

A study on the basic knowledge, attitude and practices about leprosy among the first year medical and paramedical students of a medical college in South Kerala

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Abstract

Leprosy is a chronic infectious disease which has a potential for deformities and is associated with social stigma and discrimination. Changing leprosy scenario has led to requirement of change in leprosy education. A cross sectional study was conducted to assess the baseline knowledge, attitude and practices about leprosy among the first year medical and paramedical students of a Medical College in South Kerala. The study included 155 students. Data was collected using a semistructured questionnaire. Eventhough there was good knowledge regarding mode of spread of the disease among students, there is stigma towards even the treated cases. 86.5% said that leprosy is treatable but most of them are unaware of the free MDT of leprosy. Study concludes that there are deficiencies in knowledge and persisting stigma regarding leprosy in the study subjects.

Keywords: Leprosy, Multidrug treatment, Stigma.

Introduction

Leprosy (Hansen's disease) is a chronic infectious disease caused by *Mycobacterium leprae* which primarily affects the skin and peripheral nerves. It is mainly acquired through droplet infection. If the infection is left untreated it results in various mutilating deformities and is associated with social stigma and discrimination.

Stigma towards leprosy is caused by 1)involvement of skin-the most visible organ giving aesthetic dimension to stigma; 2>false beliefs about mode of spread and treatment 3)treatment through separate programmes. The stigmatization leads to delay in diagnosis, discontinuation of treatment and psychological changes.²

Leprosy has been declared to be eliminated from India in August 2005. However pockets of endemicity still remain. Kerala, one of the most literate states in Kerala showed an increase in the number of new leprosy cases in the period 2010-2011. (NLEP 2011-2012). In our Department a total of 43 new patients registered for treatment from 2007-2014.³

Leprosy is a great mimicker and sometimes cases are missed or wrongly diagnosed. Medical students who are future doctors and will provide general health services should have knowledge about diagnosis and treatment of leprosy. Change in teaching of leprosy is needed since in post elimination era, leprosy services are integrated with general health care system and preventive aspects is gaining more importance for effective elimination. The aim of this study is to analyze knowledge, attitude and practices regarding leprosy among first year medical and paramedical students. The first year medical and paramedical students were selected because they are having classes about leprosy from second year onwards during dermatology posting.

This study also tries to reveal misconceptions regarding leprosy transmission which further contribute to the stigma towards the leprosy. This study serves as a model to conduct studies regarding the knowledge, attitude and practices regarding diseases which are of public health importance among new students in medical college.

Materials and Methods

This cross sectional study was conducted in a Medical College in South Kerala. The participants of the study were first year medical (MBBS) and paramedical (BSc nursing, General nursing, Lab technician course) students willing to participate in the study. After giving an informed consent form a semistructured questionnaire was given. The questionnaire was self prepared and validated by giving to ten randomly selected students. It comprised of 12 questions. The questionnaire was designed to cover the causes of leprosy, mode of spread, typical clinical features, treatment, prophylaxis and attitude towards leprosy patients. Seven questions have yes/no options and five have multiple choices. The respondents were asked to tick the appropriate responses. The questionnaire was filled by students in the presence of an investigator without discussion among themselves. Prior consent for study was obtained from teaching authorities.

The data was analysed using spss version 13. Awareness about various aspects were found out separately in percentages. Responses regarding modes of spread and typical features were scored by giving each correct response +1 and incorrect response -1 and to eliminate negativity +4 and +2 was added respectively, then by adding these scores further scores were given. Correlations were done using chisquare

test. The p value of <0.05 was considered statistically significant for all analysis.

Observations and Results

The study included 155 students (90 MBBS students and 65 paramedical students). Among the study subjects 33(21.2%) were males and 122(78.7%) were females.

Majority of the students 113(72.9%) believe that leprosy is still there in the community. 96 students (61.9%) haven't seen leprosy cases. 122 (78.7%) among the subjects answered that leprosy is a bacterial disease .136 students (87.7%) suggested that leprosy spread from person to person .The study shows that 46.5% are reluctant to shake hand with, 69.7% to hug/kiss, 54..8% to share a room and 52.3% to share a meal with even treated leprosy cases.

Responses regarding modes of spread and typical features were scored by giving each correct response +1 and incorrect response -1 and to eliminate negativity +4 and +2 was added respectively, then by adding these scores further scores were given. For questions regarding mode of spread 3correct response and 3 wrong responses were given. Eg: if a person answers 2wrong answers and one correct answer his score will be (-2) + (+1) which is equal to -1.To eliminate negative score a uniform number ie. +4 was added. Then score becomes 3.

Table 1: Mode of spread

Score	Number of subjects	In percentage
6	6	3.9
5	120	77.4

Association between stigma and knowledge regarding mode of spread of leprosy among the study participants (number=150)* remaining 5 not answered this question

Stigma	Mode of spread				Total	P. Value
	3	4	5	6		
Yes	12 (9.30%)	9 (6.97%)	105 (81.39%)	3 (2.32%)	129	0.078
No	2 (9.52%)	1 (4.76%)	15 (14.28%)	3 (14.28%)	21	

There is a difference in knowledge regarding mode of spread among those who have a stigma compared to those who do not have a stigma yet this difference is not found to be statistically significant.

Discussion

This study was done to analyze the knowledge, attitude and practices of first year medical and paramedical students about leprosy. This will help us to know about what needs to be changed while deciding the curriculum of teaching medical students. In this study 72.9% know about leprosy even though only 32.3% had seen a leprosy case which shows awareness

4	10	6.5
3	14	9
2	0	0
1	0	0
0	0	0

(5 participants didn't answer this question)

Correct responses-air borne, by close contact, from mother to baby.

Incorrect responses-food borne, water borne, by sexual contact

Table 2: Clinical features

Score	Number of subjects	In percentage
5	4	2.6
4	13	8.4
3	107	69
2	14	9
1	13	8.4
0	1	0.6

(3 participants didn't respond to this question)

Correct responses –white patches with loss of sensation, ulcers, deformities.

Incorrect responses-itching, pain.

134(86.5%) students knew that there is treatment for leprosy .Out of them 38.7%believed that treatment is for many years,16(10.3%) don't know about the duration of treatment.124(80%) answered that complications seen in leprosy are preventable by early detection and treatment. 47.1% believed that there is a vaccination to prevent leprosy. Only 29% know that treatment of leprosy is available free of cost.

about leprosy in the community. This study shows that 46.5% are reluctant to shake hand with, 69.7% to hug/kiss, 54.8% to share a room and 52.3% to share a meal with a treated leprosy case. It shows that there is stigma towards even the treated cases in community. Such attitudes could have its roots at knowledge obtained from unreliable means such as home and media. In the study by Ranganadha Rao et al 92.75% medical officers exhibited sympathy and helpful attitude towards leprosy patients.⁴ 87.7% of the subjects said that leprosy can spread from person to person and scoring the knowledge regarding mode of spread of the disease most of them (77.4%) got the score 5 and no

one got the scores 1 and 2 which suggests that there is good knowledge regarding the modes of spread. In study by Leena et al first year students had poor knowledge about the spread of leprosy.⁵ In contrast, in the study by Giri et al 80% of the interns were aware of the mode of spread.⁶ Even though statistically insignificant there is a difference in knowledge regarding mode of spread among those who have stigma compared to those who do not have stigma. A study by Raju and Kopparty showed that high knowledge level did not necessarily generate positive attitudes despite the ongoing health education campaigns done by national leprosy eradication programme (NLEP) in India.⁷ There was a general negative attitude even with high knowledge level on 30-35% respondents. In study by Leena et al also there was not much difference in the attitude of first and final year students towards leprosy except in their willingness to work in the same environment as leprosy patients,⁵ but in the study by Jain et al⁸ there was statistically significant association between leprosy related attitude and years of training of dental students.

Regarding the clinical features of leprosy, majority (69%) scored 3 which suggests that there is only partial knowledge regarding this aspect of the disease among the subjects. There is a difference in knowledge regarding typical features of leprosy among those who have seen leprosy cases compared to those haven't, yet this difference is not found to be statistically significant. In a study by Giri et al 50% of interns and 40% of undergraduates were unaware of the cardinal signs of the disease.⁶ In contrast in a study of health workers in Assam, all of the doctors working in PHC had a good knowledge about diagnosis.⁹ This suggests that specific training in leprosy definitely improves knowledge about leprosy.

78.7% of the subjects correctly answered that leprosy is a bacterial disease. This is comparable with a study done by Leena et al in Bangalore (74.46%).⁵ 86.5% said that leprosy is treatable and 80% answered that complications seen in leprosy are preventable by early detection and treatment which is an encouraging response. These differences in knowledge reflect the stress given to leprosy in our academic curriculum. Most of the participants (38.7%) believed MDT is given for many years. Only 29% are aware that treatment of leprosy is free of cost and most of them (32.3%) think that it is of high cost. In a study conducted in Haryana 100% of final year students had in depth knowledge of MDT.¹⁰ Our findings in first year students reflect knowledge about MDT in general public.

Conclusions

In our study the first year students have only partial knowledge about the typical features of the disease and there is considerable stigma towards even treated leprosy patients. It is better to include few more hours

of training in leprosy to the curriculum of medical students to give them good knowledge which will help to change their attitude towards leprosy patients and to remove misconceptions regarding infectiousness and spread of disease. There is no significant difference in stigma and knowledge regarding mode of spread which indicates that empathy should be developed along with knowledge among them to remove stigma. Most of the subjects are aware that leprosy is treatable but unaware of the MDT of leprosy. This study clearly shows the need of implementing well organized, specifically targeted awareness programmes regarding leprosy and MDT among the medical and paramedical students which in turn will help to increase awareness among public.

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