

## EXPERIENCES OF PSYCHIATRIC CONSULTATION SERVICE IN TWO COALFIELD HOSPITALS OF BIHAR

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### SUMMARY

The Central Institute of Psychiatry provides extension consultation services at two coalfield hospitals of Bihar, representing the intermediate and central level of health care delivery system. Analysis of data covering a period of one year, from September 1988 to August 1989, revealed significant differences in the utilization pattern of the two centres. The differences relate to the proportion of population subserved, their demographic characteristics, diagnostic break-up, and follow-up pattern. The provision of psychiatric extension services at the intermediate level is recommended.

A large number of epidemiological studies in India have convincingly proved that the prevalence of psychiatric illness in the community is large. The bulk of mental illness in the community however never comes to the attention of the Psychiatrist (Shepherd, 1980). It is also clear that a very large section of the population has no access to the mental health services. This may be due to economic barriers, educational limitations, attitude of fear and resistance developed over many years and the orientation of many in the mental health treatment professions (Glasser and Duggen, 1969). The paucity of services available may be the major limitation in the developing countries. The National Mental Health Programme (1982) envisages mental hospitals to function dynamically with links to the periphery instead of serving as passive recipients for patients. The workshop on mental hospitals held in 1988 (NMHP, 1989) recommended the setting up of special services and organising mental health care services by each mental hospital as part of primary health care for at least 100,000 population.

Keeping with the aims of the National Mental Health Programme and the recommendations of the workshop, the Central Institute

of Psychiatry has set up two consultation psychiatric services in the adjoining coalfields of Bihar. The psychiatric services have been integrated with the existing general health care delivery system. This is the first step to develop an alternative mental health care delivery system to the industrialized but remotely situated population of this region, who are otherwise well covered for physical health care.

In the present study we analyze the socio-demographic, diagnostic and follow up data on all consecutive cases seen over a period of one year at the two mental health extension services, which probably represents two different levels of health care. We compare the data from the two centres and also with the available data from two other Indian studies one carried out in a general hospital (Wig et al., 1978; Varma et al., 1979) and two others in an industrial population (Singh et al., 1977; Sethi et al., 1979). Such an exercise, it is hoped, will lead to better understanding of the referral process and help us in improving the existing mental health care delivery system.

### MATERIAL AND METHOD

The agencies involved were the Central Coalfields (CCL), a public sector organization

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and the Tata West Bokaro (TWB) coalfields, a private organization. Both organizations provide free and comprehensive health care to their employees and dependents. Until the initiation of the extension services, both had no facility for mental health care. The CCL hospital consists of a chain of 86 dispensaries, 4 regional hospitals and 2 central referral hospitals with the main 250 bedded multispeciality referral hospital situated at Ranchi. It serves a workforce of 1,04,000 and their dependents spread over 5 districts (Ranchi, Hazaribagh, Giridih, Palamau and Lohardaga) of South-West Bihar, around a radius of 150 km. from Ranchi. We designate this as mental health extension service at the central level. The TWB colliery is situated in Hazaribagh district, about 100 km. from Ranchi. It has an 80 bedded hospital with speciality services and 4 satellite dispensaries around a 5 km. radius, subserving a total population of around 35,000. This can be thought of mental health delivery at the intermediate level.

A team from the Central Institute of Psychiatry (CIP) consisting of 2-3 psychiatrists and a Clinical Psychologist visits the CCL hospital situated at Ranchi weekly, and TWB hospital once a month regularly on a specified day and time. The team provides specialist consultation service on an outpatient basis including emergency intervention, evaluation, psychological testing, counselling and drug management. Those requiring more extensive evaluation and/or management are referred to C.I.P. Patients requiring psychiatric consultation are identified by the primary health care physicians and given an appointment to meet the psychiatric consultation team on their next visit for first consultation. Follow up visits, however, could be undertaken directly. Drugs are available free of cost and the expenditure on further care is also borne by these agencies. A specially designed case record file is kept at the centres for initial work up and follow up notes.

The data over a 12 month period, from September 1988 to August 1989 was analysed.

Sociodemographic, diagnostic and follow up information were obtained from the case record files. As both groups consist largely of employees at the minimum wage level and their dependents, the variables of income and employment were not considered. Diagnoses were made according to the ICD-9 (WHO, 1978).

## RESULTS

Over a 12-month period, 160 patients availed of the consultation psychiatric facility at the CCL as compared to 127 patients at TWB. Table I compares the socio-demographic characteristics of the two samples. Also included in the table are the sociodemographic characteristics of patients studied in an ESI study in Delhi (Singh, 1977), HAL complex study in Lucknow (Sethi et al., 1979) and a general hospital study (Varma et al., 1979).

The age group 30-39 years was the largest at both CCL and TWB. The patients in the age group 0-19 (20.46%) and 20-29 (23.59%) were significantly greater at TWB than at CCL (12.49% and 10.62% respectively). The age group above 40 years was significantly larger at the CCL. There was a significant difference in the sex ratio of the two groups. In CCL 70% of the cases were male, while in TWB 59.1% were female. The patients availing the extension service in CCL were predominantly unskilled (50%) and illiterate (56.87%) whereas at TWB there were significantly greater number of housewives (45.66%) and of those having educational level of higher secondary school and above (31.48%). There was no significant difference in the marital status of the cases in the two samples, the majority being married.

The diagnostic break-up of the cases seen at CCL and TWB are shown in Table II along with those of two earlier studies—one in a general hospital (Varma et al., 1979) and the other in the industrial ESI population (Singh, 1977). There is a significantly larger population of organic psychosis (9.9%) in the CCL group as compared to 1.8% in TWB. There is no signi-

ificant difference amongst the major psychoses schizophrenia and affective disorders. The neuroses form the single largest category in both groups, 35.4% and 31.25% at TWB and CCL, respectively. Amongst the neuroses, neurotic depression forms the largest category at CCL (18.75%) and TWB (21.2%) followed by anxiety neurosis, 6.87% and 12.8% of cases respectively at the two centres. Hysterical neurosis was diagnosed in 2.5% and 0.7% of cases in CCL and TWB respectively. Two categories not observed in any of the other

studies quoted here—"nil-psychiatry" and "fitness" cases form a significant proportion of cases seen at TWB in the present study.

Table III compares the follow up rates in the two groups. After the initial contact 48.9% of the TWB and 32.5% of the CCL cases came for follow up. However, the difference is not statistically significant. There is a significantly greater number of those suffering from neuroses coming for follow up at TWB as compared to CCL while the proportion of neurotic depressives coming for follow up at the two centres

Table 1. Comparing percentage of sociodemographic variables with other studies

Sociodemographic variables	Central Coal fields Ltd. (CCL) 1988-1989 (N=160)	Tata West Bokaro Colliery (TWB) 1988-1989 (N=127)	EST Delhi 1974 (Singh, 77) (N=187)	HAL Lucknow (Sethi et al., 1979) (N=368)	PGI Chandigarh (1969, 70, 71, 74, 75) (Verma et al., 1979) (N=6683)
<i>Age in years</i>					
0-19	12.49	20.46			14.93
20-29	10.62	23.59**	} 59.89	55.6	33.76
30-39	36.87	34.63		5.5	
40-49	25.62	14.16		5.5	} 51.17
Above 50	14.37	7.08**	32.2		
<i>Sex</i>					
Male	70.0	40.9**	58.82	33.3	54.16
Female	30.0	59.1**	41.18	66.7	54.14
<i>Education</i>					
Illiterate	56.87	23.62**	25	22.2	27.6
Primary	25.0	20.47	23.9	} 61	15.40
Middle	13.12	24.4	24.4		12.40
High Secondary/Intermediate	3.75	16.32**	} 27.2		28.80
Graduate/Postgraduate	1.24	14.95**		16.7	14.9
<i>Occupation</i>					
Unskilled	50.0	6.29			
Skilled	8.12	14.17			
Student	9.37	14.17			
Housewife	21.87	45.66**		66.7	52.04
Professional	1.87	11.02**			
Not known	8.7	8.67			4.8
<i>Marital status</i>					
Married	75.0	70.8	64.59	72.2	65.0
Single	17.5	20.47	30.8	5.5	30.0
Others	7.4	8.64	4.53	22.2	5.0

\*\*p < .01

TABLE II. Comparison of percentage breakdown of diagnosis compared with other studies

Diagnostic category (ICD 9)	Central Coalfields Ltd. (CCL) 1988-1989	Tata West Bokaro Colliery (TWB) 1988-1989 (N=127)	PGI Chandigarh 1969, 70, 74, 75 (N=5215)	EST Delhi 1974 (N=187)
Organic psychoses (290-295)	9.9	1.6	4.63	4.81
Schizophrenia (291)	6.25	2.36	22.01	19.8
Affective Disorder (296)	16.25	15.7	17.30	10.69
Other functional psychoses (298)	4.37	3.93	2.11	—
Neuroses (300)	31.25	35.4	43.73	52.89
(Anxiety Neurosis)	(6.87)	(12.6)	(17.41)	(17.61)
(Hysterical Neurosis)	(2.5)	(0.78)	(9.09)	(13.90)
(Obsessive compulsive)	(2.5)	—	—	—
(Neurotic Depression)	(18.75)	(21.2)	(11.93)	(21.38)
(Others)	(0.62)	(0.78)	(5.30)	—
Personality Disorder/Sex deviation/ Drug dependence (301-304)	1.25	6.29	2.39	0.53
Physiological/special symptoms/ stress reaction (306-308)	1.25	6.29	2.37	—
Adjustment reaction (309)	1.25	2.36	1.38	—
Mental retardation (317-319)	3.12	3.36	1.59	—
Epilepsy (345)	3.12	6.29	—	—
Others (310-311)	3.74	2.36	—	—
Nil psychiatric disorder	5.0	15.75**	—	—
Fitness referral	11.9	3.93**	—	—

\*\*p&lt;.01

TABLE III. Diagnostic groupwise percentage of follow up patients

Diagnostic category (ICD 9)	Central Coalfields Ltd. (CCL)—1988-1989, Total = 160 (N=52) (32.5%)	Tata West Bokaro Colliery (TWB) 1988-1989, Total = 127 (N=52) (40.9%)
Organic psychoses (290-294)	9.60	1.6
Schizophrenia (295)	7.69	1.9 NS
Affective disorder (296)	30.76	13.46**
Neuroses (300)	32.66	48.7*
Anxiety neurosis (300.0)	(1.92)	(21.2)
Neurotic depression (300.4)	(26.9)	(26.9)
Other neuroses	(3.84)	(0.6)
Other categories	19.29	34.43**

\*p&lt;.05 level of significance

NS—Not Significant

\*\*Includes Nil-Psychiatry, Fitness referrals, Epilepsy &amp; ICD category 306-308.

was equal. A large number of cases with anxiety neurosis failed to come for follow up at CCL.

## DISCUSSION

What a given society understands by psychiatric illness is effectively defined by the characteristics of the referral pathway to the psychiatrist's office (Goldberg and Huxley, 1980). In this study the two groups represent consecutive referrals to a consultation psychiatric service from similar coal industry units. The majority of the two samples comes from the same socio-cultural, economic and geographical background and the groups are essentially comparable. Although TWB represents a unit twenty times smaller, the number of patients referred at this unit over a one year period is comparable to that of CCL. The better accessibility of the psychiatric service at the intermediate level, probably accounts for the utilization of the service by a larger proportion of the population of TWB than CCL. This factor alone can also explain the larger number of younger age group cases, as also the different male-female ratio at TWB. Male patients, and those of middle age are more likely to be the bread winner of the family and can more readily circumvent the barriers of distance to reach the mental health team. Thus the filters to the referral pathway may be relatively more permeable to them.

The age composition of the two groups are comparable to those in the ESI and PGI study, but different from HAL study, wherein the 20-29 years age group was proportionately larger and the 40-49 age group smaller (Table I). The higher representation of those over 40 years in the CCL group may be due to a more ageing population in this organization. The sex ratio at CCL is comparable to that of the other studies where males outnumber females, but at TWB the ratio is reversed. The CCL group contains predominantly unskilled and illiterate cases but the proportion of house-

wives and level of literacy seen at TWB is comparable to what is seen in PGI and HAL samples. The unskilled and illiterate class may be more motivated to undertake the rigours of distant journey to meet the mental health team. The marital status of the two groups are similar to that of other studies.

As regards the diagnostic break up of the cases (Table II) neuroses formed the single largest category in this study as well as in PGI and ESI studies. Amongst neuroses, neurotic depression is a major diagnostic category in the coalfields as in the industrial ESI population (Singh et al., 1977), compared to anxiety neuroses, which is more frequently seen in general population studies (Wig et al, 1978). Over the years the diagnosis of hysterical neuroses appears to have decreased in industrial setting. The schizophrenic disorder cases reported in the PGI and ESI samples (22.01% and 19.8% respectively) are also significantly higher than those observed at CCL and TWB 6.25% and 2.36% respectively). This may probably be due to a narrower definition of schizophrenia prevailing currently. However, the figures in the present study are closer to the expected prevalence of the disorder. The proportion of cases with affective disorder in all studies are comparable. A higher proportion of organic psychoses in the CCL group is probably due to a larger ageing population. The factor of alcohol use/abuse has, however, not been studied.

Patients are often seen not for purposes of treatment but rather to serve other organisational and community needs (Mechanic, 1978). In this context it is surprising to note the absence of the categories 'nil psychiatry' and 'fitness referral' in the other studies, whereas it formed a significant number of cases in the present study. Shepherd et al. (1971) stated that the clinician by the very nature of his role seeks to find illness to account for patients' report of distress. Thus there may be a trend towards over-diagnosis

and probably overtreatment. A sizeable number of 'nil psychiatry' disorder category amongst the referred cases represents over-zealous referrals at the peripheral level or the lack of awareness of the nature of psychiatric problems amongst qualified personnel due to lack of exposure to psychiatry at the undergraduate level (Kulhara, 1985).

'Fitness referrals' are usually made for employees reporting for duty after prolonged absence, with certificates of being under psychiatric care from private practitioners. Given the fact that some employees do absent themselves from work for personal reasons and produce false certificates, it becomes difficult for the authorities to verify the genuineness of the problem and hence the referral. The proportion of such referrals is likely to decline over time with provision of regular psychiatric services. The inadequacies of the tools available for diagnosis becomes most glaring when confronted with such cases.

The rates of follow up of 32.5% and 40.9% at CCL and TWB are in conformity with the rates observed in other studies. Dodd (1971) reported that 20.57% of the patients fail to return after the first visit. In a rural Indian set up 34% of the case returned for follow up (Parthasarathy et al., 1981) and in a general hospital psychiatric clinic 45% dropped out after the initial contact (Murthy et al., 1977). The discrepancies in the follow up rates between CCL and TWB and between rural and general hospital psychiatric clinic points to the importance of accessibility. According to Wig et al. (1981) the exercise in consultation psychiatry at the primary and tertiary levels demonstrates the importance of availability, accessibility, continuity and individualisation of the mental health care. However, the factor of accessibility does not seem to matter uniformly. In the CCL group more of those with anxiety neuroses failed to come for follow up, while at TWB more of those with major psychoses dropped out. Whether this represents the

lesser severity of those diagnosed as anxiety neuroses at CCL and whether closeness to the community acts as a deterrent for follow up of major psychoses, remains to be seen.

The treatment methods used were mainly pharmacological and/or counselling. Those who needed more intensive forms of management were referred to C. I. P. The contact, though intermittent, was no different from any other outpatient treatment strategy. At TWB one physician was constantly in touch with the visiting team and was involved in the management plan for every case. The same physician continued to see these cases between the visits. At CCL hospital the referrals came from a wide geographical area and involved a large number of medical personnel from peripheral health units. Hence for the majority of cases there was no chance for the primary treating physician to participate in the management plan. This is a severe limitation of the consultation service at the central level and may account for the lower follow up rates at the CCL compared to TWB.

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