EVALUATION OF KNOWLEDGE, STIGMATIZATION AND TREATMENT METHODS ON LYMPHATIC FILARIASIS IN SURU LOCAL GOVERNMENT AREA OF KEBBI STATE, NIGERIA.

Abstract

Lymphatic filariasis (~~lf~~LF) is endemic in Suru LGA with both acute and chronic clinical manifestations. This study was aimed at evaluating the knowledge, stigmatization and treatment methods on lymphatic filariasis in the study area. Both quantitative and qualitative techniques were employed to obtain information from respondents using semi-structured questionnaires. Of the 400 respondents (26 affected and 374 unaffected), in this study, none (0.0%) identified mosquito as the vector responsible for LF~~f~~. Majority 91(22.8%) believed it was an act of God. Seventy-eight (19.5%) attributed it to witchcraft, while 18.0%, 15.0%, 18.2% and 6.5% blamed stepping on charm, contaminated water, lack of personal hygiene and guinea worm infestation respectively. Transmission and prevention was also linked to superstitious beliefs Stigmatization was minimal as majority, 282 (70.5%) would not divorce their spouse if they contact Lf and also majority, 290 (72.5%) would associate with affected patients. However, psychological impact on affected people was deep as they felt sad, shame & abnormal about their condition. The treatment methods used by sufferers reflect their superstations about the disease as they sought help from both orthodox and traditional homes. None practiced the morbidity management methods directed by WHO. It was concluded that perception about the disease is crude and poor and knowledge-based awareness is necessary for adequate disease management.

INTRODUCTION

Lymphatic filariasis also known as elephantiasis is a mosquito-borne debilitating but preventable disease that not only affects patients and their families, but also communities and health care systems [1].

It is a neglected tropical disease, and remains an important public health problem that inflicts a considerable social and economic burden on many countries in the tropics and subtropics [2] where it affects primarily poor rural communities [3].

If left untreated, it leads to fluid accumulation in the limbs or breasts (lymphoedema) or genitalia (hydrocele) which is painful and discomforting [4]. It was estimated that 858 million people in 49 endemic countries are at risk of contacting the infection worldwide [4]. At least 36 million people remain with the chronic disease manifestations, 25 million men with hydrocele and over 15 million people with lymphoedema [5].

Many of the affected persons also suffer from emotional difficulties such as depression, anxiety, pain, stigma, etc. as a result of the disfigurement, loss of livelihood and income [6]. Knowledge about the disease and health seeking behavior can either improve or interfere with the effectiveness of control strategies [7]. Control measures were initiated in the year 2000 by Global Lymphatic Filariasis Elimination Programme (GLFEP) but the intervention centered on mass. Drug Administration (MDA) programs and less emphasis on morbidity management [4]. Effective control measure must include chemotherapy, morbidity management, psychological and health seeking components.

Materials and Methods

Study area.

Suru LGA is situated between latitude $11^{0}30'$N and $12^{0}05'$N and longitude $3^{0}15'$E and $4^{0}01'$E. The LGA is bounded by Bunza LGA in the North, Maiyama

LGA in the East, Koko/Besse and Bagudo LGAs in the South and Dandi LGA in the West [8].

The LGA has a mean annual temperature of 21^{0}C - 38^{0}C, though it sometimes fluctuates. The highest temperatures are recorded in the months of April and May. The harmamttan season runs through November to February, while the hot season starts from March to April. The mean annual rainfall is about 1000mm [8] the bulk of the rains fall between June and September with an average of 220mm in August. The people of Suru LGA are composed of Hausa, Fulani and Kyangawa ethnic groups. They are renowned farmers, cattle rearers, fishermen and traders. They cultivate crops such as millet, sorghum, rice and cowpea. The area is blessed with abundant fertile lands.

Fig 1: Map of Kebbi State showing the study area. **Source** [8]

Study Population/Design

The study population comprised of two groups, affected persons and unaffected persons. Affected persons were respondents who had clinical signs of lymphoedema, ~~elepliantiasis~~ elephantiasis and hydrocele. It was a cross-sectional study (involving men, women and children) and age limit was seven years and above [9] who are resident in Suru LGA. A total of 400 participants, 20 affected and 380 unaffected were recruited for the study. Those who had hydrocele but underwent surgery shortly before the study were included.

Sampling Technique

The sampling technique used for selecting villages was simple random sampling. The villages were listed and six were selected by balloting. All the affected individuals who consented were included in the study.

Ethical Clearance

Before the commencement of the study, a written permission was obtained from Kebbi Stat~~r~~e Ministry of Health; permission was also obtained from Local Government Secretariat, Village Heads and participants.

Data Collection Techniques

Semi-structured, pretested questionnaires, adapted from WHO quality of life scale [10] were developed for the study. Both quantitative and qualitative techniques were used.

Quantitative: It consists of 2 sections. First section sought information on the respondents demographic data. The second section south information on knowledge, psychosocial and matrimonial impact of the disease. This was for both sufferers and non-sufferers.

Qualitative: Qualitative data was collected from only those with clinical signs of the disease. They were interviewed on psychological impact and health seeking behaviour.

Data Analysis

Data clearing for errors, consistency and completeness checks were done. Information collected were analysed and presented using pie chart, histogram, frequency tables and percentages.

Results

The results obtained in this study are presented in Fig 1, Fig 2 and Tables 1-3.

1. Socio-demographic characteristics of study population.

A total of 450 participants took part in this study. 290 representing 72.5% were male and 110(27.5%) were female. One hundred and seventy-five (43.8%) were married while 225 (56.2%) were single. Demographic characteristics of village were: Bendu (17.3%), Tindifai (17.3%), Bandam (16.3%), Kawara (17.3%), Suru (16.3%) and Giro (16.0%). As regards educational level, those with no formal (western) education were 39.5%, primary (22.7%), secondary (20.0%) and tertiary (17.8%). Details of the demographic information of the study population are shown in Table 1.

Table 1: Characteristics of the study population

Variable	Category	n (%)
Sex	Males	290 (72.5)
	Females	110 (27.5)
Marital Status	Married	175 (43.8)
	Single	225 (56.2)
Village	Bendu	69 (17.3)
	Tindifai	69 (17.3)
	Bandam	65 (16.3)
	Kawara	69 (17.3)
	Suru	65 (16.3)
	Giro	63 (16.0)
Educational Level	No western education	158 (39.5)
	Primary	91 (22.7)
	Secondary	80 (20.0)
	Tertiary	71 (17.8)
	Overall	400 (100)

2. Perceived causes of lymphatic filariasis

The knowledge of the cause of lymphatic filariasis revealed that both infected and uninfected respondents were completely ignorant of the cause of the disease. None (0.0%) identified mosquito bites as a cause. Majority 91 (22.8%) comprising 26 affected and 374 unaffected though, it was the act of God. 78 (19.5%) attributed it to witchcraft while 18.0%, 15.0%, 18.2%, and 6.5% blamed stepping on charm, contaminated water, lack of personal hygiene and guinea worm respectively (Fig. 2).

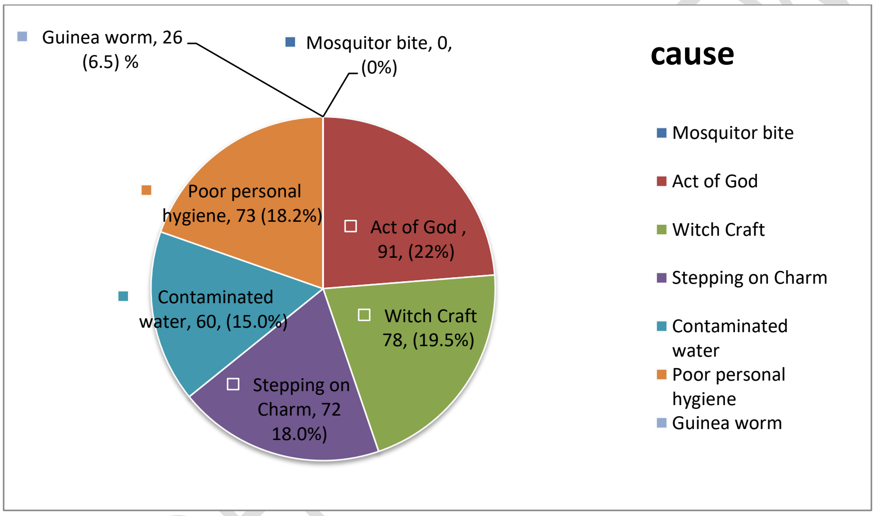

Fig 2: Respondents Knowledge of the cause of LF

3. Perceived knowledge of mode of transmission and preventive measures of LF

Respondents views regarding the mode of transmission of the disease revealed complete ignorance of the mode of transmission. A total of 100 (25.0%) believed it was transmitted through person to person body contact with infected person, 96 (24.0%) thought it was inherited, 122 (30.5%) though it was through sexual intercourse with infected person and 82 (20.5%) by witchcraft power. With regard to prevention, they linked it to cultural and traditional interpretation and beliefs and emphasized prevention to spiritual and supernatural concepts. A total of 70 (17.5%) believed that praying to God for divine protection is the solution, 89 (22.2%) respondents were of the opinion it was avoiding body contact with the infected, 55 (13.8%) good personal hygiene and 102 (25.5%) avoiding sexual intercourse with infected person. Twenty-one (5.2%) believed it was by avoiding Guinea worm infestation and 63 (15.8%) charms and local herbs (Table 2).

Table 2: Respondents knowledge on the mode of transmission and perception on the prevention of Lf.

Variable	Responses	Frequency	Percentage
Perceived mode of transmission	Body contact (non-sexual	100	25.0
	Mosquito bite	0	0.0
	Sexual intercourse	122	30.5
	Inheritance	96	24.0
	Witchcraft	82	20.5
	Total	**400**	**100.00**
Preventive measure	Avoid body contact with affected person	89	22.2
	Avoid sexual intercourse with affected person	102	25.5
	Avoid mosquito bite	0	00
	Avoid Guinea worm infestation	21	5.2
	Good personal hygiene	55	13.8
	Praying to God for protection	70	17.5
	Using charms and local herbs	63	15.8
	Total	**400**	**100.00**

4. Perceived beliefs on psychosocial consequences of LF

Table 3 shows respondents views on psychosocial consequences of the disease, e.g marriage, divorce and association with affected persons.

As regards proposing marriage to affected person, 298 (75.5) of the respondents (both affected and unaffected) would not propose marriage to someone with visible physical sign of the disease. However, if their partner contacts the disease while already married to them, majority 282 (70.5%) responded that they would not divorce.

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On association with affected persons, 290 (72.5%) responded that they will associate with affected persons while 62 (15.5%) responded that they would not.

Table 3: Respondents view on psychosocial consequences

Variable	Responses	Frequency	Percentage
Marriage proposal to affected person	Yes	82	20.5
	No	298	74.5
	Don’t know	20	5.0
	Total	**400**	**100.00**
Divorce of affected spouse	Yes	58	14.5
	No	282	70.5
	Don’t know	60	15.0
	Total	**400**	**100.0**
Association with affected persons	Yes	290	72.5
	No	62	15.5
	Don’t know	48	12.0
	Total	**400**	**100.0**

5. Result of qualitative interview with affected persons

Participants with visible signs of Lf, including those that had hydrocele surgery few months before the study were interviewed on psychological aspects of the disease.

Concerning their feelings about their condition, 12 (46.2%) felt sad, 7 (26.9%) felt abnormal, 7 (26.9%) felt shame and none (0.0%) felt like committing suicide. With regard to their thinking about themselves, 15 (57.7%) thought less of themselves while 6 (23.1%) did not. On the question on whether their condition affects their acceptance in their families and communities, 18 (69.2%) believed that it did not, while 4 (15.4%) believed it did.

As regards the effect of the disease on family, marriage and marriage prospects, they expressed high awareness of the consequences. Ten (38.5%) of the respondents believed it ruins marriage, while 15 (57.7%) were of the opinion that it destroys sexual relation with spouse whereas s~~ile~~ only 1 (3.8%) agreed that it leads to divorce (Table 4).

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Table 4: Affected persons feelings on liking with Lf, acceptance and matrimonial consequences

Variable	Responses	Frequency	Percentage
Feelings	Sad	12	46.2
	Shame	7	26.9
	Abnormal	7	26.9
	Suicidal	0	0.0
	Don’t know	0	0.0
	Total	**26**	**100.00**
Think less of themselves	Yes	15	57.7
	No	6	23.1
	Don’t know	5	19.2
	Total	**26**	**100.00**
Views on being accepted	Well accepted	18	69.2
	Not well accepted	4	15.4
	Not sure	4	15.4
	Total	**26**	**100.00**
Opinion on matrimonial consequences	Ruins marriage,	10	38.5
	Destroys sexual relation with partner	15	57.7
	Leads to divorce by spouse	1	3.8
	Total	**26**	**100.00**
Consequences of disease on marriage prospects	Difficult to find a spouse	19	73.1
	Hinder marriage prospect of family members	7	26.9
	Has no effect on marriage prospect	0	0.0
	Total	**26**	**100.0**

6. Treatment methods practices of affected persons

People afflicted by Lf usually try out different sources of treatment in attempt to achieve cure. Table 4 shows the different methods of treatment employed by sufferers in the study area.

Three (11.5%) of the sufferers patronize traditional medicine alone and 3 (11.5%) also use orthodox drugs alone. However, majority 18 (69.2%) combine both traditional and orthodox treatments. None 0 (0.0%) use the morbidity management practices of GLFEP, and 2 (7.8%) out of frustration from prolonged treatment to no avail, had stopped any form of treatment (Table 5).

Table 5: Treatment methods practices of affected persons

Treatment Method	Frequency	Percentage
Orthodox drugs alone	3	11.5
Local herbs alone	3	11.5
Hygiene practices (GLFEP)	0	0.0
Both drugs and herbs	18	69.2
None	2	7.8
Total	**26**	**100.00**

Discussions

Lymphatic filariasis is a debilitating and painful neglected tropical disease that affects the poorest of the poor in mostly rural communities.

Many studies have reported on knowledge, psychological and treatment methods on lymphatic filariasis [11, 4]. In this study, communities knowledge and beliefs on lymphatic filariasis is very low. This is similar to some studies in Nigeria and elsewhere [12, 11, 13, 11]. On the contrary, some studies reported high knowledge of the disease [14, 15, 16].

Though they are aware of the infection through the clinical signs which they called ‘gudunguma’ for elephantiasis and ‘gwaiwa’ (hydrocele), they were not aware of the cause, transmission, mode of prevention of the infection. This may be due to low educational status as majority of the respondents had no formal education.

Lymphatic filariasis causes not only physical disability but also psychological disability that tend to be unnoticed. There are diminished marriage prospects but majority, including unaffected people will not divorce their partners if they contact the disease while already married to them. A similar report was obtained in Kano State, Nigeria [9].

The patients with lymphoedema and hydrocele in this study felt shame, sad and abnormal. Though stigmatization by both family members and community was low, they were angry, bitter and depressed about their condition. This is probably due to their reduced productivity, unattractiveness and sexual dysfunction. [17] reported similar negative feelings in India.

The misconceptions and superstitious regarding this disease together with cultural and ethnic beliefs militate against prevention, treatment and control of the disease. Thus the patients sought for remedy from various sources. Majority use both traditional and orthodox drugs and some only local herbs. None of the participants used the hygiene practices recommended by WHO for morbidity management and alleviation of the physical disability of already affected patients. Similar reports of use of combination of orthodox and traditional herbs abound in Nigeria [12, 18, 19].

Conclusion: Knowledge about LF is very poor. Stigmatization is minimal but the psychological burden is deep. Treatment methods were crude and did not conform with WHO's prescribed methods for morbidity management.

Recommendation: There is need to create knowledge-based awareness among the residents for effective management of the disease.

Conflict of Interest :

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