

Psychiatric Disturbances Among Leprosy Patients. An Epidemiological Study¹

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It is a common observation that leprosy patients often develop complexes, neurotic symptoms, and even psychotic reactions. The most probable reason may be the social stigma associated with the disease. In the minds of many people, leprosy is so much associated with sin, punishment, physical disfigurement, and social isolation that it is a very traumatic experience for any one to know that he has developed the disease. Any rehabilitation program for leprosy should therefore take into consideration this emotional impact of the disease.

There are very few studies which have looked into the degree and pattern of psychiatric disturbance among leprosy patients. Weigand and Dawson (¹) studied 85 patients with leprosy and reported them to be more depressed, neurotic, and paranoid when compared to a normal group. Flynn and Harvey (¹) reported that leprosy patients tended to handle emotional problems in either a classically neurotic manner or by means of somatization. As a collaborative study between the Department of Psychiatry, Christian Medical College, Vellore, and the Schieffelin Leprosy Research & Training (S.L.R. & T.) Centre, Karigiri, we conducted a personality study of 20 male patients with leprosy and found that when compared to a normal group and a group of chronic patients treated in a general hospital, the leprosy patients had higher neuroticism scores and developed several neurotic symptoms (³). Since this group of patients was a very selected one, we wanted to do an epidemiological study by examining a nonselected group of leprosy patients in their own households to determine

the amount and type of psychiatric disturbances commonly associated with leprosy. The purpose of this paper is to describe the findings of this epidemiological study.

MATERIALS AND METHODS

Two blocks (groups of households) in Gudiyattam Taluk, South India, where a leprosy control program has been going on for some years under the supervision of the S.L.R. & T. Centre, Karigiri, were selected for the present study. In these two blocks, there were 5745 patients with leprosy. Using a stratified random sampling method, 540 patients were selected. This technique was used to give equal weight to the different diagnostic groups, duration of the disease, and deformity pattern of the patients.

An attempt was made to interview the 540 patients selected at the various village clinics. Those who could not be contacted at these clinics were interviewed in their homes. Forty-six patients could not be traced because 31 were dead or had left for other villages; two were noncooperative, nine were absent from their houses despite repeated visits, and four were transferred to other village clinics. The social and demographic data of the remaining 494 patients were collected, and a mental status assessment was done making use of a Mental Health Item sheet and the M-R scale of the Cornell Medical Index. These were standardized in the Department of Psychiatry and had been used in other epidemiological studies (²). These were administered by an experienced psychiatric social worker. Those who scored three or more positive responses on the Mental Health Item sheet and more than 10 on the M-R scale of the Cornell Medical Index were considered psychiatrically disturbed. These patients were brought to the Department of Psychiatry for a psychiatric evaluation. The final diagnosis was made by a psychiatrist.

The data were analyzed by the chi square test for statistical significance.

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TABLE 1. *Study subjects.*

Total no. of leprosy patients	5745
No. of patients selected	540
No. of patients studied	494
No. of patients with psychiatric disturbances	49
Prevalence rate 99/1000	

TABLE 2. *Classification of psychiatric disturbance.*

Depressive reaction	41
Hysterical reaction	2
Paranoid state	2
Psychotic state	2
Senile degeneration	2
Total	49

TABLE 3. *Sex and psychiatric disturbance.*

	Male		Female	
	No.	%	No.	%
Psychiatric group (49)	30	61.3	19	38.7
Nonpsychiatric group (445)	315	70.8	130	29.2

TABLE 4. *Age and psychiatric disturbance.*

Age distribution	Psychiatric group (49)		Nonpsychiatric group (445)	
	No.	%	No.	%
Below 20 years	0	0	35	7.9
20-29	8	16.3	66	14.8
30-39	12	24.5	116	26.1
40-49	12	24.5	107	24.0
50-59	9	18.4	75	16.9
60 and above	8	16.3	46	10.3

TABLE 5. *Family constellation and psychiatric disturbances.*

	Nuclear ^a		Joint ^b	
	No.	%	No.	%
Psychiatric group (49)	34	69.4	15	30.6
Nonpsychiatric group (445)	316	71.0	129	29.0

^a A nuclear family is one consisting of a married couple and their dependent children.

^b A family is considered to be joint when it includes besides the above, brothers and sisters who have their own families, living together and partaking food from the same kitchen.

TABLE 6. *Education and psychiatric disturbances.*

Educational level	Psychiatric group (49)		Nonpsychiatric group (445)	
	No.	%	No.	%
Illiterate	38	77.6	330	74.2
Primary	6	12.2	70	15.7
Secondary and above	5	10.2	45	10.1

TABLE 7. *Marital status and psychiatric disturbances.*

	Psychiatric group (49)		Nonpsychiatric group (445)	
	No.	%	No.	%
Married	35	71.4	303	68.1
Unmarried	12	24.5	106	23.8
Widow	2	4.1	21	4.7
Widower	0	0	15	3.4

TABLE 8. *Duration of leprosy and psychiatric disturbances.*

No. of years	Psychiatric group (49)		Nonpsychiatric group (445)	
	No.	%	No.	%
0-4	5	10.2	72	16.2
5-9	14	28.6	147	33.0
10 and above	30	61.2	226	50.8

TABLE 9. *Deformities and psychiatric disturbances.*

	Psychiatric group (49)		Nonpsychiatric group (445)	
	No.	%	No.	%
Deformed	31	63.3	213	47.9
Nondeformed	18	36.7	232	52.1

$p < 0.05$, chi square test.

RESULTS

Among the 494 patients studied, 55 had a high score in both the scales. On psychiatric evaluation, there was no evidence of psychiatric disturbance in six patients. This gives the prevalence rate of psychiatric disturbance as 99 per 1000 (Table 1). The different diagnostic groups are given in Table 2. Depressive reaction was the most com-

mon. Table 3 shows the sex distribution, which was similar in both the psychiatric and nonpsychiatric groups. Table 4 shows the age distribution, which was similar in both groups. Table 5 shows the family constellation in both groups. There was no difference. Tables 6 and 7 compare the two groups with regard to literacy and marital status, respectively. There were no differences. Table 8 shows the duration of leprosy in relation to psychiatric disturbance. The prevalence of psychiatric disturbances shows a tendency to increase with the duration of leprosy although this does not reach statistical significance. Table 9 shows that psychiatric disturbance is more common in those patients with physical deformity. This is significant at the 5% level.

DISCUSSION

The main finding of this epidemiological study is that the prevalence rate of psychiatric disturbance among leprosy patients is about 99 per 1000. This prevalence rate is much more than in a normal population. In a mental health survey of Vellore town (2) using a methodology similar to the one used in the present study, we found that the prevalence rate for psychiatric disturbance was about 63 per 1000. This shows that leprosy patients form a vulnerable group to develop psychiatric disturbance. Depressive reaction is the most common. This means that the psychiatric disturbance which these patients develop is a reaction to the physical illness.

Another finding of this study is that those who have been sick for a longer time and those who have developed physical handicaps have a greater chance to get psychiatric disturbances. In our study on hospitalized leprosy patients, we found that patients with gross degrees of physical deformity were more "adventurous" and "paranoid" on Cattell's 16 personality factors inventory (3). This finding is important in the rehabilitation of leprosy patients. It is not the actual disease but the physical deformity produced by it which stands in the way of rehabilitation. It is therefore very important that physical handicaps in leprosy be avoided. The psychology of crippling is a very important part of the psychology of leprosy.

Our findings strongly suggest that psy-

chiatric intervention also is necessary in the management of leprosy patients. Short term supportive psychotherapy is essential in the treatment program. This will minimize the development of psychiatric disturbance and also help the patient to get over it if it has already developed.

SUMMARY

An epidemiological study was done to determine the prevalence of psychiatric disturbances among leprosy patients. Using a stratified random sampling technique, 540 subjects with leprosy were selected from a total population of 5745 leprosy patients. A mental health evaluation was conducted on 494 of these subjects. Forty-nine of these patients were found to have a psychiatric disturbance, giving a prevalence rate of about 99 per 1000. Depressive reaction was the most common disturbance seen. Those patients who were sick for a longer time and those who developed physical deformities were found to be more prone to get psychiatric disturbances. It is emphasized that supportive psychotherapy is important in the management and rehabilitation of leprosy patients.

RESUMEN

Se realizó un estudio epidemiológico para determinar la frecuencia de alteraciones siquiátricas en los pacientes con lepra. Usando una técnica de "muestreo al azar en estratos" se seleccionaron 540 pacientes de una población total de 5745 pacientes con lepra. En 494 de los individuos seleccionados se hizo una evaluación de salud mental. Se encontró que 49 de estos pacientes tenían algún tipo de alteración siquiátrica, lo que equivale a una prevalencia de cerca de 99 por 1000. La alteración más frecuente fue un estado depresivo. Aquellos pacientes con el mayor tiempo de enfermedad y aquellos con deformaciones físicas fueron los más susceptibles de desarrollar alteraciones siquiátricas. Se enfatiza que la sicoterapia es importante en el manejo y rehabilitación de los pacientes con lepra.

RÉSUMÉ

Une étude épidémiologique a été menée en vue de déterminer la prévalence des troubles psychiatriques parmi des malades de la lèpre. On a utilisé une technique stratifiée d'échantillonnage au hasard. Parmi une population totale de 5745 malades de la lèpre, on a sélectionné 540 sujets. Une évaluation de l'état de santé mentale a été menée sur 494 de ces sujets. Chez 49 d'entre eux, on a observé des troubles psychiatriques, ce qui livre un taux de prévalence d'environ

99 pour mille. Le trouble le plus fréquemment observé consistait en réactions dépressives. Ces malades, dont la maladie durait depuis longtemps, de même que ceux qui avaient développé des mutilations et difformités physiques, sont apparus plus enclins à présenter des troubles psychiatriques. On insiste sur le fait qu'une psychothérapie de support est importante dans le traitement et la réhabilitation des malades de la lèpre.

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