Indian J Lepr 2013, 85 : 123-127

http://www.ijl.org.in

Short Communication

Knowledge and attitude about Leprosy in Delhi in post elimination phase

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Received : 16.03.2013 Revised : 11.12.2012 Accepted : 08.01.2013

Leprosy is a chronic communicable disease since age associated with stigma and suffering. India claims its elimination but in some districts it remains a public health problem. A cross sectional study was conducted and a total of 60 persons were interviewed with an objective to assess the knowledge and attitude about leprosy among sample of 30 adults each from leprosy colony dwellers and urban slum dwellers in South District of Delhi. Results: Knowledge about the leprosy among leprosy colony dwellers was significantly lower than the slum dwellers. Both the groups still believed that leprosy could be due to curse of God, past misdeeds, and could spontaneously occur. Respondents of leprosy colony had significantly less adverse attitude such as leprosy patient should never get married (12% vs 57%), patient should be kept in leprosy colony (0 vs 30%) and should not be allowed to enter religious places (0 vs 23%). Surprisingly 73% of them had not heard about MDT and only (68%) knew that treatment is available free of cost in all Govt. hospitals. Only about half of the respondents knew that deformities could be corrected. Conclusion: This study reflects the poor awareness and negative attitudes towards leprosy particularly among leprosy patients themselves, which could be one of the reasons for slow progress in Leprosy Elimination Program in Delhi.

Key words: Leprosy, knowledge, attitude, stigma, Delhi.

Introduction

Leprosy is a chronic communicable disease caused by *Mycobacterium leprae* and has been known to be prevalent in India since antiquity (WHO 2008). Leprosy causes more social stigma and prejudices than medical problems thereby causing major obstacles in its eradication (Brian H, Briden A). Therefore Leprosy is a disease of public health concern not only because of the case load but also because of social stigma.

The Government of India launched the National Leprosy Control Program in 1955 based on Dapsone domiciliary treatment (WHO 2008). The multidrug therapy came into wide use from 1982 and the National Leprosy Eradication Program (NLEP) was launched in 1983. In 1991 the goal of elimination of leprosy as a public health problem i.e <1 case per 10,000 was aimed (WHO 2008; GOI, 2007). Its epidemiological basis was that with a prevalence of less than 1 per 10000

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population the disease would not spread and would die out i.e. will be eradicated by itself over time. Subsequently National Leprosy Elimination Project was launched and after the first and second phase the national prevalence fell from 57.6 per 10,000 in March, 1981 to 2.44 per 10,000 in March, 2004. In December 2005 India declared elimination of leprosy (Dhillon GP; NLEP, GOI).

Leprosy is still prevalent in certain parts of India including Delhi where elimination yet remains a concern (WHO 2008, Country Office for India). Information Education and Communication (IEC) has been an integral component of NLEP. These activities are carried through mass media, outdoor & rural media and advocacy meetings (NLEP GOI). In this context, it was felt necessary to assess the current levels of knowledge and attitude prevailing among urban slums of Delhi and Leprosy Colony in relation to leprosy.

Rationale

The prevalence of leprosy is still high in the urban slums of Delhi (CP Mishra and MK Gupta) and this study was conducted to learn the attitudes of the people living in the slums and compare them with the leprosy colony where it is believed that their knowledge and attitudes should be positive.

Material and Methods

A community-based, cross-sectional study was conducted in the "Satya Jeewan Leprosy Camp" (Leprosy Colony) and "Motilal Nehru Camp" (Urban Slum), both located in South District of Delhi. During December 2007 a sample of 60 households was selected, 30 each from both the communities. One adult male or female member from each household who volunteered to give information was interviewed. If a household was found locked then next household was contacted until all households were covered in Leprosy Colony. Similar method was adopted in the urban slum. To get the information from the subjects a pretested tool, interview schedule was used having close ended and few open-ended questions which were coded later. The data was checked for consistency and reliability and then entered in excel sheet analyzed with the help of Epi Info software.

Results and Discussion

Background Information

Sixty percent of the respondents were females with almost all (98.3%) Hindus. The characteristics of respondents from both leprosy colony

Table 1 : Socio Demographic profile and Comparison between Leprosy Colony and Urban Slum

Characteristic	Leprosy colony n=30 (%)	Urban Slum n=30 (%)	Total N (%)	P value
Sex				
Male	13(43.3%)	11 (36.7%)	24 (40.0%)	0.59
Female	17 (56.7%)	19 (63.3%)	36 (60.0%)	
Education				
Illiterate	16 (53.4%)	08 (40.0%)	24 (40.0%)	0.004
Literate	10 (33.3%)	06(20.0%)	16 (26.7%)	
Middle & above	04 (13.3%)	16 (40.0%)	20 (33.3%)	
Religion				
Hindu	29 (96.7%)	30 (100%)	59 (98.3%)	0.31
Muslim	01 (03.3%)	00 (0.0%)	01 (1.7%)	

Table 2 : Overall Knowledge about Leprosy and Comparison between Leprosy Colony and Urban Slum Communities

Characteristic	Leprosy colony n=30 (%)	Urban Slum n=30 (%)	Total N=60 (%)	Chi square/ Fisher	p value
Causes of Leprosy					
Infectious Agent	09(30.0%)	11 (37.9%)	20 (33.3%)	0.3	0.5
Curse of God	01 (03.3%)	02 (6.6%)	03 (5.0%)	0.3	0.5
Past Sins	04 (13.3%)	05 (17.2%)	09 (15.0%)	6.1	0.7
Spontaneous	07(23.3%)	03 (10.3%)	10 (16.6%)	1.9	0.1
Don't Know	09 (30.0%)	08 (27.6%)	17 (28.3%)	0.08	0.7
Factors Predisposing to Leprosy					
Familial	01 (03.3%)	09 (30.0%)	10 (16.6%)	7.68	0.005
Poverty	03 (10.0%)	03 (30.0%)	06 (10.3%)	0.1	0.7
Poor Personal Hygiene	06 (20.0%)	10 (33.3%)	16 (26.6%)	1.3	0.2
Don't Know	13 (43.3%)	04 (13.3%)	17 (28.3%)	6.6	0.0009
Leprosy Contagious					
Yes	04 (13.3%)	17 (56.7%)	21(35.0%)	12.3	0.004
No	26 (87.7%)	13 (43.3%)	39 (65.0%)		
Mode of Spread					
Droplet	7(23.3)	10(33.3)	17(28.3)	0.74	0.31
Direct Contact	3(10.0)	11(36.6)	14(23.3)	5.9	0.01
Blood Transfusion	04(13.3)	11(36.6)	15(35)	4.3	0.03
Sexual Transmission	05(16.6)	11(36.6)	16(26.6)	3.07	0.07
Symptoms of Leprosy					
Hypo-pigmented patch	10(33.3)	4(13.3)	14(23.3)	3.35	0.06
Loss of sensations	12(40.0)	07(23.3)	19(31.6)	1.9	0.16
Deformity/ Disability	05(16.6)	02(06.6)	07(11.6)	1.46	0.2
Correct Symptoms	02 (6.6)	08 (26.6)	10 (16.6)	4.3	0.03
Don't Know	01(3.3)	09(30.0)	10 (16.6)	7.6	0.005
Treatment of Leprosy & MDT					
Curable	22(73.3)	21(70.0)	43(71.6)	0.08	0.7
Heard of MDT	11(36.6)	05(16.6)	16(26.6)	3.01	0.07
Free availability of medicine in Govt. Hosp	24(80.0)	17(56.6)	41(68.3)	3.7	0.05
Deformity can be corrected	14(46.6)	17(56.6)	31(51.6)	0.6	0.43

Note: Figures given in parentheses are not mutually exclusive

and urban slums were comparable except education level where the slum dwellers were better educated. (Table 1).

Knowledge about Leprosy

Causes and Predisposing Factors of Leprosy: Only 33.3% respondents in both the communities knew that leprosy is caused by infectious agent and some believed that - "leprosy can occur spontaneously" (16.6%), "due to past sins" (15%), "curse of God" (5%), and 28.3% respondents didn't know the cause. Predisposing factors for leprosy stated by the respondents were - poor personal hygiene (26.6%), familial/hereditary factors (16.6%), and poverty (10%). Significantly more urban slum dwellers (30% v/s 03.3%) perceived that leprosy runs in families ($p<0.05$) (Table 2).

Mode of Spread and free treatment available: More than half (56.7%) of the respondents from the urban slum still believe that leprosy is a contagious disease. 53.7% of the respondents in the urban slum were not aware that the Government provides free treatment for leprosy. Surprisingly a fifth of respondents from the leprosy colony were also unaware of free facility of Government.

Table 3 : Attitude about Leprosy and Comparison between Leprosy Colony and Urban Slum Communities

Characteristic	Leprosy colony n=30 (%)	Urban Slum n=30 (%)	Total N=60 (%)	Chi square/ Fisher	p value
Leprosy patient should not stay with Family					
Agree	01(3.3)	09 (30.0)	10 (16.7)	07.6	0.005
Disagree	29 (96.7)	21(70.0)	50 (83.3)		
Leprosy patient should not stay away from Community					
Agree	00(00.0)	9(30.0)	09(15)	12.0	0.0005
Disagree	30(100)	21(70.0)	51(85)		
Leprosy patient should not get married					
Agree	04(13.3)	17(56.7)	21(35)	12.38	0.0004
Disagree	26(86.7)	13(43.3)	39(65)		
Leprosy patient can be employed as domestic Help					
Agree	21(70.0)	12(40.0)	33(55)	5.45	0.01
Disagree	9(30.0)	18(60.0)	27(45)		
Goods made by leprosy patients should not be purchased					
Agree	02(6.7)	16(53.3)	18(30)	15.56	<.0001
Disagree	28(93.3)	14(46.7)	42(70)		
Leprosy patient should not enter religious places					
Agree	00(00.0)	07(23.3)	07(11.7)	7.9	0.004
Disagree	30(100)	23(76.7)	53(88.3)		
Leprosy patient should keep more fast & perform more religious rituals					
Agree	18(60.0)	13(43.3)	31(51.7)	1.67	0.19
Disagree	12(40.0)	17(56.7)	29(48.3)		

Attitude towards Leprosy patients: Thirty percent respondents from the slums believe that the leprosy patients should not stay with their family and more than half said that they should not get married also. Forty percent of the slum dwellers believed that leprosy patients should not be employed as domestic help and 53% believed that they should not buy goods made by these patients.

Myths and belief such as "leprosy can occur spontaneously", "due to past sins", "curse of God" and "hereditary are still prevalent in the study subjects specially in the urban slums. Similar observations were made in other parts of the world (Browne SG, Chen PCY, Wong ML, Zodpey SP). This indicates that the existing knowledge is low even at a juncture when India declared elimination of Leprosy in 2005 (Govt. of India 2007). This could be the reason for continued higher prevalence rates in some states including Delhi as reported by the government.

Conclusion

Study shows the poor awareness levels and negative attitudes of community towards leprosy could be one of the reasons for slow progress of Leprosy Elimination Program in Delhi. The findings call for intensification of community awareness about the etiology of leprosy and dissemination of positive and scientific information and provide enabling environment for doing so, especially in the urban slums, to remove the social prejudices associated with Leprosy.

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How to cite this article : Grewal I, Negi Y, Kishore J and Adhish SV (2013). Knowledge and attitude about Leprosy in Delhi in post elimination phase. *Indian J Lepr.* **85** : 123-127.