

PREVALENCE OF PSYCHIATRIC ILLNESSES AMONG PATIENTS WITH HENSEN'S DISEASE- A STUDY IN TERTIARY HEALTH CARE IN ODISHA

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Abstract

Background: Leprosy is a chronic illness which is caused by bacteria mycobacterium leprae. The study goal was to estimate the prevalence and kind of psychiatric illness among leprosy patients receiving care in a tertiary care facility in Odisha and assess the association between those conditions and sociodemographic and clinical factors. **Materials and Methods:** A total of 100 patients who were diagnosed with Leprosy aged 18 to 60 were enrolled in the study, who visited the outpatient department of the Saheed Laxman Nayak Medical College and Hospital, Koraput. The study participants were evaluated for mental illness using a specially created pro-forma based on ICD 10 Mental Illness Checklist. **Result:** Our research indicates that 34% of leprosy patients also had a mental disorder. The most prevalent mental illness overall was depression, followed by anxiety. Compared to semiurban and rural patients, patients who lived in cities had a much lower prevalence of mental illness. In leprosy patients, psychiatric issues were more prevalent in the older adult group (51–60 years). Women were more likely than men to experience mental problems. Patients with the lepromatous stage of leprosy were more likely to suffer from mental disorders. **Conclusion:** We draw the conclusion that leprosy patients frequently have serious mental co-morbidities, such as depression disorders that are frequently followed by anxiety disorders. In addition to improving patient outcomes, psychiatric co-morbidity also has a detrimental effect on prognosis and morbidity. Early diagnosis and treatment of this condition can be beneficial.

INTRODUCTION

Leprosy is a neglected chronic disease caused by bacillus, Mycobacterium leprae, affecting skin, peripheral nerves, respiratory tract and eyes transmitted via droplets.^[1,2] Globally, leprosy prevalence showed a decreasing trend and similar observation has been seen in India where more than 98.5% decrease in national prevalence.^[3,4] According to World Health Organization estimates, 127558 new cases of leprosy are detected from six WHO regions and India has the highest number of leprosy patients.^[2,4]

In India, leprosy was considered a curse from god and is often stigmatized with the notion that the person has committed some sin. The stigma associated with leprosy is the oldest known disease-

related stigma resulting in social isolation.^[5,6] The visible signs of disfigurements, association with poverty and social stigma make leprosy one of India's neglected tropical diseases.^[7] Additionally, these patients are predisposed to psychiatric illnesses due to restriction in physical mobility, sensory deprivations, unemployment and anti-leprosy medications.^[5,7,8] Evidence based research around the world suggests that high prevalence of mental illness among leprosy diagnosed patients, particularly depression, as compared to general population.^[2,9,10,11]

Psychiatric co-morbidity prevalence varies across different settings and different geographic regions ranging from 25 to 70% as reported by different studies.^[11,12,13,14] However, there are not much studies available in India regarding this correlation with different psychiatric co-morbidity in India

context. There are very few studies in India where prevalence on psychiatric comorbidity has been reported which was between 10 to 76%.^[15,16,17,18] In Odisha there were no studies reporting the prevalence regarding psychiatric comorbidity among leprosy patients. As a result, this study aims to determine the prevalence and kind of psychiatric problems among leprosy patients who visit a tertiary care hospital in south Odisha and to assess their relationships with sociodemographic and clinical factors.

MATERIALS AND METHODS

The present hospital based cross-sectional study was conducted in the out-patient departments of Saheed Laxman Nayak Medical College and Hospital located in Koraput, Odisha. In this study a total of 100 study participants were enrolled from January to May 2022. The enrolment was carried out based on following inclusion criteria and exclusion criteria:

Inclusion Criteria

1. The study participant is previously diagnosed as a case of Hansen's disease/Leprosy,
2. The age of study participants should be above 18 years and under 60 years of age.
3. The study participant who are willing to participate in the study and will provide written informed consent.

Exclusion Criteria

1. The study participant/patient who were having co-morbid dermatological diseases.
2. The study participant/patient with chronic debilitating medical and surgical conditions.

Trained psychiatrists collected patient data in a semi-structured questionnaire based on Mental disorder ICD-10 checklist. Physical and Mental examination was also carried out for all the study participants. The data were collected in a performa and was analyzed using SPSS 22.0, statistical software. Univariate analysis was carried out for analyzing psychiatric disorder according to the sociodemographic characteristics. Proportion was calculated and provided for demographic characteristics and psychiatric co-morbidity among study participants and p value of less than 0.05 was considered as significant.

RESULTS

In this study 100 patients were enrolled, and data were collected from them. Majority of the study participants were male (70%) and the rest were females. The age of study participants was ranged from 18 years to 60 years and most of them were from adult age group of 31 years to 40 years. The majority of study participants were from low socioeconomic group (46%) and illiterate (33%). The sociodemographic characteristics of study participants with psychiatric disorders is provided in [Table 1].

Table 1: Socio demographic characteristics and psychiatric disorders in the leprosy diagnosed patients

Sociodemographic characteristics		Total leprosy patients (n=100)	Psychiatric illness			
			Present (34%)		Absent (66%)	
			N	%	N	%
Age	18-30 years	12	7	58.3	5	41.7
	31-40 years	36	10	27.8	26	72.2
	41-50 years	31	11	35.5	20	64.5
	51-60 years	21	8	38.1	13	61.9
Gender	Male	70	14	20.0	56	80.0
	Female*	30	20	66.7	10	33.3
Marital Status	Unmarried	34	11	32.4	23	67.6
	Married	66	23	34.8	43	65.2
Educational Status	Post graduate	3	0	0.0	3	100.0
	Graduate	11	3	27.3	8	72.7
	Intermediate	12	6	50.0	6	50.0
	High-School	22	10	45.5	12	54.5
	Primary school	19	6	31.6	13	68.4
	Illiterate	33	9	27.3	24	72.7
Residence	Urban*	16	3	18.8	13	81.3
	Semi urban	46	19	41.3	27	58.7
	Rural	38	12	31.6	26	68.4
Occupation	Skilled worker	37	14	37.8	23	62.2
	Unskilled worker	55	14	25.5	41	74.5
	Unemployed*	8	6	75.0	2	25.0
Socio economic Status	Lower	46	12	26.1	34	73.9
	Middle*	25	15	60.0	10	40.0
	Upper	29	7	24.1	22	75.9

*Statistically Significant at p<0.05

The psychiatric co-morbidity prevalence in leprosy diagnosed patients is shown in table - 2. Most common co-morbidity found in the patients was Mood disorders (50%), followed by anxiety disorders (13.6%) and psychosis (6.81%).

Table 2: Psychiatric co-morbidity prevalence among patients with leprosy

Psychiatric disorders		Number (n =44)	%
Mood disorder (50%)	Mild depressive episode	1	2.9
	Moderate depressive episode	6	17.6
	Severe depressive episode without psychotic symptoms	7	20.6
	Severe depressive episode with psychotic symptoms	2	5.9
	Recurrent depressive disorder- Current episode moderate	2	5.9
	Recurrent depressive disorder- Current episode severe without psychotic symptoms	2	5.9
	Dysthymia	2	5.9
Anxiety disorder (13.6%)	Generalized anxiety disorder	3	8.8
	Mixed and other anxiety disorder	1	2.9
	Panic disorder	1	2.9
	Obsessive Compulsive Disorder	1	2.9
Psychotic disorder (6.81%)	Delusional disorder	2	5.9
	Schizophrenia	1	2.9
Other (6.81%)	Somatoform disorders – Hypochondriacal disorder	2	5.9
	Adjustment disorders	1	2.9

Multibacillary leprosy was seen in majority of the study participants with 58% and rest were having Paucibacillary leprosy. Overall 46% of patients were found positive in Lepa reaction and rest were negative. The onset was seen at early age group 19 years to 30 years (35%) followed by next age group 31 years to 40 years (19%) and 41 years to 50 years (17%).

The most common onset age was 19-30 years (35%) followed by 31-40 years (19%) and 41-50 years (17%). In 45% of cases, the sickness lasted less than a year, while in 38%, it lasted between one to five years and in 17% it was between 6 to 10 years. Of the total patients on medication only 35% of them had completed their medication course. In the patients undergoing treatment for leprosy, 44% of them were taking three medications and the remaining patients were using only two. We discovered no statistically significant difference between leprosy patients with and without psychiatric illnesses when compared to the subcategories of leprosy, age of onset, duration of disease, bacillary status, lepra reaction status, and current drug regimen.

DISCUSSION

In our study we found more than one third (34%) of patients who have any kind of mental illness. The study's results are consistent with those of another research that have been published worldwide and in India. Erinfolami et al, Kisivuli et al, Yazici et al, Leekassa et al and Soykan et al had reported prevalence in leprosy patients between 20% to 72%.^[11,12,13,14,19] Indian studies by Kumar et al, Ramanathan et al and Chatterjee et al also reported similar mental illnesses between 10% and 78% among leprosy patients.^[8,15,16] High prevalence of mental illness may be attributed towards visible skin disfigurements, social isolation due to stigma, socioeconomic condition, unemployment and change in their life style due to disease.^[11] Various studies have provided biological linkage towards mental illness among leprosy patients, which is caused due to irritable systemic lesions due

to toxins and viral infection in nervous system.^[4] Among leprosy patients having psychiatric co-morbidity, most common disorder was depression. The findings were similar to various other studies where depression prevalence was found in range 30% -70% in leprosy patients.^[11,9,10,16,17]

The second most common disorder was anxiety disorder which was similar in other studies which found anxiety disorder in range of 10% -20% of patients in similar settings.^[12,17,20] According to one study, dementia affects 28% of people as their major illness. Dementia has been found in these people, according to other studies, of people as their primary illness.^[21]

This study's findings showed that participants living in urban areas have significantly low psychiatric disorders compared to semiurban and rural areas. The low prevalence of mental illness in urban areas may be attributed to better awareness of the disease, better access to medical care, better living situation and adherence to medication.

According to the study's findings, patients living in urban settings had a considerably lower rate of mental disorder than those who lived in semi-urban areas and rural areas. The low prevalence of mental illness in urban settings may be attributed to higher education, better access to healthcare and, consequently, better drug adherence and better living situations. Psychiatric illness were more prevalent in older age group between 51 to 60 years in leprosy patient, however there was no significant difference found across the group which is consistent with other studies.^[22]

We found that women were more likely than men to have mental illness in the current study. This result is consistent with a study carried out in Italy by Picardi et al., who discovered that women have a higher probability of having dementia.^[23] We found in our study that unmarried patients were more prone to mental illness than married individuals, but the difference was not significant across the group. Insufficient social and psychological support may contribute towards the reported higher prevalence of mental disorders among them. Mental illness among patients having no education was higher as compare

to individuals having primary or above educational qualification is similar to finding by Turkan et al and Weiss et al, but not significant across the group (9,24). Previous studies have shown low education level is one factor leading towards poverty, which is one of the factors associated with mental illness. In this study we found higher prevalence of mental illness among patients in lepromatous leprosy. Leprosy stages, however, don't really relate to psychiatric co-morbidity among the patients. The findings of this present study agree with those of Turkan et al.^[9] The increasing prevalence of psychiatric co-morbidity among leprosy patients may be attributed to fatigueness, greater disability, length of treatment, drugs for treatment leading to dementia.^[9] The study finds patients with multibacillary status more likely to be diagnosed with any type of psychiatric co-morbidity. However, the bacillary status is not a strong predictor to psychiatric co-morbidity. The findings are similar to Turkan et al and Weiss et al.^[9,24]

High disability and more physical issues associated with multibacillary status, which may raise a patient's stress levels and impair social functioning, could cause this increase in frequency. These patients may not finish the entire treatment course due to their lack of understanding of the condition, making them resistant to additional treatment.

In our study there are some limitations. The patients enrolled in our study has been only tested once. The total sample size for our study is relatively lower, so generalizations to general population is not possible. Our study concludes that leprosy patients suffer from psychiatric co-morbidity, such as depression, followed by anxiety. In addition to affecting patient treatment outcomes, psychiatric co-morbidity also has detrimental effects on the patient's prognosis and health status.

Early diagnosis and treatment of this condition can be beneficial. Therefore, comprehensive care for Hansen's disease should also include in any appropriate psychiatric evaluation and treatment.

CONCLUSION

We draw the conclusion that leprosy patients frequently have serious mental co-morbidities, such as depression disorders that are frequently followed by anxiety disorders. In addition to improving patient outcomes, psychiatric co-morbidity also has a detrimental effect on prognosis and morbidity. Early diagnosis and treatment of this condition can be beneficial.

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