Psychiatric Morbidity in a Sub-Himalayan Tribal Community:
An epidemiological Study

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ABSTRACT

This paper reports the findings obtained from an epidemiological study conducted on the Totos—a sub-Himalayan tribe who were at the verge of extinct in early 70’s in the state of W.B. The place in which they live is not easily accessible to the outsiders. The present study investigated socio-demographical aspects and the level of psychiatric morbidity within the Toto community. The study had been conducted on the total population of 1021 as available in the study period of 6 weeks. A socio-demographic profile on the tribal community had been drawn. The findings showed that proportion for male and female were close to each other, though, interestingly children below 15 years of age had accounted for almost half of the entire population. The socio-demographic profile that included other bio-social and social cultural factor were also discussed. Psychiatric morbidity was investigated within the Toto community. The results showed about 50 per thousand of the Toto population were psychiatrically morbid—with females being more affected than that of males. The rate of variation of different psychiatric disorder had been studied and the obtained findings indicated that the Totos mostly suffer from depression though other disorders were also found of very low rate compared to that of depression. The findings of psychiatric morbidity had been discussed with each of the socio-demographic factors after proper statistical analysis.

Keywords: Psychiatric morbidity, Tribal community, Epidemiological study

Introduction

The Totos, a sub-Himalayan tribe, live in the extreme northeast region of Jalpaiguri district in the state of West Bengal. They live in a small village called “Toto para” located in the Madarihat Police Station of Alipurduar subdivision of the district of Jalpaiguri in Western Duars bordering Bhutan. Totopara (the home of the Totos) is a cluster of three small hillocks, which are situated 750 to 1250 feet above sea level at the foot of the Himalayas.

Totopara as a place is not easily accessible to outsiders due to lack of direct road communication from the nearest Railway station at Hasimara situated at a distance of 16 km. There are only a few foot tracks and one may proceed to Totopara almost by trekking along these difficult foot tracks.

The Totos are endogamous and posses certain features unique to this tribal community. They are basically reluctant to accept any kind of social change in the direction of progress and appear to be happy in retaining the age old customs, socio cultural practices and their life style in general. They are illiterate. They do not have any script of their own language.

The Totos have been at the risk of extinction during the past few decades. Since the Totos are also citizens of India and segregation has never been the policy of Indian society towards tribal community, the Government of West Bengal has come forward with some welfare programs to protect this sub-Himalayan tribe from extinction. The protective measures taken by the Government with respect to dwelling units, food, drinking water facilities and health problems have been found to be beneficial and as a result the total number of Totos has increased from about 400 in early 1970s to more than 1000 during the present study period.

The Toto have various health problems and they suffer from physical disease of various type.

Though the Totos seek treatment through tribal medicine, the Government has started providing modern treatment facilities and a section of the Toto community particularly the present generation, go to nearby health center for treatment of serious ailments.

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However, they are not concerned with mental disease and have no awareness about mental health. Mental diseases are quite common among tribal belonging to other tribal communities (Nandi et. at 1977, 1980, 1992)

The Totos as a tribal community may not be an exception. The present investigation attempts to throw some light on prevalence of psychiatric disorder in this population. There are some reports on the social life of this tribe but no reports deal with mental disorders.

**Aims and Objectives**

I. The aims of the present investigation are to study the prevalence of psychiatric morbidity and draw a distribution of all kinds of psychiatric disorders in the Toto population.

II. An attempt is also made in the present study to find out socio-demographic correlates of prevalence of the psychiatric morbidity of the Toto community.

III. One of the objectives of the study is to create an awareness about prevalence of psychiatric morbidity among the Toto and draw attention of the Government and non-Government organizations to take preventive and modern therapeutic measures for the purpose of protecting this tribal community from health hazards-both physical and psychological.

**Methods & Materials**

The present investigation was undertaken to assess the psychiatric morbidity within the population of the Sub Himalayan tribe. The investigation was a challenging one due to difficulty in communication both in terms of accessibility through road links and language barrier.

Prior to the study proper, a scientific planning was made in consultation with the experts and earlier study reports, which were mostly Anthropological. In this regards, Anthropological Survey of India and Department of Tribal Welfare, Government of West Bengal helped a lot. In fact Tribal Welfare Department 1. provided shelter there at the Totopara Guest house. Officers of the Department introduced investigators with two key persons of the Toto community, one of them was adult male & other was adult female. As most of the people of the community do not know Bengali, those two acted as interpreters.

Before conducting the epidemiological study, preliminary publicity was made with the help of those two persons who introduced the investigators to the members of the Toto community. This was done to eliminate the first and foremost problem of prejudice and to gain the confidence of the people. The purpose of the study was explained to the people assembled in small group meetings organized by the investigators. They were also assured during the time to study that all cases detected by our team would receive treatment on request. Confidentiality of communication was carefully maintained. The present investigation on psychiatric morbidity was conducted on the total population of the village with 530 males and 491 females distributed in 247 families.

The core of the design of the study was to interview each family as a unit and each member separately. The data was collected first from the head of the family and again from each adult member when possible to make sure by cross validation that all the facts were collected. Since all people were separately interviewed, there were minimum chances of missing a case. If due to illness, senility or for some other reason the head of the family was not able to give the interview, the next head family or some other member of the family was questioned.

For nosological uniformity, ICD-10 was accepted and used to classify the illness of each of the patients detected during the survey. Lastly, the most vital point was designing of the study and it was prepared after consultation with an expert in statistics and social Anthropologist.

**The Study was conducted in phases for 6 weeks.**

Three schedules were prepared to collect and tabulate the data:

I. House hold schedule, which recorded the data connected with the family, structure, the size of the family, age of each member, their sex, marital status, education occupational status, housing, and other relevant information.

II. The questionnaire schedule, which led to the identification of the cases. These questions are in Bengali but translated into Toto language by the help of those key persons. The questions were prepared in consultation with other psychiatrists (not members of the team)

III. Case record schedule provided all relevant information regarding the case detected through questionnaire schedule and recorded the findings of examinations
and final diagnoses. For an operational definition of a case, the definition mentioned in WHO technical report series (1960) was taken as preliminary model. (See Appendix)

Wherever a probable case was detected, two psychiatrists did thorough physical & psychiatric examination separately and diagnosis was made independently. In the event of divergence of opinion, the case was further re-examined, discussed and an agreed diagnosis was reached.

The size of the total Toto population belonging to different areas of Totopara was found to be 1021 as available during the present study period. The data obtained from the population was arranged properly with respect to each of the socio-demographic factors separately. The data expressed in frequencies falling under different categories of a factor were then analyzed statistically using the chi square $(\chi^2)$ test for testing the significance of difference among the categories in each of the factors.

**Results**

The obtained data on socio demographic factors along with the results of statistical analyses are presented in the following tables vide below.

The distribution of the toto population into different age group showed that the percentage of the toto was the highest in 5-14 years age group (29.77%), while it was the lowest in 60 years and above age group (1.46%). However, studies conducted on the Lodha and Mundas living in the plains (in West Bengal) showed that percentage of population in 60 years and above group is fairly high. Among the Munda was 5.1% and among the Lodhas living in Debra and Narayangarh it was 4.1% and 4.4% respectively (Nandi et. al 1977). In the non-tribal rural population in West Bengal, the corresponding percentage was 6.1% (Nandi et al 2000). The remarkably low percentage in the oldest age group of the Totos, in the context of the high percentage in the below 15 years age group, probably suggests that the birth rate in this endangered community has increased satisfactorily. While the life span of the individual is still low, compared to other tribes. This trend deserves special attention of all of us.

It was evident that the members of Toto males and females were close to each other with the percentage of males (51.91%) slightly higher than that of the females (48.09%) in the entire Toto population (Table 1). It was also indicated by the insignificant $\chi^2$ value that the two sex groups did not differ significantly with respect to the different age group. The age wise distribution, however, showed that children below 15 years of age, irrespective of sex, were the largest group who accounted for about 48% of the total Toto population with maximum numbers belonging to 5-14 years (29.77%). The percentage of the elderly people with 60 years of age and above was surprisingly low (1.46%) with the females (1.83) slightly edged over the males (1.13%)

The results depicted that proportions of the Toto population based on the levels of education showed wide difference as indicated by the highly significant value of $\chi^2$ (Table II) More than 90% of the Totos found to be illiterate, while a

**Table – I**

| Age Group in Years | Male    | Female   | Total   |
|--------------------|---------|----------|---------|
| Below 5 Years      | (89 (19.79) | 97 (19.75) | 186 (18.21) |
| 5 –14              | 167(31.50) | 137 (27.90) | 304 (29.77) |
| 15 – 24            | 96 (18.11) | 106 (21.58) | 202 (19.78) |
| 25 – 44            | 86 (16.22) | 73 (14.86)  | 159 (15.57) |
| 35 – 44            | 42 (7.92)  | 37 (7.53)  | 79 (7.73)   |
| 45 – 59            | 44 (8.30)  | 32 (6.51)  | 76 (7.44)   |
| 60 and above       | 6 (1.3)   | 9 (1.83)   | 15 (1.46)   |
| Total              | 530 (100) | 491 (100)  | 1021 (100)  |

Figures in parenthesis indicate percentage. $\chi^2 = 6.21$  df = 6  $p > 0.05$ (not significant)

**Table – II**

| Illiterate | Below primary | Primary & above | Total   |
|------------|---------------|-----------------|---------|
| 925 (90.59)| 73 (7.51)     | 23(2.23)        | 1021(100)|

$\chi^2 = 1511.77$  df = 2  $p < 0.01$ (Significant beyond 0.01 level)
meager 2.26% of the population attained primary and above primary level of education. However, it was found that 7.15% of the Toto population was expected to basic level of education which might be considered to be below primary level.

The Toto population was classified into three categories on the basis of marital status viz. Single, Married and others in which “Others” category included widows, widowers, divorcees and persons who were mutually separated. The obtained X² value indicated a high significant difference among the Toto people belonging to different categories in marital status (Table III). The percentage of persons in the “Single” category was significantly higher (59.26%) than those of “Married” (36.83%) and “Other” (3.9%) categories. However, the Totos placed in the single category included a large number of children making the percentage so high as compared to those of married and others category.

The Totos were found to live in two types of families’ viz. nuclear & extended nuclear families. A nuclear family was composed of parents and their unmarried children only, while in an extended nuclear family unmarried brothers, sisters or persons with close blood relations lived with the nuclear setup of the family. In the Toto community sons or daughters usually after marriage moved away from the original family and started living in a new household.

The obtained results showed a highly significant difference between the numbers of two types of families as indicated by the highly significant X² (Table IV). However, the nuclear families significantly overnumbered the extended nuclear families.

The term size here refers to the number of members in a family and the Toto families were found to have size ranging from single person keeping a household to more than six members irrespective of family type. The significant X² value showed that the families defined in terms of size did not differ significantly (Table V). The percentage of the small, medium and large-sized families are close to each other, though it was slightly higher for the families having more than six members than with other sizes.

The Totos differ from the tribes living in the plains of West Bengal in respect of the size of their families. Nandi et. al (1977) noted that 20% of the families of the Lodha of Narayangarh had more than 6 members, while 20% of the families of the Lodha of Narayangarh had more than 6 members, while 12% of the families of Lodha of Debra had more than 6 members. The higher percentage of big families among the Totas need a careful probe. About one in every four families is an extended family. By virtue of its composition it is likely to be a big family. An extended family may be an indirect effect of short life span of the head of a nuclear family. The children lose their parents before they attain marriageable age. As a result they are forced to live with their married brothers.

Since the Totos are a hill tribe, the present investigation also attempted to study the distribution of the population on the basis of inhabitation of the Totos on different altitude of hills. In the present investigation Toto inhabitants living in place located on high and low altitude were only considered.

Table – III

| Marital Status | Single   | Married  | Others  | Total   |
|----------------|----------|----------|---------|---------|
| Number         | 605 (59.26) | 376 (36.83) | 40 (3.91) | 1021 (100) |

X² = 474.65 df = 2 p < 0.01 (Significant beyond 0.01 level)

Table – IV

| Type                      | Nuclear | Extended Nuclear | Total   |
|---------------------------|---------|------------------|---------|
| Number of families        | 188 (76.11) | 59 (23.89)    | 247 (100) |

X² = 67.38 df = 1 p < 0.01 (Significant beyond 0.01 level)

Table – V

| Size          | 1 – 3   | 4 – 5   | Above – 6 | Total   |
|---------------|---------|---------|-----------|---------|
| Number of families | 82(33.20) | 73(29.55) | 92(37.55) | 247 (100) |

X² = 2.20 df = 2 p >0.05 (Not significant)
The distribution of the basis of altitude showed that more than \(\frac{2}{3}\)rd of the population lived in places located on the low altitude foot hills. The highly significant \(X^2\) revealed a wide difference between the sizes of the Toto settlement on two different altitudes (Table VI).

In the next phase of the present investigation the investigators visited every household and examined each & every member of the family for the detection of potential cases who were affected by Psychiatric morbidity. An attempt was also made to study the rate of morbidity among the toto people with respect to socio-demographic factors like age, sex marital status and also family type, altitude of Toto settlements in hills. The data in frequencies obtained from the total Toto population were arranged into contingency tables and analyzed statistically using chi square test. The collected data and the results obtained from statistical analyses of the same presented in the following tables.

The results showed a highly significant difference between the males and females with respect to psychiatric morbidity as indicated by highly significant \(X\)- value (Table VII). The females were more affected by psychiatric morbidity than the males. It was found that out of the total population of 1021 of Totos 50 individuals were affected in which 35 were females and 15 males. The morbidity rate per one thousand was 31.28 for the females, while it was 28.30 for the males. The overall rate for the total Toto population was close to 49.

The difference between the morbidity rates of men & women deserves our attention. Many studies on non tribal communities living in different parts of India have found statistically significant difference in the rates of morbidity between men and women (Reddy & Chandrashekar, 1998) but tribal communities studied so far have shown no significant difference between the rates of morbidity of men and women (Nandi et. al. 1977, 1980, 1992). The findings of this study in this respect need further exploration.

It was evident from the obtained results that the Totos belonging to different age groups differed significantly with respect to psychiatric morbidity as shown by the highly significant \(X^2\) (Table VIII) the persons with 35 years of age and above were found to be most vulnerable to psychiatric morbidity among the Toto population. The worst victims were the people belonging to the age group of 60 years and above one third of this group were psychiatrically morbid. The morbidity was also very high in age groups 35-44 and 55-59 years as evidenced by morbidity rates of 126.59 and 36.84 respectively per one thousand persons. The rate was found to be less in age groups below 35 years with a minimum of 6.12 only in children below 15 years of age. A look in the last column of this table shows increased rate in higher age group. Amongst the plains tribals Nandi et.al (1977) found the same trend i.e. 33-44 years age group had the highest rate of mental morbidity. The higher rates of mental morbidity and unnaturally low percentage of people in the higher age group at this endangered tribal community deserves to be viewed with concern.

The married persons were found to have significantly higher psychiatric morbidity with a rate of 95.74 per thousand persons than those of “Single” or “Others” status. Surprisingly, not a single person belonging to “Others” category was found to be psychiatrically morbid. The total number of 50 potential cases was shared by “Single and

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**Table – VI**

| Altitude | High | Low   | Total    |
|----------|------|-------|----------|
| Habitation | 319(31.24) | 702 (68.76) | 1021 (100) |

\[ X^2 = 143.68 \quad df = 1 \quad p < 0.01 \quad \text{(Significant beyond 0.01 level)} \]

**Table – VII**

| Sex     | Affected | Non Affected | Total | Rate per 1000 |
|---------|----------|--------------|-------|---------------|
| Male    | 15       | 515          | 530   | 28.30         |
| Female  | 35       | 450          | 491   | 71.28         |
| Total   | 50       | 971          | 1021  | 48.79         |

\[ X^2 = 10.11 \quad df = 1 \quad p > 0.05 \quad \text{(Significant beyond 0.01 level)} \]
Reddy & Chandrasekhar (1998) found that the single persons had the lowest rate of morbidity in the studies reported by them. The highest rate was found among the widows and widowers. In this sample, single persons did have the lowest rate, but the others (widow & widowers) had no mental morbidity amongst them and this freedom from mental disorders of the latter group is rather interesting and deserves to be explored from psychosocial view point.

The results revealed that persons belonging to nuclear and extended nuclear family, differ significantly with respect to psychiatric morbidity as shown by highly significant value X² (Table X). It was found that persons with nuclear family background were more morbid than persons to belonging to extended nuclear family. The results showed that out of 605 Totos who came from nuclear families 42 were morbid, while only 8 individual out of 416 Totos having an extended nuclear set up suffered from psychiatric disorders. The rates were found to be 69.42 and 19.23 per one thousand individuals for the persons belonging to nuclear and extended nuclear family respectively.

In the meta analysis of 13th survey of mental disorders, Reddy & Chandrasekhar (1998) found that nuclear families had high rate of morbidity while joint families had a low rate of morbidity. The greater vulnerability of single family seen in tribal and both in rural and urban non tribal communities probably suggests among other findings deep lack of support system during emotional crisis in those inherently small families.

It was evident from the result that the Toto inhabitants belonging to settlements located on two altitude of the hills differed significantly with respect to psychiatric morbidity
as indicated by the highly significant value of $X^2$ (Table XI). The high altitude inhabitants were found to be significantly more morbid than those of low altitude. The results showed that out of 319 individuals belonging to high altitude were found to be psychiatrically morbid with a rate of 81.50 per one thousand persons, while 24 persons were morbid in a total of 678 Totos of low altitude with a rate of 34.19 per thousand. It is possibly safe to presume, on the strength of these data, that the life in the higher altitude is more stressful than that in the low altitude. The causes of the stress may lie in the inclement climate, loneliness caused by scattered human habitation, death, inaccessibility of health facilities and vulnerability of supply line of the basic needs of life.

In the next phase of the study, each of the potential cases affected by psychiatric morbidity was diagnosed on the basis of a detailed clinical examination. An attempt was also made to find out the prevalence rate for each of the disease in males and females within the Toto population. The obtained results are given in the following table 1.

### Results and Analysis

The results showed that the rate of total mental morbidity of the community was 48.97 per thousand (Table XII). Nandi et al (1977) surveyed two tribal communities in the plains of West Bengal and reported that the rate of total mental morbidity was 32.8 per thousand in the Lodha of Narayangarh 34.8 per thousand in the Lodha of Debra and 44.6 per thousand in the Munda. The rate of morbidity of a rural tribe by the same author in 1992 on Santal was 42.9 per thousand.

The rate of morbidity of the Toto Community is, therefore, fairly similar to that of tribes surveyed in West Bengal. The total mental morbidity of nontribal populations of different parts of India is found to be consistently higher than that of the tribal people (Sethi et al 1967, Nandi et al 1975, Premaranjan et al 1993). These rates are 72.8 per thousand, 102.8 per thousand and 99 per thousand in that order. The sex difference in the rate of mental morbidity (Male 28.30 per thousand, Female 71.28 per thousand) is statistically significant. Women are more vulnerable to mental disorder than men. This trend of morbidity is similar in all tribal community surveyed in West Bengal (Nandi et al 1977, 1980, 1992).

The total mental morbidity of nontribal population of different parts of India is found to be consistently higher than that of the tribal people (Sethi et al 1967, Nandi et al 1975, 102.8 per thousand and 99 per thousand in that order. The sex difference in the rate of mental morbidity (Male 28.30 per thousand, Female 71.28 per thousand) is statistically significant. Women are more vulnerable to mental disorder than men. This trend of morbidity is similar in all tribal community surveyed in West Bengal (Nandi et al 1977, 1980, 1992). Reddy and Chandrasekhar (1998) compiled the findings of thirteen major studies conducted in different parts of India and estimated that the rates of morbidity in males and females were 51.9 per thousand and 64.8 per thousand respectively. This difference in the rates of morbidity was statistically significant. The higher rate of morbidity among tribal women is consistent with the findings.
of many studies on non-tribal communities in the West (Hagnell, 1966, Leighton et al 1963)

Depression is the commonest mental disorder as reported by other studies. Field (1960) reported depression was the commonest mental disorder amongst the tribes of Ghana. Nandi et al (1977) reported similar results from three studies on plain tribals of West Bengal. Reddy and Chandrasekhar (1998) summarized the findings of thirteen epidemiological studies condenced in different parts of India and came to the same conclusion. The rate of depression found in this survey (40.16 per thousand) is much higher than that reported by studies on other rural tribes. For example, rural Santals 23 thousand, rural lodha and munda (combined) 10.6 per thousand (Nandi et al 1977, 1992). The prevalence of Mania in our sample was 0.98 per thousand (i.e. one case in a sample of 1021 persons). This is remarkably less than the rate of Schizophrenia calculated by Reddy and ChandraSekhar (1998) from a combined sample of 33572 persons covered by thirteen psychiatric epidemiological studies conducted in different states of India. They arrived at the rate of 2.7 per thousand (varying between 2.2. and 3.3.). The rate of schizophrenia found amongst is relevant here. Nandi et al (1992) surveyed a rural santal community and reported rate of 1.5 per thousand. The rate of schizophrenia in a combined sample of three rural tribes (viz, Lodha of Naryangarh, Lodha of Dubra and Munda) was 1.3 per thousand. Apart from the possible difference in biological diathesis of vulnerability to schizophrenia in the tribal and non-tribal communities, it may be postulated that social and cultural factors may have a role in the incidence of the disease and its course. In other words, some social systems may have protective barriers the disorder or the other way round. This question may be answered by a longitudinal study of the incidence of schizophrenia of a tribal community and comparing it with result of a similar study in a non-tribal community.

The prevalence of a chronic disorder like schizophrenia depends on many factors. Incidence, treatment and life-span of the patients are relevant issues in society where facilities for treatment, willingness to take advantage of those facilities and life span of the patients and the people at large are extremely limited. In the poor tribal community under survey, the demographic pattern shows that 70% of the population is below 25 years. It is possible that many patients are lost early in life as the remorseless Toto families fail to protect their affected members for long. Consequently whatever the rate of incidence, prevalence figure does not swell.

Psychiatric Morbidity in a Sub-Himalayan Tribal Community

A significant finding of this survey is the almost non-existence of neurotic disorders. This finding corroborates the reports of previous studies on rural tribal (Nandi et al 1977, 1980). The urbanized tribals have, however, higher rate of neurotic disorders (Nandi et al 1992). Neurotic disorders are much less common amongst tribals than among the non-tribals. Nandi et al (1977) report that prevalence of neurosis among the Brahmans of a cluster of villages in West Bengal was eight times higher than that among the tribes (Lodha and Munda) of neighbouring villages. It is, noteworthy that in the tribal community under report there was not a single case of OCD (Obsessive Compulsive Disorder). In a survey of the Lodha and Munda communities in West Bengal, no case of OCD could be detected (Nandi et al. 1977). Nandi et al (1992) surveyed a sample of urban Santal Community and found no case of OCD. In a sample of 653 rural Santals, however, had one case of OCD amongst them (1.5 per thousand). From a meta-analysis of 13 non-tribal (except one) Indian rural and urban surveys, Reddy and Chandreshkar (1998) estimated that the rate of OCD was 3.1 per thousand (varying between 2.4 and 3.8 per thousand). It is, therefore, obvious that OCD is indeed a rare disorder in tribal Communities in India.

It is interesting to speculate why it is so ?

Without delving deep into the mechanism of symptom formation is neurotic disorders, we may venture to explore phenomena from a psychosocial perspective.

It is well known that tribal societies are free from social stresses. They have no sense of insecurity, which is derived from economic prosperity. They are steeped in their today’s problems and have no overt concern for their tomorrow. In other words, they have a low level of aspiration. This mindset keeps them free from the ill effects of stress. Child-rearing practices among the tribals allow a free play of instincts. Children grow into adulthood without the expected task and responsibility of acquisition and preservation of material wealth. Thus the stress associated with such shared social values does not exist in their mental life. The total personality pattern of a tribal is, therefore, a bulwark against neurosis. Obsessive compulsive Disorder is very often associated with stressful situation of life in a highly competitive taboo ridden society. The tribal society is indeed on antithesis of a society that fosters obsessive disorder. The superego conflict is a constant feature of life-pattern in a complex society. The moral and ethical dilemma eats into the very basis of a modern man. The tribal life is still, fortunately is not affected by it. This is possibly one of the factors that influences the low prevalence of OCD in tribal
communities. These issues, however, needs systematic and separate studies from psychological and anthropological points of view.

As a word of caution, we must humbly emphasize that we have no pretension to generalize beyond the findings of the sample, which is in no way representative. But these findings should draw our attention to the rich possibilities of obtaining useful insight into many hitherto ill-understood facets of psychopathology. Cross-cultural studies may give us answers to problems, which still baffles us. With this end in view, more objective methods of detection and diagnosis of cases and a deeper probe into the psychosocio-cultural factors causing mental morbidity should be the line of further enquiry in this area of research.

In conclusion, it may be noted that this sub-Himalayan tribal community, though saved from extinction by timely intervention of the Government and a few NGO’s is afflicted with mental disorders of a significant magnitude. Unless remedial measures are taken promptly, the well-being of the tribe will be in jeopardy.

Appendix

Operational definition of a case:

A manifest disturbance of mental functioning, specific enough in clinical character to be consistently recognizable as conforming to a clearly defined standard pattern and severe enough to cause at least partial loss of working or social capacity or both of a degree which can be specified in terms of decrease in quality and / or quantity of work or of the taking of legal or other social action.

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