



Community Perception on Leprosy in the Islands

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ABSTRACT

Background: Leprosy is still a public health problem in India. The study was conducted to assess knowledge, attitude and belief about leprosy and the perceived stigma against leprosy patients in community.

Methodology: A cross-sectional study was carried in Andaman and Nicobar Islands among 533 people selected by systematic random sampling in January 2017 using a pre tested structured questionnaire.

Results: Community perception on leprosy was analyzed on 533 respondents which included 331 females (62.10%) and 202 males (37.71%). About 85.40% had heard about leprosy, 69.50% were aware about hypo pigmented patches and 32.50% knew that it spreads by close contact. Around one third were aware that leprosy is curable, free treatment available and may result in deformity if left untreated. 65.90 % didn't want to invite leprosy patient to their social gathering and 12.10% respondents thought that leprosy patient shouldn't be given same respect as others.

Conclusion: Level of knowledge of leprosy is insufficient, therefore health education, frequent surveys, case detection along with regular and complete treatment play a crucial role for reducing the burden of this disease.

Key Words: Leprosy, awareness, Andaman, KAP

INTRODUCTION

Leprosy or Hansen's disease is a chronic disease caused by Mycobacterium leprae which is a acid-fast, rod-shaped bacilli affecting the peripheral nerves, skin and certain body tissues. It can result in loss of sensation¹. The social and psychological effects of leprosy due to its visible debilities and sequelae and the stigma attached to it have resulted it to be a major public health problem in India. ². The stigma in leprosy is primarily due to the misconceptions pertaining to the "incurability" and "highly infectiousness" of this disease³. Transmission is assumed to be primarily by droplets from the nose and mouth which may occur through close contact with infected persons ⁴.

Till about 1940 there was no effectual cure for leprosy⁵. Later anti leprosy drugs like dapsone, clo-

fazamine and rifampicin came into existence but the Multidrug therapy which was combination of all three drugs was first recommended by WHO Expert Committee in 1981 which cured the patient within 6 to 12 months depending on the type of leprosy⁶. Due to the stigma associated with the disease people delay seeking proper medical care until they develop deformities ⁷.

Prevalence of leprosy from 138 countries from all WHO regions at the end of 2015 was estimated to be 176176 cases (0.2 cases per 10 000 people). Globally new cases reported in 2015 was 211973 (2.9 new cases per 100 000 people). The number of new cases reported in 2014 was 213899 and in 2013 new cases reported were 215,656⁸. Globally at the end of 2016, total number of cases were 173358 which in turn corresponds to prevalence of 0.29/10,000 ⁹.

With the implementation of MDT, India has succeeded in bringing down the national prevalence from 1/10,000 in December 2005 to 0.66/10,000 in 2016. By the closing stages of March 2016, of the total 669 districts about 551 districts (82.36%), had a prevalence of <1/10,000 population which is the goal of eliminating it as a public health problem. Seventy six districts had prevalence between 1 and 2/10,000, 39 districts had prevalence between >2 and 5/10,000 and only 2 districts had prevalence between 5 and 10/10,000 population¹⁰.

There is no previous study on leprosy reported from the community settings of Andaman and Nicobar Islands. Therefore the present study was undertaken to understand the community perception about leprosy.

OBJECTIVES

The study was conducted to assess the knowledge, attitude and belief about leprosy in the community members, and to analyze the perceived stigma against leprosy patients.

MATERIALS AND METHODS

A Cross Sectional study was conducted from January 24 to 30, 2017 at Haddo, urban field practice area of Department of Community Medicine, Andaman and Nicobar Islands Institute of Medical Sciences. The area has a population of 13,787 and total households of 3528. Haddo area is divided into two wards 1 & 2. Ward - I has a population of 7084 and a total households of 1802. Ward -II has a population of 6703 and total households of 1726. Ward 2 was selected by simple random sampling technique. Ward 2 consists of two areas- Haddo junction area and Lilypur area. Haddo junction area was selected for conducting the study by simple random sampling.

Haddo junction area has 662 households and a population of 2667. By systematic random sampling every 5th house was surveyed. A total 134 households with 533 people were interviewed and the data was collected by using a predesigned pre-tested structured questionnaire. The questionnaire included demographic variables like age, sex, marital status and occupation. The other variables included were to assess the knowledge, attitude, stigma and belief about leprosy. A pilot study was conducted to assess the feasibility and shortcomings of the study. The data was collected and entered in Microsoft excel spread sheet on a regular basis. Final analysis was done using IBM SPSS software version 21. Ethical clearance was taken from institution ethics committee.

Inclusion criterion: Population who were 18 years and above and who were interested to participate.

Exclusion criterion: Population below 18 years and sick individuals.

RESULTS

Community perception on leprosy was analyzed on 533 respondents which included 331 females (62.10%) and 202 males (37.71%). The study included 27 people (5.07%) below 20 years, 169 persons (31.71%) were between 20 and 30 years, 154 persons (28.89%) were between 30 to 40 years, 111 persons (20.83%) belonged to age group between 40 to 50 years, 46 persons (8.63%) were between 50 to 60 years, 18 persons (3.38%) were between 60 to 70 years, 6 persons (1.13%) belonged to age group between 70 to 80 years and 3 persons (0.56%) were between 80 to 90 years (Table 1).

Out of 533 respondents only 455 people (85.40%) had heard about leprosy and the rest 78 persons (14.60%) had not heard about leprosy. Only 455 people who had heard about leprosy were interviewed. Among which about 56 people (12.30%) accepted to have known person in their family or neighbourhood who was suffering from leprosy. Most of the respondents 317 (69.70%) said leprosy is caused by germs while 52 people (11.40%) thought leprosy is caused by curse and the rest 86 (18.90%) didn't know the cause. Only 148 persons (32.50%) said that leprosy spreads by close contact. About 316 (69.50%) person said that leprosy appears as hypo pigmented skin patch. About 156 people (34.30%) said leprosy is a hereditary disease. Leprosy is curable was known to 300 persons (65.90%). Only 290 persons (63.70%) were aware that treatment is available for leprosy in health facility. Treatment for leprosy is available free of cost by government was known to 299 (65.70%) respondents while 156 (34.30%) didn't know that government is providing free treatment.

Table 1: Age-Sex distribution of respondents

Age	Gender		Total (%)
	Female (%)	Male (%)	
<20	11 (3.32)	16 (7.96)	27 (5.07)
20-30	117 (35.35)	52 (25.87)	169 (31.71)
30-40	103 (31.12)	51 (25.37)	154 (28.89)
40-50	65 (19.64)	45 (22.39)	111 (20.83)
50-60	22 (6.65)	24 (11.94)	46 (8.63)
60-70	7 (2.11)	11 (5.47)	18 (3.38)
70-80	5 (1.51)	1 (0.50)	6 (1.13)
80-90	1 (0.30)	2 (1.00)	3 (0.56)
Total	331 (100.00)	201 (100.00)	533 (100.00)

Table 2: Respondent's knowledge, attitude and belief about leprosy

Item	Yes (%)	No (%)
Have you heard about leprosy disease?	455 (85.4)	78 (14.63)
Do you know anyone who is having leprosy in your family/ neighbourhood?	56 (12.3)	399 (87.69)
Is leprosy caused by a germ?	317 (69.7)	138 (30.33)
Is leprosy caused by curse?	52 (11.4)	403 (88.57)
Do you know leprosy spreads by close contact?	148 (32.5)	307 (67.47)
Does it appear as skin patches?	316 (69.5)	139 (30.55)
Is leprosy hereditary disease?	156 (34.3)	299 (65.71)
Is it completely curable?	300 (65.9)	155 (34.07)
Is treatment for this disease available in the health facility?	290 (63.7)	165 (36.26)
Do you know that treatment for leprosy is free of cost?	299 (65.7)	156 (34.29)
Do you know that if it remains untreated it leads to deformity?	286 (62.9)	169 (37.14)
Will you refuse casual contact with a person with leprosy?	217 (47.7)	238 (52.31)
Would you invite your friend to social occasions even if he has leprosy?	300 (65.9)	155 (34.07)
Do you think that a person with leprosy should be excluded from social gathering?	182 (40)	273 (60)
Do you think that a person with leprosy should get the same respect or standing as others in the community?	400 (87.9)	55 (12.09)

Awareness about untreated leprosy may lead to deformity was known to 286 persons (62.90%). When enquired about casual contact with leprosy person, 217 (47.70%) persons accepted to refuse casual contact with persons suffering from leprosy and 155 persons (34.10%) said they won't invite friends suffering from leprosy on their social occasions. About 182 (40.00%) people felt that a person suffering from leprosy should be excluded from social gathering. About 55 people (12.10%) felt that person suffering from leprosy should not get the same respect as others in community. (Table 2)

DISCUSSION

The major thrust in leprosy control in India is active detection which includes early diagnosis and regular treatment of leprosy and to stop new infections and disability. Leprosy is totally curable with multi drug therapy which is available free in public hospitals.

In our study about 85.40% had heard about the disease leprosy which can be considered high. Similar study done by Navya Handa et al in western Rajasthan found 51% had no knowledge about leprosy ¹¹. In another study done at Karad, urban slum of western Maharashtra found that 78% had heard about the leprosy disease ¹². The reason for high awareness in our study can be because of regular health educational programmes conducted by the health workers in the islands.

In our study 69.70% people believed that leprosy is caused by germs. In a similar study done by Handa et al in western Rajasthan found that 73.68% felt that leprosy is caused by germs ¹¹.

On assessment of knowledge about transmission present study revealed that only 148 persons (32.50%) were aware that leprosy spreads by close

contact which is lower compared to 59.34% seen among urban slum community in Maharashtra ¹². Study done in Pakistan among general practitioners regarding knowledge about spread of leprosy by close contact was known to only 49% ¹³. In a related study done by in Guntur district 36.23% person had the knowledge about transmission of leprosy ¹⁴. Navya et al in her study found that almost 50% understood that leprosy is extremely infectious and easily communicable ¹¹. In another study done in a leprosy rehabilitation centre in Maharashtra about 43.13% of cases were aware that leprosy is an infectious disease ¹⁵.

In our study we found that 69.50% knew that leprosy appears as hypo pigmented skin patches. Various other studies found knowledge about hypo-pigmented patches to be 68.62% and 72.36% ^{11, 15}.

Insufficiency in knowledge about awareness about the mode of transmission, early signs and symptoms with pessimistic and apprehensive notions attached with the ailment are significant factors which hamper leprosy control ¹⁶.

We observed that 34.30% felt that leprosy is a hereditary disease. Almost similar results (28.76%) were observed by Mohite in his study done in a urban block in western Maharashtra and by Navya et al (32.89%) ^{11,12}. In comparison to our study Madhavi J Mankar et al in his study in Maharashtra observed that there was a high level of awareness about the fact that the disease is not hereditary ¹⁵.

In present study 300 persons (65.90%) knew that leprosy is curable while 155 (34.10%) persons felt that leprosy is incurable. Almost similar result was seen in study done in slum community in Maharashtra ¹². Compared to our study, knowledge about cure of leprosy was known by higher per-

centage of people (73%) in study done among general practitioners at Hyderabad¹³. Knowledge about cure of the disease is very important among the masses only then people will seek medical care.

Present study found that 63.70% were aware that treatment is available for leprosy in health facility. Almost similar finding was seen by Mohite (52.90%)¹². Similar study done in a tertiary centre in Rajasthan stated that 75% were aware that leprosy can be treated by drugs while study done in Guntur district 40% reported that leprosy could be treated with anti-leprosy drugs^{11,14}. In the present study only 63.70% were aware that treatment is available for leprosy in health facility which seems to be very poor. In present study free treatment for leprosy was known only to 299 (65.70%) respondents. Mohite in his study found 46% knew that treatment of leprosy is available free of cost¹². It shows that more forceful Information, Education, Communication (IEC) activities with emphasis on treatment and curability of this disease are essential and also that treatment is available free by the government in health facility needs to be spread in the community.

In our study we found that 286 persons (62.90%) knew that if leprosy remains untreated it will lead to deformity which is comparably better in comparison to study done by Navya et al (44.73%)¹¹. Study done by Kopparty et al had reflected that the fraction of families who are having a family member with deformities faced problems ten times higher (57%) than those without deformity (6%)¹⁷. It is vital to provide information regarding leprosy to increase awareness at community level. Education about adequate and suitable treatment of leprosy is important as it is an important cause of preventable disability¹⁸.

In our study when enquired about casual contact with leprosy person, 217 (47.70%) persons accepted to refuse contact with persons suffering from leprosy while 238 (52.30%) said they don't mind. Navya et al in her study observed that 11% people feared leprosy patients and 3% said that they felt disgusted on coming across leprosy patients¹¹. Similar studies have also observed refusal of contact with leprosy patients^{16, 19}. Few findings concordant with previous work include strong emotional reactions towards leprosy patients like fear, disgust^{20,21, 22}, unwillingness for matrimony^{21,23}, hesitance of sharing of food^{15,20} and disinclination to travel with a leprosy patient²⁰. Such kind of behavior of people is seen because of inadequate scientific knowledge and cultural attitudes in people.

In the present study about 155 persons (34.10%) said they won't invite friends suffering from leprosy on their social occasions which is lower than a similar study done in Guntur district were 86.96%

accepted that they do not want to be associated with a leprosy patient¹⁴. This difference could be because of dissimilar study population and study area and their educational status influencing their thoughts.

Our study found that 182 (40.00%) people felt that a person with leprosy should be excluded from social gathering. Previous study done by Rao PVR et al has shown the reluctance of community to allow leprosy patients to attend social functions¹⁶. Such kind of attitude is seen because of the stigma attached to the disease which has been prevailing from so many years. Literacy rate is better in these islands therefore in our study we have observed that individuals in the community have accepted leprosy patients in their social gatherings.

Present study reveals 87.90% feel that leprosy patient should be given same respect as others which was higher compared to study done by A Niranjan et al¹⁴. Similar kind of negative attitude towards leprosy patients had been observed by other studies also^{15, 24}. Literacy plays an important role which influences one's thoughts and views.

Results gained from our study can be utilized in routine management and counseling of leprosy patients and also in developing better level strategies to improve broad-spectrum awareness about the disease. Various studies done by researchers around the world have focused on the gaps in knowledge about leprosy^{20, 24, 25}.

There is a gap between the actual number of cases and the number of cases which are reported. The most common challenges observed in leprosy are the patient compliance with treatment and the acceptance level by the patient which is found to be low mainly because of the stigma involved with the disease. Therefore it requires multi faceted approach which includes political will, socioeconomic development and integrated health approach.

To reduce the incidence of leprosy every district team needs to be strengthened with more involvement of leprosy affected persons for leprosy services and training them for better monitoring and surveillance, adequate transportation facilities for the team, improving detection of the disease and providing quality services and treatment for prevention of further spread of the disease, lessen the visible deformities and rehabilitating those patients were disabilities has occurred and remove stigma and discrimination linked with the disease²⁶.

In addition to actual control activities preventive interventions focusing at chemoprophylaxis of contacts of leprosy patients with single dose rifam-

picin and immunoprophylaxis with BCG vaccine can help to reduce the transmission of M Leprae²⁷.

It is therefore need of the hour to provide information regarding leprosy to increase awareness at community level.

Limitations of the study: Education, income, type of family, and socio economic status have not been taken into consideration

CONCLUSION

Level of knowledge of leprosy is still insufficient .Only 85.40% had heard about leprosy and 47.70 % persons accepted to refuse casual contact with persons suffering from leprosy. About 34.30 % believed that leprosy is a hereditary disease , 40.00% people felt that a person suffering from leprosy should be excluded from social gathering and 12.10 % felt that person suffering from leprosy should not get the same respect as others in community therefore awareness needs to be extended more for absolute elimination of this disease. Emphasis should be more on information about the disease, its cause, transmission, misconceptions and stigma rather than treatment. Frequent surveys, case detection along with regular and complete treatment play a crucial role for reducing the burden due to this disease.

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