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## Effectiveness of a structural teaching programme on leprosy and its management: An interventional study

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Shaweta Sharma and Rachna Devi Thakur**

### Abstract

Leprosy has been known to the Indians since the Vedic time. However, a clear diagnostic criterion was established only about half a century back. India has always been the country with the largest number of leprosy cases in the world. A WHO study group recommended Multi Drug Therapy (MDT) for Leprosy control programs in 1982. There were 208,619 new leprosy cases registered globally in 2018, according to official figures from 159 countries from the 6 WHO Regions. Based on 184, 212 cases at the end of 2018, prevalence rate corresponds to 0.2 per 10 000. India, which has the highest burden of the disease, has reported a decreasing number of new cases for the past 2 years, by nearly 15,000 cases (135,485 in 2016 to 120,334 in 2017–2018) and reduction in new pediatric cases, to less than 10,000 (9227 in 2018) from more than 10,000 (10,287 in 2017) previously. Results showed that majority (76.6%) participants had poor knowledge before structural teaching program only (13.3%) participants had average knowledge. A very few (10%) participants had good knowledge. One fourth (23.3%) participants had average knowledge further majority (46%) participant had good knowledge and only (30%) of participants had very good knowledge. Further the result showed statistically significant difference at 0.05 level which means difference between pretest and post test mean score was a true difference and not by chance. The participants has given good feedback about the sessions and expressed their wish to attend such more training programme.

**Keywords:** Leprosy, nursing officers, nursing faculty, structural teaching programme

### Introduction

Leprosy is an infectious diseases caused by Mycobacterium Leprae. Leprosy primarily affects the peripheral nervous system and skin. The damage of the nerves may affect the sensory, motor and autonomic functions of the nerves resulting ultimately in disabilities <sup>[1]</sup>. Leprosy has been known to the Indians since the Vedic time <sup>[2]</sup>. However, a clear diagnostic criterion was established only about half a century back <sup>[3]</sup>. India has always been the country with the largest number of leprosy cases in the world <sup>[4]</sup>. A WHO study group recommended Multi Drug Therapy (MDT) for Leprosy control programs in 1982 <sup>[5]</sup>. The success of MDT led the World Health Assembly in 1991 to set a target for the elimination of Leprosy as a public health problem by the year 2000 <sup>[6]</sup>. The goal for elimination of Leprosy was set at achieving a prevalence rate of less than 1 per 10,000 population. India achieved this goal in December 2005 <sup>[7]</sup>. However, in year 2012-13, at a prevalence rate of 0.73 per 10,000, the total number of registered leprosy cases in India was 0.92 lacks. Annual New Case Detection Rate (ANCDR) stood at 10.78 per 10,000 population. Significant amount of disability was detected among the new Leprosy patients <sup>[8]</sup>. In 2016, globally a total of 214,783 new cases were reported; over half of them were from India (135,485) alone. There were 208,619 new leprosy cases registered globally in 2018, according to official figures from 159 countries from the 6 WHO Regions. Based on 184, 212 cases at the end of 2018, prevalence rate corresponds to 0.2 per 10 000 <sup>[9]</sup>. India, which has the highest burden of the disease, has reported a decreasing number of new cases for the past 2 years, by nearly 15,000 cases (135,485 in 2016 to 120,334 in 2017–2018) and reduction in new pediatric cases, to less than 10,000 (9227 in 2018) from more than 10,000 (10,287 in 2017) previously <sup>[10]</sup>. It is believed that proper control and elimination of leprosy is possible only by considering long term planning and control of leprosy as a chronic disease and providing sustainable care for leprosy patients <sup>[11]</sup>. Leprosy is also synonymous with social stigma due to reasons like its transmission, lack of knowledge on available treatment, deformities and religious views.

Prejudices and lack of knowledge about leprosy exist even among medical practitioners and healthcare professionals around the world also [12].

Therefore it is necessary to update knowledge of teaching faculty and nursing officers regarding leprosy and its management. Approved policies, education, current evidence can be implemented and evaluated for the change in practice. The various research studies and practice aspects, created insight in the researcher mind and felt the need for design a study to conduct structural teaching programme for nursing faculties & nursing officers who are working in various nursing colleges & hospitals on leprosy and its management. This will help to learn and improve knowledge and practice of nursing teaching faculty and nursing officers regarding leprosy and its management.

**Objectives**

The objective of this Structural Teaching Programme was to assess knowledge of nursing faculty and nursing officers about Leprosy and its management so that the health resources are suitably directed to meet the future needs in this field.

**Material and Methods**

A cross-sectional interventional study was done to assess the effectiveness of a structural teaching programme on Leprosy and its management among the nursing faculties and nursing officers. It was conducted by nursing faculty members at Maharishi Markandeshwar College of nursing in January 2020. Total 30 participants were registered most of them were nursing officers and very few were Nursing teaching faculty from various hospitals and colleges of Himachal Pradesh.

Resource persons were invited from outside. The three sessions were held for one day, six hours of teaching programme scheduled for a day. Different teaching methods were used like lecture with power point presentation, white board, etc for the teaching programme. Teaching faculty of M. M. College of nursing was also engaged in many sessions. Topics covered in the teaching programme were origin & history of Leprosy around the World and in the India, its transmission, Sign & Symptoms, Investigation, Prevention and National Leprosy Eradication Program, state

wise statistics, achievement of govt. organizations and NGOs regarding Leprosy and its management. Finally, the sessions were wrapped with the feedback of participants. Every participant attended all the sessions. This study involved a pretest, educational intervention, and posttest. O1, X, O2. O1, O2 was the Observation of the dependent variable (pretest and posttest); X was the exposure to the educational intervention, the independent variable.

A pre-test and post-test contained 30 questions and for the test completion 20 minutes were given and this test includes various topics in the sessions. Test was given on a day before the start of session and after of the Structured Teaching Programme, to test the participants knowledge before and after the teaching programme. Structured Knowledge questionnaire with closed ended questions were used. An answer key was prepared for all the questions. Each correct response was awarded by 1 mark and an incorrect response was awarded by 0 marks. All the participants were certified with the certificate of participation at the end.

**Statistical Analysis**

The mean test score of pre-test and post-test were compared by using paired t-test, for p-value of <0.005. The statistical package used was used SPSS 22 version.

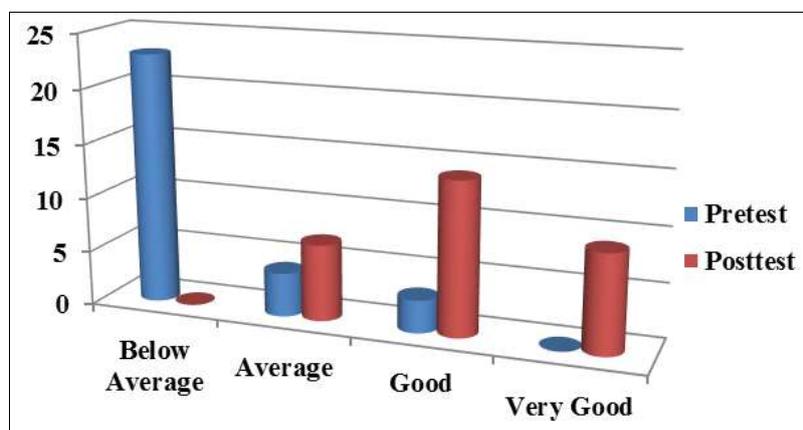
**Result**

Study results revealed that the mean pretest knowledge score of nursing officers and teaching faculty was 38.00 and in posttest it was 68.78. The result further showed that the computed ‘t’ value i.e. -14.73 was found to be statistically significant at 0.05 level which showed that the mean difference between pretest and post test mean score was a true difference and not by chance. (Table1 / Figure1)

**Table 1:** Mean, Mean difference, Standard Deviation Difference, Standard Error of Mean Difference and ‘t’ value of pre test and post test Knowledge Score of Nursing Officers and Teaching Faculty Before and After the Structural Teaching Programme

|                  | Mean  | Mean <sub>D</sub> | SD <sub>D</sub> | SE <sub>MD</sub> | t- value | p-value |
|------------------|-------|-------------------|-----------------|------------------|----------|---------|
| Pre test (n=30)  | 38.00 | -30.78            | 11.44           | 2.08             | -14.73   | .000*   |
| Post test (n=30) | 68.78 |                   |                 |                  |          |         |

\*significant (p≤0.05), \*t'(29)= 2.05 NS not significant (p>0.05)



**Fig 1:** Shows below average, average, good and very good

Participant’s feedback showed that teaching programme created more interest, enthusiasm, and inspiration to learn the topic. They also increased peer coordination and group dynamics.

**Discussion**

This study prospectively investigated knowledge acquired by nursing officers and teaching faculties through session. An analysis of the data has helped the investigator to get a

clear understanding of the study undertaken. The interpretation drawn from the findings of the study were based on the knowledge related to origin & history of Leprosy around the World and in the India, its transmission, Sign & Symptoms, Investigation, Prevention and National Leprosy Eradication Program, state wise statistics, achievement of govt. organizations and NGOs regarding Leprosy and its management.

Present study showed that majority (76.6%) participants had poor knowledge before structural teaching program only (13.3%) participants had average knowledge. A very few (10%) participants had good knowledge. One fourth (23.3%) participants had average knowledge further majority (46%) participant had good knowledge and only (30%) of participants had very good knowledge after the post test i.e. after the structural training programme. Similar finding were reported by a research study on knowledge and attitude about leprosy among Indian dental students in Faridabad showed mean knowledge score for the sample was  $7.64 \pm 3.23$ . A total of 32.29% participants were under poor knowledge category; 57.42% had fair knowledge about Leprosy while 10.29% had good knowledge<sup>[13]</sup>.

Further Similar finding were reported by a research study on Knowledge on leprosy and its management among primary healthcare providers in two districts of Bangladesh showed significantly increase in knowledge<sup>[14]</sup>.

### Limitations

The limitations of the present study were small number of participants.

### Conclusion

Present study showed improvement in the knowledge after the structural teaching programme. The participants has given good feedback about the sessions and expressed their wish to attend such more training programme. It leads to an improvement for patient safety and care as well as prevention of leprosy. Furthermore, researchers should investigate the transfer of knowledge into practice i.e. how utilized and implemented in practice. The findings of this study show that there was highly statistical significant relation difference between pre-test and post-test.

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