



IJSRM

INTERNATIONAL JOURNAL OF SCIENCE AND RESEARCH METHODOLOGY

An Official Publication of Human Journals



Human Journals

Research Article

June 2019 Vol.:12, Issue:4

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Knowledge, Attitude and Practices (KAP) about Lymphatic Filariasis and Perception Regarding Socio-Economic Status of Diseased Person among Inhabitants of Erstwhile Warangal District, Telangana State



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Submission: 26 May 2019

Accepted: 31 May 2019

Published: 30 June 2019



HUMAN JOURNALS

www.ijsrm.humanjournals.com

Keywords: Lymphatic Filariasis, Knowledge, Practices, Perception, Social Stigma

ABSTRACT

Lymphatic Filariasis (LF) is a huge public health concern primarily caused by vector borne nematode, *Wuchereria Bancrofti*. It is transmitted through mosquito bites which releases larvae of *Wuchereria Bancrofti* that live in human lymphatic system & develops into adult worms. LF is a neglected tropical disease mainly affects the poorest of the poor worldwide. Information about the people's knowledge, attitude, practices, socio-economic factors and epidemiological factors that are related to the disease are necessary to strengthen the programme & to eliminate the Lymphatic Filariasis. A total of 238 participants were included in the study from erstwhile Warangal district of Telangana State by systemic randomization. Social-economic status of the individuals was collected. Perception among the respondents regarding impact of Lymphatic Filariasis on the socio economic status of diseased person like difficulty in getting Job, difficulty in getting married, overall effect on income etc were assessed. Out of 238 participants, 10 individuals (4%) were identified with Filariasis. Total 58 % of respondents knew that Filariasis is caused by mosquito bite and 57 % of participants said that mosquitoes could be controlled by cleaning the blocked drainages. But 96 % of participants did not know that it is a communicable disease. Total 71 % of respondents reported the use of modern repellents or Bed nets. In the study; more numbers of literate respondents compared to illiterate respondents shared the opinion that diseased person will face the social stigma. Effective community participation activities may strengthen the peoples' knowledge and perception on LF.

INTRODUCTION

Lymphatic Filariasis (LF) is a chronic disease and a huge public health concern characterized by several clinical manifestations such as elephantiasis, lymphedema, and hydrocele¹. It is primarily caused by vector borne nematode, *Wuchereria Bancrofti*. Infections are transmitted through mosquito bite, which releases larva of *Wuchereria Bancrofti* that live in human lymphatic system and develops into adult worm measuring 2-5cm in length.

LF is a neglected tropical disease, mainly affects the poorest of the poor worldwide including tropical and sub-tropical countries. Though several government organizations and international health organizations were spending huge funds to prevent disease transmission, the prevalence of the disease is still predominant in rural areas. Ecological transformations such as water reservoir construction and irrigation schemes may result in formation of new breeding sites that are suitable for the mosquito vector development. Other contributory factors to increase the transmission of lymphatic Filariasis include overcrowding, deteriorating sanitary conditions and unplanned urbanization².

Knowing the people's socio- economic condition and epidemiological factors; related to the disease and influence of systematic noncompliance is necessary to strengthen the program and to increase the treatment coverage. To reduce the vector-borne disease burden, information on knowledge, attitude and practices in the community is necessary. It will help in the development and formulation and implementation of effective and sustainable control programme against the disease^{3,4}.

KAP study related to Lymphatic Filariasis may be different among communities as it is related to socio-cultural factors of different areas. Information relating to ways in which communities implement local knowledge to prevent lymphatic Filariasis is still obscure. Hence the present study was aimed to assess the knowledge, attitude and perception of the people about the LF and it was studied in 6 endemic Primary Health Centers in Warangal district of Telangana state.

MATERIALS AND METHODS

Study area

The present study areas were located in the Erstwhile Warangal district of Telangana State. The study population was selected from endemic areas for Filariasis, where Annual Mass Drug Administration program were conducted since 2015.

Study population

Residents of selected area aged 15 years and above were selected.

Inclusion Criteria: Adult males and females aged fifteen years and above who have been living for six months or more in selected area.

Exclusion criteria: Persons coming from outside the selected area or staying temporarily (< 6 months). And who did not provide consent to participate in the study were excluded.

Sampling technique and Data Collection

Systematic random sampling technique was used. Village wise data of regarding Filariasis was collected from District Malaria Officer of Erstwhile Warangal District and now new divided districts such as of Warangal urban, Warangal Rural, Mahaboobabad, Janagaon and Siddipet Districts. At first, eighty four endemic villages were listed out for this study and among them total 20 villages were shortlisted by using Research Randomizer Software. A minimum of 210 samples size was decided as per the cluster sampling technique. So, it was decided to include 12 participants per village, randomly from the selected list of villages. Approximately 40 participants were included extra as a precaution to avoid the situation of less number of samples; which may be because of incomplete format or due to missing information, etc.

A total of 238 participants were interviewed in this study in the month of October 2018 after informed consent was taken from all the participants. Socio-economic status of the individuals such as occupation, education, area of living, knowledge about Filariasis, MDA, bed nets, mosquito breeding sites and transmission of the disease and other related information were collected. Similarly, perception of impact of disease on socioeconomic

status of diseased person was assessed. After data compilation; analysis was done by using statistical software.

Study Tool:

A structured questionnaire was designed included 29 questions to collect all the information from the participants. The questionnaire was finalized after field testing.

RESULTS

The demographic and socio-economic data of participants is given in Table 1 and 2. At the time of collection, the mean age of the participants was 44.21. In the present study, 44.12 % participants were male and 55.88% were female.

Participant's level of education ranged from illiterate and primary school to graduate. Among the participants, 41.17 % were illiterate and 58.82 % were Primary School / Middle school / high school/Intermediate / graduates. Large proportion of the interviewers 51.26% were living in huts /mud/ shed houses and 48.74% were living in Pucca houses. Four percentages of the participants (10 individuals) were affected with Filariasis. Among them 8 were female and 2 were male.

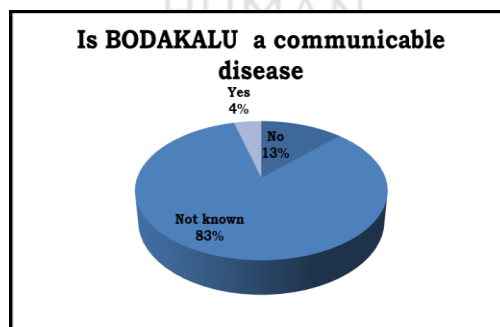


Fig 1. Is Bodhakalu (Filariasis) a communicable disease?

Most of the participants (96 %) didn't know whether the disease was communicable or not.

Half and above (57%) of the individuals claimed that Filariasis was caused by mosquito bite, 3% other than mosquito bites, 5% participants stated other sources and nearly 35% of the persons were unaware of the mode of transmission. Nearly, 98% of the participants didn't undergo any tests for Filariasis, however, they were aware about the free distribution of tablets. Further, 36.55 % of the respondents preferred to contact ASHA or ANM or

government hospitals if they had developed any symptoms of Filariasis. It was noted that, 88% percent of the respondents consumed DEC tablets during MDA.

Regarding the means of protection from mosquito bites, 72.26 % of the individuals reported the use of repellents or bed nets, 26.89 % used natural methods. Approximately 57% of the participants reported that mosquitoes could be controlled by cleaning the blocked drainages.

Through this study; the perception among the participants regarding the effect of Filariasis on the socio-economic status of the individual (diseased person) was also ascertained.

For the question of “Whether the diseased person will face Social stigma?”, responses of participants were recorded and then the responses were analysed among the groups of males Vs Females and also Illiterates Vs Literates. The difference of perception among the Males Vs Females was not found to be significant but among Illiterates Vs Literates it was statistically highly significant (two tailed $p = 0.0007$) by applying Chi-square test with Yates correction with 1 degree of freedom. That means more numbers of literate respondents (32.14 %) compared to illiterate respondents (12.24 %) have the perception that diseased persons are likely to face social stigma. Similarly; for the question of “Whether the diseased person will earn lesser compared to healthy person?” The difference of perception among the Males Vs Females was not found to be significant but among Illiterates Vs Literates it was statistically highly significant (two tailed $p = 0.0002$ with $df = 1$).

For the question of “Whether the diseased person will face difficulty in getting job?” The difference of perception among the Males Vs Females was not found to be significant but among Illiterates Vs Literates it was statistically highly significant (two tailed $p = 0.01$ with $df = 1$). However; for the question of “Whether the diseased person will face difficulty in getting married?” The difference of perception among the Males Vs Females was found to be significant (two tailed $p = 0.03$, $df = 1$), and among Illiterates Vs Literates also, it was statistically highly significant (two tailed $p = 0.001$, $df = 1$).

Table 1: Socio-economic characteristics of participants

Characteristics	Frequency	Percentage (%)
Male	105	44.12
Female	133	55.88
Education- Illiterate	98	41.17
Education- Primary and above	140	58.83
House Type		
Mud/Hut/Shed	122	51.26
Pucca	116	48.74
No of participants with Filariasis (Bodhakalu in local dialect)		
Yes	10	4.20
No	228	95.80
Is BODHAKALU (Filariasis) a communicable disease?		
No	30	12.60
Not Known	198	83.20
Yes	10	4.20
Do you know how a person gets affected by BODHAKALU (Filariasis)?		
Mosquito Bite	137	57.56
Flies	7	2.94
Others	12	5.04
Don't know	82	34.45
What do you think a breeding source of mosquito?		
Blocked Drainage	135	56.72
Scrap	59	24.78
Stagnant Water	6	2.52
All of the above	38	15.96
Which part of the body is affected by Filariasis?		
Leg	115	48.31
Don't know	123	51.68
Have you undergone any test for Filaria?		
Yes	6	2.52
No	232	97.48
Whom would you contact first for the treatment?		
ASHA	10	4.20
ANM	11	4.62
Govt.hospital	66	27.73
Local RMP	71	29.88
Pvt Hospital	73	30.67
Traditional Healers	7	2.94
Do you know Filaria tablets were distributed free of cost every year in your area?		
Yes	223	93.69
Not known	15	6.31
Have you consumed DEC tablets during MDA?		
Yes	211	88.65
No	27	11.35
How to get Protection from Mosquito?		

Repellents	140	58.82
Bednets	32	13.44
Natural methods	64	26.89
Any others	02	0.84
How to Control mosquitoes?		
Cleaning of drainage/ chemical spray	183	76.89
Don't known	55	23.11

Table 2: Perception among participants regarding Filariasis

Characteristics	Frequency	Percentage (%)
Do you think patient suffering from BODHAKALU would face difficulty in getting job?		
Yes	41	17.22
No	197	82.77
Do you think patient suffering from BODHAKALU would suffer social stigma in public places?		
Yes	57	23.94
No	181	76.05
Do you think patient suffering from BODHAKALU will face difficulty in getting married?		
Yes	52	21.84
No	186	78.15
Do you think patient suffering from BODHAKALU would earn lesser?		
Yes	48	20.16
No	190	79.83

DISCUSSION:

LF is considered to be one of the important neglected diseases and is mainly distributed in areas with poor social conditions and sanitary infrastructure. In our study, most of the participants were living in rural area with poor sanitary infrastructure with more than 50 % of participants were residing in Mudhouse/ Hut/ Shed.

While approximately 58 % of participants knew that mosquito bite is responsible for the disease and approximately 57 % of responders were aware that mosquito is breeding in the blocked drainages. But at the same time most of the participants (approximately 96%) did not knew that Filariasis is a communicable disease. For the protection from mosquito bites; 58.82 % of respondents were using modern day repellents, 13.44 were using Bed nets and 27 % were using natural methods and other methods. Lack of knowledge by participants would lead to inappropriate control measures thereby disrupting any control measures targeted against the disease.

Further, the perception among the participants regarding effect of Filariasis on the socio-economic status of diseased individual was analyzed. The opinions among participants were almost similar in males and females for the questions regarding 'Getting job', 'Earning the income', or 'Social stigma faced' by diseased person. But; when it was analyzed by the literacy level of respondents; it was found that; major proportion of literate people compared to illiterate people were having opinion that the diseased person will face the social stigma, they will face the difficulty in getting job and they will earn lesser income compared to healthy person.

Similar to the above scenario; major proportion of literate people were having opinion that diseased person will face the difficulty in getting married and big section of male participants compared to female participants were having the same opinion.

This study shows the mirror of the society; where in 21st century still the Filaria diseased person is likely to face social stigma and in turn, the person would find it difficult to get the job with good income and to get married. This is evident from the data especially from the responses of the literate population. A separate study among the diseased persons focusing the above facts needs to be planned to further confirm the situation.

CONCLUSION

The knowledge on causation of the disease was observed to be moderate in our study area. This might be due to the lower community participation and less/ no health education campaigns by health department. However, more number of education campaigns and continued Mass Drug Administration programs are required to achieve the success of the elimination program. An effective community participation activity needs to be continued to strengthen the peoples' knowledge and perception on LF. Such activities may provide important information for achieving the complete elimination of LF.

ACKNOWLEDGMENT:

Authors are grateful to the District Malaria Officers of the newly carved out districts (like Warangal Urban, Warangal Rural, Mahaboobabad, Jangaon and Sidhhipet) from erstwhile Warangal district. Authors are also thankful to each member of the field team from Regional Office of Health and Family Welfare, GOI, Hyderabad and the team for data compilation in MS Excel.

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