	Non-affected	Total
Female	19 (4.97)	363 (95.03)	382
Male	21 (5.39)	368 (94.61)	389
Total	40 (5.18)	731 (94.82)	771

Figures in parenthesis are percentages calculated row wise.

This table shows that there is no statistically significant difference in the sex ratio

between the affected and non-affected persons.

Table 3

Age group (in years)	Distribution of affected persons by age		
	Affected	Non-affected	Total
0 - 4	0	146	146
5 - 14	2 (11.49)	172	174
15 - 24	5 (40.0)	120	125
25 - 34	14 (85.36)	150	164
35 - 44	8 (77.6)	95	103
45 - 59	6 (142.57)	36	42
60 +	5 (294.11)	12	17
Total	40 (51.88)	731	771

$X^2 = 29.29$   $df = 6$   $P < .01$

Figures in the parenthesis indicate rate per thousand calculated row-wise

This table shows that affected individuals are in larger concentration in the age range of 25 years and above.

Table 4

Marital Status	Distribution of affected persons by marital status		
	Number affected	Number Non-affected	Total
Single	3 (7.9)	375 (99.20)	378
Married	27 (7.64)	326 (92.35)	353
Others	10 (25.0)	30 (75.0)	40
Total	40 (5.18)	731 (94.81)	771

$X^2 = 48.82$   $df = 2$   $P < 0.001$

Figures in parenthesis are percentages calculated row wise.

This table shows that individuals belonging to the category 'others' (separated/widow-widower/divorced etc) have the highest rate of being affected and least affected are the 'single' individuals.

Table 5 shows that both in cases of male and female individuals, the persons belonging to the category 'others' (Separated/widow-widower/divorced etc) have the highest rate of being affected. Married

Table 5  
Distribution of affected persons by marital status and sex

Marital Status	MALE			FEMALE		
	A	NA	Total	A	NA	Total
Single	3 (1.45)	203 (98.55)	206	0 (0.0)	172 (100.00)	172
Married	16 (9.09)	160 (90.91)	176	11 (6.21)	168 (93.79)	177
Others	2 (28.57)	5 (71.43)	7	8 (24.24)	25 (75.76)	33
	21 (5.39)	368 (97.61)	389	19 (4.97)	363 (95.03)	382

$X^2 = 11.59$   $df = 2$   $P < 0.01$   $X^2 = 35.49$   $df = 2$   $p < 0.001$  A = Affected NA = Non-affected  
Figures in parenthesis are percentage calculated row wise.

males are found to be a bit more affected than married females.

### Discussion

Total psychiatric morbidity in the community was 51.88 per thousand (Table 1). Nandi *et al* (1977), in their study of psychiatric morbidity in two rural tribal communities found the rates of total morbidity as follows: Lodha (Navayangarh area) 32.8 per thousand, Munda 44.6 per thousand. It is, therefore, clear that this sample of urbanized tribal has no significant difference from the rural tribals in its rate of total mental morbidity. Our first hypothesis (i.e. urbanization would modify the rate of mental morbidity) does not stand.

It is reasonable to presume, on the basis of these data, that urbanization per se exert no adverse influence on the mental health of a tribal community, provided it is allowed to preserve its ethnicity and basic cultural pattern. The people under study settled down in an urban set up with the active organisational, financial and moral support of the State Government and a philanthropic society. Hence they could obtain the benefit of urban life without the detrimental effect of exposure to and assault by alien cultures. This qualitative difference in the aim and circumstances of the project of rehabilitation may have protected this community from the deleterious effects of the uprooting of a tribal group from its tra-

ditional rut and transplanting it on a new inhospitable soil.

Now, let us scrutinize the effects of urbanization on the pattern of mental morbidity of the community. There was no statistically significant difference between the rates of morbidity of males and females (Table 2). In the rural tribes surveyed by Nandi *et al* (1977), the pattern of morbidity by sex was similar. Like the present sample, the rural tribals too had a slightly higher rate of morbidity among the males. This is in contrast to the data obtained in non-tribal societies. Dube (1970) in his field-survey in Uttar Pradesh found a higher prevalence of mental morbidity in females than in males. Nandi *et al* (1975), in their rural survey in West Bengal, corroborated this finding. Gove and Tudor (1973) surveyed 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 forced on them. The social role of women in the tribal society is certainly different from that in non-tribal societies. That women in tribal communities are less vulnerable to mental illness than their menfolk might be a reflection of their gender role characteristic to these societies.

Affected individuals are found to be in larger concentration in the age range of 25 years and above (Table 3). Increased psy-

chiatric morbidity with advancing age has been reported in many studies (Elnagar *et al*, 1971, Nandi *et al*, 1975). Dube (1970) reported that the highest rate of morbidity was found in the age group of 34 - 44 years followed by a decline. Nandi *et al*, (1977) found in some rural tribals that the most morbid age group was 35 - 44 years. After a careful review of the literature Dohrenwend and Dohrenwend (1974), however, came to the conclusion that age showed no consistent relationship with morbidity in most studies.

The complex life pattern in a highly competitive urban setting produces strain in interpersonal relationship. Separation, divorce etc are intimately associated with this strain. This in turn influences the psychiatric morbidity in this group of people. In Tables 4 and 5, the category 'others' (separated/divorced/widow-widower) shows the highest rate of morbidity. This finding deserves to be studied more thoroughly in the context of the urbanization of a tribal community.

The most remarkable aspect of the possible effect of stress is the high rate of depression in this sample (Table 1). Field (1960) in her field-survey among the Akan tribe of northern Ghana found that depression was the commonest mental illness in Akan rural women. She also refuted the oft repeated statements of low incidence of depression in tribal Africa. Nandi *et al* (1977) in their study of rural Lodha and Munda tribes of certain parts of West Bengal, found that the commonest illness in these tribes was depression. The point of departure in this sample is that the rate of depression was as high as 38.91 per thousand in a sample whose total morbidity was 51.88 per thousand. The corresponding rate in the latter study (Nandi *et al* 1977) was 10.6 per thousand while the total morbidity of the sample was 37.2 per thousand.

The spectacular rise in the rate of de-

pression might be related to the stressful life situation associated with higher level of aspiration engendered in an urban society. Anxiety Neurosis, reported to be absent in the rural tribals (Nandi *et al* 1977), shows a prevalence rate of 2.59 per thousand in this urban sample. The opportunities for occupational specialization open to this urbanized tribal community have strengthened its economy. Consequently its level of aspiration was risen. Nandi *et al* (1978) have shown that higher level of aspiration is linked with higher rate of stress dependent mental disorders.

That this social stress has not yet affected the basic cultural mould of the tribes in which their personality grows up, is shown by the fact that obsession and phobia are still absent in this community. Wintrob and Wittkower (1966) have suggested that disease of super-ego conflict (e. g. obsession) is likely to be rare in the tribal culture. If the stress caused by super-ego conflict is a major precipitant of obsession, it is reasonable to postulate that its absence in this community shows that its basic personality structure which is a product of its cultural mould has not yet been changed by urbanization.

Mental Retardation and Epilepsy have fairly low rates of prevalence. Hence it will be hasty to comment on them in the context of urbanisation. Relatively low prevalence of schizophrenia (1.3/1000) has been reported amongst the rural tribals by Nandi *et al*(1977). It is absent in this urban sample of tribals. The result of the study shows that urbanization has produced some effect on the pattern of mental morbidity of the community. It has injected an element of stress into the life of the community stress dependent disorders (e. g. Anxiety Neurosis, Depression) have therefore, a high rate of prevalence. The second hypothesis partially stands.

Finally, it must be noted that the sample

under study is a small one and it was exposed to the urban setting for a relatively short period of time. Study of psychiatric morbidity in tribal communities urbanized through generations would be of much interest in respect of the effect of urbanization.

### Acknowledgement

Authors sincerely acknowledge the cooperation of the santal families at Kalyani, District Nadia, West Bengal (India) and the members of the staff of Luthern Health Clinic at that place in carrying out the present study.

### References

- COX, J. L. (1977), Aspect of transcultural psychiatry. *British Journal of Psychiatry*, 130, 311-321.
- DOHRENWEND, B. P. & DOHRENWEND, B. S. (1974), Psychiatric morbidity in urban settings. *American Hand Book of Psychiatry*, Vol. II Part III. Basic Book Inc. Pub. New York.
- DUBE, K. C. (1968), Mental disorder in Agra. *Social Psychiatry*, 3, 133-143.
- FIELD, M. L. (1960), Search for security: an ethno-psychiatric study of rural Ghana. Evanston, North-Western University Press.
- FORTES, M. & MAYER, D. Y. (1966), Psychosis and social change among the Tallensi of Northern Ghana. *Cahiers de-tudes Africaines*, VI, 5-40. Quoted in: Hsu, Francis, L. K. (Ed) *Psychological Anthropology* P. 108, Schenkman Publishing Co., 1972 Cambridge, Massachusetts.
- GOVE, W. R. & TUDOR, J. F. (1973), Adult sex role and mental illness. *American Journal of Sociology* 78, 812.
- KUPPUSWAMY, B. (1976) Manual of socio-economic status scale (Urban). Manasayan. Delhi-6.
- NANDI, D. N., AJMANY, S., GANGULY, H., BANERJEE, G., BORAL, G. C., GHOSH, A. & SARKAR, S. (1975), Psychiatric disorders in a rural community in West Bengal-an epidemiological study. *Indian Journal of Psychiatry*, 17, 87-99.
- NANDI, D. N., MUKHERJEE, S. P., BORAL, G. C., BANERJEE, G., GHOSH, A., AJMANY, S., SARKAR, S. & BISWAS, D., (1977), Prevalence of Psychiatric morbidity in two tribal communities in certain villages of West Bengal. A cross-cultural study. *Indian Journal of Psychiatry*, 19, 2-12.
- NANDI, D. N., MUKHERJEE, S. P., BANERJEE, G., BORAL, G. C., GHOSH, A., SARKAR, S., DAS, S., BANERJEE, K. & AJMANY, S. (1978), Psychiatric morbidity in an uprooted community in rural West Bengal. *Indian Journal of Psychiatry*, 20, 137-142.
- ODEGAARD, O. (1932), Emigration and insanity. *Acta Psychiatrica Scandinavica*, Supplement 4.
- SROLE, L., LENGNER, T. S., MICHAEL, S. T., OPLER, M. K. & RENNIE, T. A. C. (1962) Mental health in the metropolis: The Midtown Manhattan Study. Vol. 1, New York, McGraw Hill.
- WINTROB, R. & WITTKOWER, E. D. (1966) Magic and witchcraft in Liberia: their psychiatric implication. *Transcultural Psychiatry. Research Review*, 3, 149.