

Original Research Article

A questionnaire-based study to assess the knowledge, attitude and behaviour about leprosy among paramedical staff in a tertiary care hospital in Chennai

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ABSTRACT

Background: The paramedical staff has an important part in the management of leprosy patients. They have a role in counselling, wound management, performing investigations etc. This study aimed at assessing the knowledge, attitude and behaviour of paramedical workers in a tertiary care hospital in Chennai.

Methods: This cross-sectional study comprised of 100 paramedical workers of which 41 were males and 59 were females. Following classes of workers were included: nursing staff, auxiliary nursing midwives, ASHA workers, laboratory technicians, pharmacists and allied medical workers. Of these, the nursing staff comprised of the highest proportion (44%). The paramedical workers were given a questionnaire consisting of their demographic profile and further 32 questions to assess knowledge, attitude and behaviour towards leprosy. The data hence obtained over a period of 1 month was later systematically analysed.

Results: The knowledge of paramedical workers was considered sufficient in the nursing staff, ANM and ASHA workers. It was consistently found that those workers who had some experience in the field of leprosy (39%) showed good level of knowledge, while others had a scope for improvement. The paramedical workers' attitudes and behaviour were deemed to be overall appropriate, while there is a clear need to improve outreach initiatives in order to properly train them.

Conclusions: The training of paramedical workers in leprosy should be prioritised. They are the initial point of contact for patients. There should be a greater emphasis on raising awareness and providing accurate information about the disease.

Keywords: Attitude, Behaviour, Knowledge, Leprosy, Nursing staff, Paramedical staff

INTRODUCTION

Leprosy or Hansen's disease is a deeply rooted problem of our society. It is a disease of bacterial origin caused by *Mycobacterium leprae*.¹ Recently, *Mycobacterium lepromatosis* has been isolated from the Latin American region as an organism akin to *M. leprae* and capable of causing the disease.² India has borne the brunt of Hansen's disease since centuries with tropical climate,

poor sanitation and illiteracy further cumulating the incidence.

It is the duty of healthcare providers to essentially identify, treat and rehabilitate these cases at the earliest. Apart from doctors, the team of paramedical workers including nursing staff, laboratory technicians and even ASHA workers stand to provide preliminary care to those affected. The knowledge, attitude and behaviour regarding leprosy has to be assessed of this stratum of the

healthcare fraternity in order to create better protocols and governance.

The efforts by National Leprosy Eradication Programme (NLEP) are unequivocal in having significantly reduced the case load of leprosy by urging people to take multi-drug therapy and creating a platform for good surveillance.³ Still trickling cases are being diagnosed especially in endemic areas like Chennai and it therefore brings justice to a study of such profile being performed.

The objective of this study was therefore to analyse the knowledge, attitude and behaviour of paramedical staff working in a tertiary care hospital in Chennai regarding leprosy. Data was procured using an online questionnaire-based survey.

METHODS

It was a single point cross-sectional study (KAB study) comprising of paramedical staff working in the medical college. This study took place at Sree Balaji Medical College and Hospital, Chennai- a tertiary care setup, for a period of May 2021 to June 2021. Software used to analyse the study was SPSS-20.

Inclusion criteria

Paramedical workers should have completed 18 years of age. Paramedical workers include: Nursing staff, Auxiliary nursing midwives, Laboratory technicians, Allied medical sciences, ASHA workers, Pharmacists.

Exclusion criteria

Patients not consenting for the study.

Study methodology

The study was initiated after obtaining a clearance from the institutional ethical committee. A total of 100 paramedical workers were included after due consent. Study participants were stratified based on the nature of their job into the following categories: nursing staff, auxiliary nursing midwives (ANMs), ASHA workers, laboratory technicians, pharmacists and allied medical workers. The online questionnaire-based survey consisted of 4 sections, namely: demographic profile, knowledge (K) regarding leprosy, attitude (A) towards the disease and behavioural practices (B) followed. The KAB section included 32 questions (K= 13, A= 10, B= 9). The data thus recorded was systematically tabulated.

RESULTS

Of the 100 participants that were included, nursing staff contributed to the majority of the population (43%). Female workers were also in the majority (59%). Figure 1 gives the male to female distribution of the study population. Figure 2 illustrates the age-sex comparison of

the participants. Among the nursing staff, those working in the hospital wards contributed to a higher proportion (n=16, 37.2%).

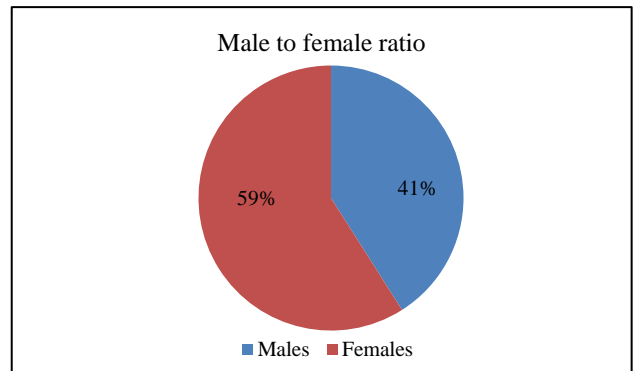


Figure 1: Bar graph about the male to female ratio of study participants.

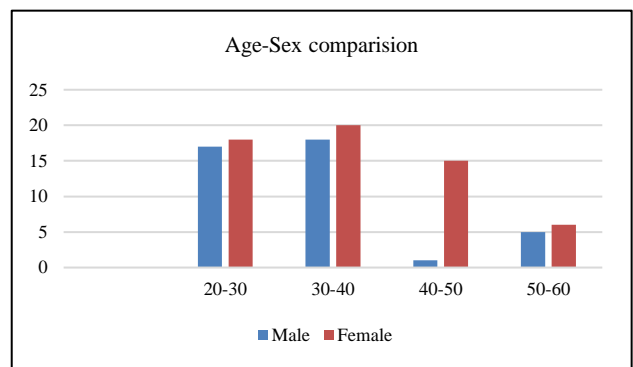


Figure 2: Age sex comparison of the paramedical workers.

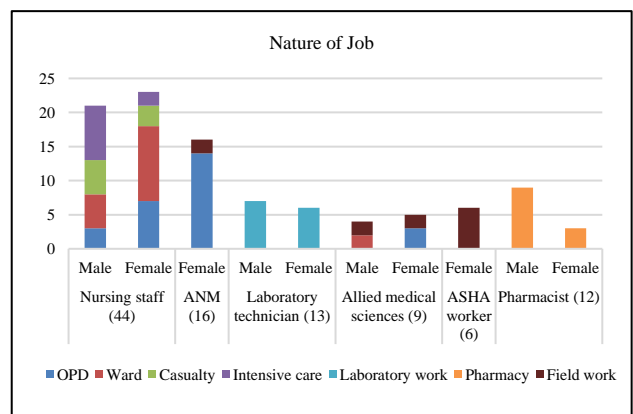


Figure 3: Distribution of paramedical workers based on the nature of their job.

Figure 3 gives the distribution of the paramedical workers based on the nature of their job. Data was also collected about the years of experience the study participants had and also whether they had contributed to the field of leprosy. Those having an experience of 5-10 years formed the majority (38%). Of all the study participants 39% individuals had an experience in leprosy. Figure 4

illustrates the years of experience the workers had in the field of leprosy management.

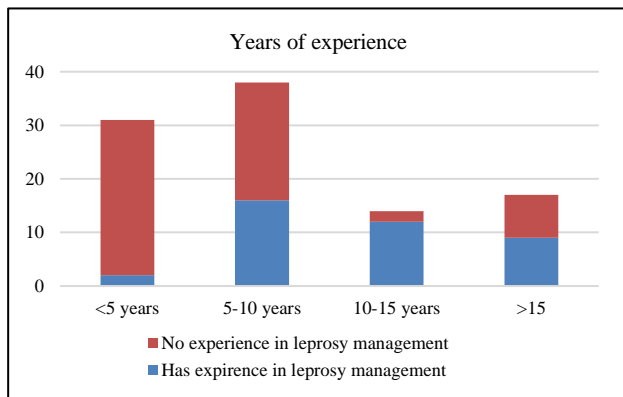


Figure 4: Bar graph showing the years of experience of the study population in the field of leprosy.

The knowledge about leprosy was assessed by asking a set of 13 questions. Leprosy being an infectious disease was known to 96% of the population whereas the remaining 4% were doubtful of the cause. When asked for the etiological agent of leprosy, 58% individuals gave a correct response by stating bacteria, 8% cases marked virus as their choice and 34% of cases did not know the answer. Assessing early symptoms of leprosy is vital to pick up cases and 66% of the study population rightly chose 'light coloured patches and loss of sensation' as their preference whereas 14% of cases differed with incorrect responses and 20% participants were not aware. Disease transmissibility can occur primarily via air and also by touch and this was known to 84% of the staff. Leprosy can be treated to a point of presumptive cure, though bacterial persisters can be a cause of relapse. Considering this, when asked whether leprosy can be completely treated 56% opined 'yes', 28% said 'no' and the rest did not know. Multidrug therapy was known to 80% of the paramedical workers. The disease transmissibility in leprosy gets significantly reduced when treated completely, though there lies a possibility of spread due to persisters. Thereby, a treated case of Hansen's disease can transmit the disease and this fact was known to 54% of the population whereas 22% were of the contrasting opinion and the rest were unaware. Over 96% of the staff knew that leprosy can be associated with mutilating deformities and disabilities. Leprosy can be very well diagnosed early by adopting techniques of slit skin smear and skin biopsy with clinical correlation and the replies of 58% of study participants synced with this, whereas 42% cases were either not aware or stated that it cannot be diagnosed early. *M. leprae* has a potential to invade internal organs and causes varied clinical manifestations. This aspect was known to the majority (78%). 'Whether leprosy can be transmitted from an affected mother to child' got mixed responses. An equal proportion (36%) of the paramedical staff opined 'yes' and 'don't know' and the rest (28%) stated 'no'. The transmission of leprosy has not been

established to occur from mother to child transplacentally and the cases of childhood leprosy have been linked to infection by droplet nuclei exogenously. Multibacillary and paucibacillary forms of the disease were known to 66% of the population and 84% individuals were aware of dedicated leprosy care centres in the vicinity.

With respect to assessing the attitude of paramedical workers 10 questions were framed. Leprosy is associated with prominent social stigma. On asking whether those affected should be segregated from the community for management, 78% participants disagreed, implying the fact that patients can be nursed in their respective households. Another 22% people contradicted to the above stated opinion. Out-reach activities aid in building social responsibility and awareness. Efforts are being taken to sensitise people regarding Hansen's disease via the NLEP and multiple non-government organisations, but 90% of the study population still believes that there is scope in increasing the number of these out-reach programmes. Being a disease with social stigma, it was imperative to analyse the attitude of the paramedical staff and whether they stigmatise the disease. It was studied that 82 of 100 participants did not stigmatise the disease and the rest 'somewhat' did. 'Should the paramedical staff be included in the team of frontline workers', was supported strongly by 56% individuals with 40% others also agreeing to the notion with only 4% cases disagreeing to the fact. Leprosy in the early stages may appear benign with poorly defined hypopigmented patches and thereby it is pertinent to note the thought of paramedical workers as to whether it is essential to refer cases to a healthcare facility in the vicinity at the earliest. It was opted by 66% of the paramedical staff to immediately refer a suspected case of leprosy to a hospital nearby. A few others (34%) stated that a 'wait and watch' approach can be considered. A few unfortunate patients who get afflicted with the mutilation caused by leprosy may lead a miserable life due to the possibility of getting outcasted. Of the study population, 90% individuals affirmed that this is a reality whereas the remaining 10% participants thought otherwise. Question was asked to learn mindset of the paramedical workers in view of actively participating in leprosy management to which 86% participants agreed to volunteer whereas remaining 14% cases differed in opinion, meaning that it may bother them to be involved. Subsequently, it was asked to the partakers whether cases of leprosy can move freely in the community. To this, 66% participants strongly agreed whereas 26% somewhat agreed and a fewer (8%) thought it unacceptable to let patients roam around freely in the community fearing the possibility of infection. Furthermore, it was asked whether leprosy be a ground for refusal of marriage or divorce to which 84% people strongly disagreed and 16% agreed. Finally, it was asked as per a common belief by general population whether they consider leprosy as a curse of God and all the study participants have disagreed to this.

In the end, to assess the behavioural practices followed by those enrolled in the study a set of 9 questions were asked. When asked about their involvement in the field of leprosy management, 39% cases claimed that they had been involved at some point of time and the rest denied. Drug compliance and monitoring (33%), cleaning and dressing of wounds (28%), record keeping (20%) and performing investigations (16% (e.g., slit skin smear) were the fields in which these study participants had operated. Forty-four percent of paramedical workers claimed that they ask patients of leprosy to follow-up in the hospital every month, whereas others (56%) either don't particularly give importance to this aspect or stated that they had no experience. With respect to referral of a case of leprosy to a department in the hospital, 60% study participants claimed they refer to dermatology, 22% to general medicine, 4% each to general surgery and orthopaedics and 10% stated they had no experience. Counselling patients of leprosy has an integral role in management and it was done by 34% patients in the following sections: treatment and therapeutic compliance (52.9%), possible side-effect of drugs (17.6%), self-care practices (17.6%), detection of early signs of dysfunction (11.8%). Thirty-four percent people stated that they have attended seminars on leprosy management while the rest had not. Thirty four percent paramedical workers stated that they do not segregate patients of leprosy in the hospital ward while remaining 66% individuals stated they had no experience regarding this. Finally, only 14% cases regularly used masks and gloves while handling patients of leprosy or objects used by them, 26% used infrequently, 4% did not use any and the rest (56%) had no experience regarding the same.

DISCUSSION

Leprosy is one of the oldest diseases that has ever been recognised to harm humans.⁴ It has been brought under control through arduous interventions and a multimodal approach. The best way to break the chain of transmission is to treat the primary patient with stringent multibacillary multidrug therapy.⁵ The incubation time for leprosy is relatively long, lasting from 3-10 years.⁶

The three most distinguishing characteristics of the disorder are:⁷ 1) A hypopigmented anaesthetic patch. 2) Slit skin smear positivity. 3) Thickened peripheral nerves.

India is one of the important countries for detecting leprosy cases. This is a disease that causes deformities and disabilities in a large number of people but seldom kills them. Inadequate treatment, late presentation, drug resistance and reinfection are the various causes because of which patients may harbour bacilli for a longer period of time which favours the formation of deformities.⁸ A deformity can be defined as an alteration in the appearance. Disability is the incapability of the patient to perform activities.⁹ Patients with leprosy must use a variety of coping methods to avoid developing morbidities. Compliance with multi-drug therapy,

knowledge of leprosy reactions, care of ulcers and anaesthetized limbs, prevention of secondary infection, use of MCR footwear, splints, and physiotherapy are just a few examples of self-care that a leprosy patient should be aware of.¹⁰⁻¹²

India has been designated as one of the WHO's 23 worldwide priority nations for leprosy intervention. In India, the prevalence of leprosy was 0.66 percent/10,000 people in 2016 and it slightly decreased to 0.57/10,000 population in March 2020. Despite its low incidence, India still accounts for 60% of all new cases recorded worldwide. The introduction of multidrug therapy in India in 1981 has aided in the reduction of leprosy prevalence and burden.¹³ The WHO launched the Enhanced Global Strategy in 2009 with the goal of reducing leprosy disease burden from 2011 to 2015, with a minimum of 35 percent reduction in new cases of grade-2 disability (G₂D) per 1 lakh population.¹⁴

The paramedical staff is part of the leprosy management team of frontline workers. They take an active role in the patients' treatment, rehabilitation, and monitoring. It is imperative to know the knowledge of, attitude towards and practices followed for leprosy by the paramedical staff to help understand better the levels at which training has to be given to improvise our current protocols. Leprosy is linked to a high prevalence of psychological problems as well.¹⁵

Our study found that the paramedical staff showed fairly good knowledge, attitude and behavioural practices regarding leprosy. Of all the workers, those tending to patients in the wards and being actively involved in counselling and consistently showed better knowledge regarding the disease. Those serving in the out-patient department have to be alert to pick up early signs of the disease. It was found that the laboratory technicians who had either performed slit skin smears or had stained them were well-versed with the aetiology of the disease and transmissibility. Majority of ASHA workers had counselled patients of leprosy with respect to either picking up early signs of the disease or treatment compliance.

According to research conducted by the Regional Leprosy Training and Research Institute in Lalpur, Raipur, Chhattisgarh, India, 45 of medical officers, 71% of health supervisors, and 75% of multipurpose workers have received leprosy training.¹⁶

In China's Yangzhou and Dongtai districts, analysis of the attitudes, beliefs, and conduct of 730 primary healthcare (PHC) workers indicated that only half of the PHC workers had a basic understanding of MDT and a desire to engage in its implementation.¹⁷

Improving the knowledge of paramedical staff is warranted for a better healthcare infrastructure. There should be an increase in the number of seminars and out-

reach activities pertaining to leprosy for further refinement. Having a right attitude towards a disease will help in reducing the associated social stigma and aid in better patient compliance and rehabilitation. It is the duty of the medical and paramedical workers to improve the healthcare infrastructure by adopting proper means.

CONCLUSION

Attention should be given to the training of paramedical workers in the field of leprosy. At many levels of intervention, the paramedical staff is the first point of contact for the patients and thereby their knowledge, attitude and behaviour towards the disease must be appropriate. There should be a rise in creating more awareness and apt knowledge about the disease. Increase in the number of seminars and out-reach activities will help to do so.

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