

## **An exploratory study on somatic disturbances in patients with chronic lymphatic filariasis**

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### **Abstract**

**Introduction:** Disability in the physical level is described as the inability to withstand bodily disruptions in normal functional performance.

**Objectives:** This study was conducted to determine the pattern of somatic disturbances in patients with chronic lymphatic filariasis and to assess the disability in somatic disturbances on the basis of gender, duration of disease and stage of the disease.

**Materials and Methods:** This cross-sectional study was conducted among individuals suffering from chronic lymphatic filariasis in Kannur District, Kerala State, India. 200 individuals with chronic lymphatic filariasis participated in this research. An interviewer-administered questionnaire, which had structured closed-ended questions and semi-structured open-ended questions, was used for data collection. The questionnaire statements dealt with the general characteristics of the patients and somatic disturbances. A house-to-house survey was conducted to recruit the required sample size. Data were summarized using mean, median, standard deviation and range for continuous parameters, and counts and percentages for categorical parameters. Chi-square test was used to test the association between severity of the disability and gender, duration of disease and stage of the disease.

**Results:** Two hundred individuals with chronic lymphatic filariasis participated. Their ages ranged from 25 to 85 years (mean age 58.8±12.1 years). There were more female participants than males. Thirty nine

percent were illiterate; more than 85% male participants were engaged in business, farming, labour or wood cutting. Among females, 20.5% were engaged in weaving, factory work, tailoring or teaching. Of the 200 respondents, the most prevalent somatic disturbance reported was weakness. Other somatic disturbances observed were sleep disturbances (59.5%), fatigue (59.5%), numbness (48.5%), and itching (45%). Extreme severity reported was almost similar in disturbances such as sleep, weakness and fatigue when compared to the other two reported disturbances.

The prevalence of somatic disturbances based on the severity showed variations between the two genders. A female preponderance was observed in all types of disturbances and in the degree of severity. There was no statistically significant difference observed in the distribution of males and females in all aspects of somatic disturbances except sleep disturbances. The proportion of various somatic disturbances among participants with various durations of disease showed that the highest proportion of somatic disturbances such as sleep disturbances, weakness, fatigue, itching and numbness were reported by participants with a duration of disease over 40 years as compared to duration of disease 21- 40 years or less than 20 years respectively. But in the case of sleep disturbances, the median score observed was 'nil' among those with duration of the disease less than 20 years, but it was 'mild' in participants with duration of disease 21-40 years and >40 years. This observation was statistically significant. Considering the different stages of disease, weakness (77%) was prevalent among participants in stage seven, followed by sleep disturbances (75%), fatigue (68.8%), itching (58.3%) and numbness (48%). Itching was the least reported somatic disturbance in any of the stages. The scores related to somatic disturbances were not statistically different among different stages of the disease except sleep disturbances.

**Conclusion:** The prevalence of somatic disturbances based on the severity showed variations between the two genders. With regard to the duration of

the disease, the severity of the somatic disturbances increased as the duration of the disease increased. The present study did not show any significant difference in the somatic disabilities related to the different stages of the disease.

**Keywords:** Lymphoedema, Filariasis, somatic disturbances.

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## Introduction

Patients with filariasis suffer from many difficulties such as physical, psychological, social, spiritual and economic. Disability in the physical level is described as inability to withstand bodily disruptions in the functions that are usually needed to sustain normal performance. The physical disability may be present in varying degrees of intensities, from tolerable to severe. The bodily functions are evaluated by assessing the severity of somatic concerns. Somatic disturbances measured include sleep disturbances, fatigue, weakness, itching and numbness. Lymphoedema affects the quality of life of patients with lymphatic filariasis.

In a study conducted by Harichandrakumar et al. in Tamilnadu, India, the severity level of physical, mental and social dimensions of disability was assessed using seven domains and the authors observed that the mean severity score of Activities of Daily Living were significantly higher when compared to lymphoedema and hydrocoele. The study also revealed that all domains of health were affected by filarial disease, with the levels of severity

varying with the stages of the disease. The mean severity score of ADL was significantly higher compared to lymphoedema and hydrocoele, and the mean score for lymphoedema was significantly higher in comparison to hydrocoele in males. The severity of disability scores increased with the progression of the disease but was not associated with gender<sup>1</sup>. The most important issues related to disability reported were the difficulty in going for work, the problem of stigma from the local community, the difficulty in attending functions, humiliating attitude from others, depression, shame, feeling of reduced social status and fear due to the disease conditions<sup>2</sup>. A difficulty in performing work and lack of support from social group was observed in patients with acute adenolymphangitis<sup>3</sup>.

The most important somatic and physical problems were sleep disturbances and mobility. The somatic disturbances like sleep disturbances are more prevalent among children with filariasis compared to adults<sup>4</sup>. But another study reported that sleeping disturbance was not that prevalent, compared to other disabilities<sup>82</sup>. Fatigue in filarial patients is one of the somatic disturbances described by Wijesinghe et al.<sup>5</sup>. The sleep disturbances, pain and activities of daily living depend mostly on the medication used by the patients<sup>3</sup>. Hence, this study was conducted to determine the pattern of somatic disturbances in patients with chronic lymphatic filariasis and to compare between gender, duration and stage of the disease.

## **Materials and Methods**

This cross-sectional study was conducted among individuals with chronic lymphatic filariasis in Kannur District, Kerala state, India. 200 individuals with chronic lymphatic filariasis participated in this research.

An interviewer-administered questionnaire, which contained structured closed-ended questions and semi-structured open-ended questions, was used for data collection which contained a mixture. The questionnaire statements assessed the general characteristics and somatic disturbances.

The socio-demographic characteristics assessed were age, gender, education and occupation before and after the illness. Medical history of the disease considered included the duration and stage of disease.

Five questions in the questionnaire were related to somatic disturbances, which are sleep disturbances, fatigue, weakness, itching and numbness. Each item was divided into five levels according to the intensity. The codes used were '0' nil and '4' for extreme. The questionnaire was validated for face and content validity by an independent group. Items in the questionnaire were generated from a review of published literature and other public health materials. They were reviewed by experts in the field of public health research for interpretability, clarity and accuracy.

Prior written consent was obtained from all the study participants. The participants who did not wish to enrol in the research were given the opportunity to refuse to participate. Anonymity was maintained by not writing the name or any other information revealing the subject's identity. A house-to-house survey was conducted to recruit the required sample size. The lymphoedema in chronic lymphatic filariasis was classified into seven stages on the basis of the presence or absence of oedema, folds, nodules, mossy foot and disability. Stage I - swelling reverses at night, skin folds-absent, and appearance of skin smooth and normal; Stage II - swelling not reversible at night, skin folds absent, and appearance of skin smooth and normal; Stage III - swelling not reversible at night, skin folds-shallow, and appearance of skin smooth and normal; Stage IV - swelling not reversible at night, skin folds-shallow, appearance of skin irregular and presence of nodules; Stage V - swelling not reversible at night, skin folds-deep, and appearance of skin - smooth or irregular, Stage VI - swelling not reversible at night, skin folds- absent, shallow, deep and wart-like skin lesions on foot or top of the toes; Stage VII - swelling not reversible at night, skin folds-deep, and appearance of skin- irregular, and needs help for daily activities - walking, bathing and using bathrooms, dependent on family or health care systems.

Data were coded and fed in to Excel spread sheet and analysed in SPSS 19 version (IBM, Chicago, Illinois). Data were summarized using mean, median,

standard deviation and range for continuous parameters, and counts and percentages for categorical parameters. Chi-square test was used to test the association between severity of the disability and gender, duration of disease and stage of the disease.

## Results

Two hundred individuals with chronic lymphatic filariasis participated in this research. The ages of the participants ranged from 25 to 85 years (mean age 58.8 years with a standard deviation of 12.1 years). The number of female participants three times [151 (75%)] that of the males [49 (25%)]. Thirty nine percent were illiterate, which proportion was higher among the females. Around 9% had non-formal education. More than 85% of the male participants were engaged in business, farming, labour or wood cutting. Among the females, only 20.5% were engaged in work other than household works, such as weaving, factory work, tailoring and teaching.

Of the 200 respondents, 64% had experienced weakness, which was the most prevalent somatic disturbance reported. Other somatic disturbances observed were sleep disturbances (59.5%), fatigue (59.5%), numbness (48.5%) and itching (45%). Extreme severity reported was almost similar in disturbances such as sleep, weakness and fatigue when compared to the other two reported disturbances.

## Somatic Disturbances and Gender

The prevalence of somatic disturbances based on the severity showed variations in the two genders. The extent of severity of these disturbances differed in the various types of disturbances. A female preponderance was observed in all types of disturbances and in the degree of severity. Mild to extreme level of sleep disturbance was experienced by 59.5%, the proportion of mild to extreme level of sleep disturbances being higher (63.6%) among females as compared to males (46.9%). 59.5% participants reported mild to

extreme level of fatigue due to the present health condition, which was more prevalent (61.6%) in females than in males (53%). The proportion of mild to extreme level of weakness due to the present health condition was higher (65.2%) among males when compared to females (63.6%). Numbness of mild to extreme level was reported by 48.5% of the participants; the proportion of which was more (50.3%) among females than males (42.8%). Apart from these, 45% reported mild to extreme level of itching; the proportion of which was more (47%) among males than females (44.3%). The details are given in Table 1.

**Table 1: Distribution of participants' somatic disturbances according to Gender**

| Somatic disturbances Group |           | Gender |      |        |      | Total |
|----------------------------|-----------|--------|------|--------|------|-------|
|                            |           | Male   |      | Female |      |       |
|                            |           | No.    | %    | No.    | %    |       |
| Sleep Disturbances         | Nil       | 26     | 53.1 | 55     | 36.4 | 81    |
|                            | Tolerable | --     | --   | --     | --   | --    |
|                            | Mild      | 15     | 30.6 | 56     | 37.1 | 71    |
|                            | Moderate  | 7      | 14.3 | 27     | 17.9 | 34    |
|                            | Extreme   | 1      | 2.0  | 13     | 8.6  | 14    |
| Fatigue                    | Nil       | 23     | 46.9 | 55     | 36.4 | 78    |
|                            | Tolerable | --     | --   | 3      | 2.0  | 3     |
|                            | Mild      | 18     | 36.7 | 66     | 43.7 | 84    |
|                            | Moderate  | 7      | 14.3 | 19     | 12.6 | 26    |
|                            | Extreme   | 1      | 2.0  | 8      | 5.3  | 9     |
| Weakness                   | Nil       | 17     | 34.7 | 52     | 34.4 | 69    |
|                            | Tolerable | --     | --   | 3      | 2.0  | 3     |
|                            | Mild      | 23     | 46.9 | 67     | 44.4 | 90    |
|                            | Moderate  | 8      | 16.3 | 18     | 11.9 | 26    |
|                            | Extreme   | 1      | 2.0  | 11     | 7.3  | 12    |
| Itching                    | Nil       | 26     | 53.1 | 82     | 54.3 | 108   |
|                            | Tolerable | --     | --   | 2      | 1.3  | 2     |
|                            | Mild      | 14     | 28.6 | 32     | 21.2 | 46    |
|                            | Moderate  | 7      | 14.3 | 23     | 15.2 | 30    |
|                            | Extreme   | 2      | 4.1  | 12     | 7.9  | 14    |
| Numbness                   | Nil       | 28     | 57.1 | 74     | 49.0 | 102   |
|                            | Tolerable | --     | --   | 1      | 0.7  | 1     |
|                            | Mild      | 15     | 30.6 | 39     | 25.8 | 54    |
|                            | Moderate  | 5      | 10.2 | 27     | 17.9 | 32    |
|                            | Extreme   | 1      | 2.0  | 10     | 6.6  | 11    |

### Somatic Disturbances Score and Gender: Median and Range

There was no statistically significant difference observed in the distribution of male and females in all aspects of somatic disturbances except sleep disturbances. The median score observed for sleep disturbances was none and mild for males and females respectively. With regard to fatigue and weakness, the median score was same for both males and females. The details of the median, minimum and maximum scores are given in Table 2.

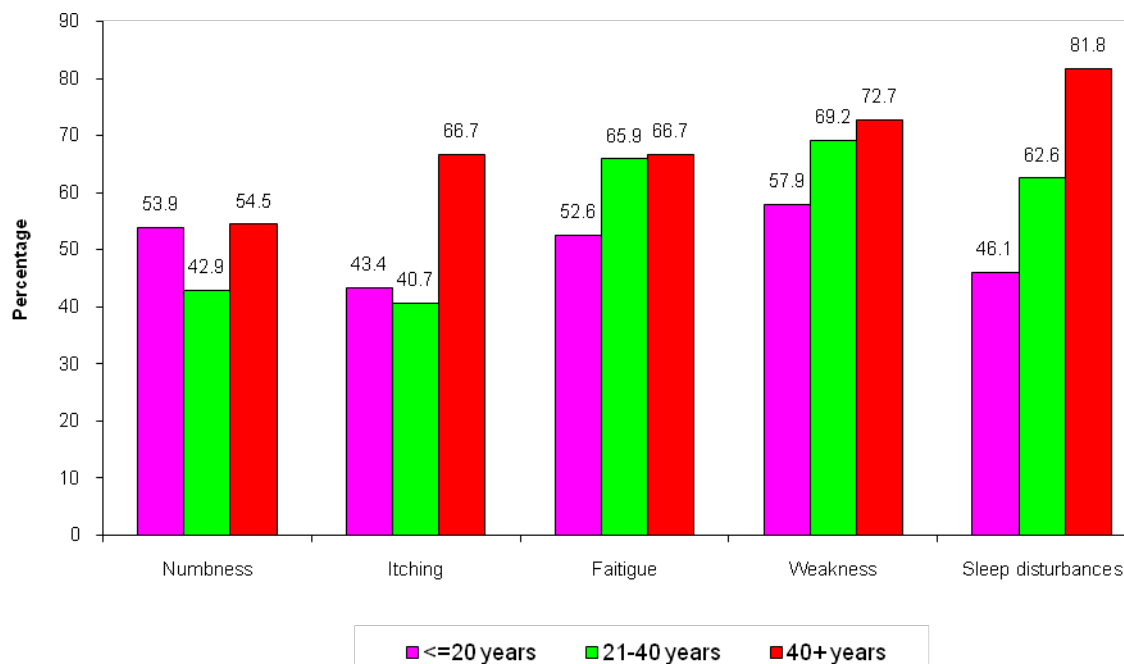
**Table 2: Somatic disturbances and Gender: Median, minimum and maximum score**

| Somatic disturbances |             | Gender  |         |            |         |           |        | P value |
|----------------------|-------------|---------|---------|------------|---------|-----------|--------|---------|
|                      |             | Male    |         |            | Female  |           |        |         |
|                      |             | Minimum | Maximum | Median     | Minimum | Maximum   | Median |         |
| Sleep Disturbances   |             | 0.0     | 4.0     | 0.0        | 0.0     | 4.0       | 2.0    | <0.05   |
| Fatigue              |             | 0.0     | 4.0     | 2.0        | 0.0     | 4.0       | 2.0    | NS      |
| Weakness             |             | 0.0     | 4.0     | 2.0        | 0.0     | 4.0       | 2.0    | NS      |
| Itching              |             | 0.0     | 4.0     | 0.0        | 0.0     | 4.0       | 0.0    | NS      |
| Numbness             |             | 0.0     | 4.0     | 0.0        | 0.0     | 4.0       | 2.0    | NS      |
| 0-Nil                | 1-Tolerable | 2-Mild  |         | 3-Moderate |         | 4-Extreme |        |         |

### Somatic Disturbances and Duration of Disease

The proportion of various somatic disturbances among participants with various durations of disease shows that the highest proportion of somatic disturbances such as sleep disturbances, weakness, fatigue, itching and numbness was reported by participants with duration of disease greater than 40 years as compared to duration of disease 21-40 years or less than 20 years. Details are given in Figure 1.





**Figure 1: Distribution of participants' somatic disturbances according to duration of disease.**

Among the total respondents, 7% had extreme suffering due to sleep disturbances, with 35.5% and 17% suffering from mild to moderate levels, irrespective of the duration of the disease. Participants with duration of disease greater than 40 years had extreme suffering due to sleep disturbances when compared to those with duration of disease 20-40 years (7.7%) or less than 20 years (3.9%). Irrespective of the duration of the disease, around 41% did not suffer from sleep disturbances.

The next highest percentage of extreme severity was noted in itching (7%). Moderate severity was reported by 15% and mild severity by 23%. Irrespective of the duration of the disease, 54% did not suffer from itching. Extreme severity (15.2%) was observed in those whose duration was greater

than 40 years, followed by 5.5% in participants with 20-40 years duration, and 5.3% in participants with less than 20 years of disease duration.

Among the five leading somatic disturbances, the next highest (6%) extreme severity was seen in participants with weakness; 13% had weakness of moderate severity, followed by 45% with mild severity. Above all, 34.5% did not suffer from weakness irrespective of the duration of the disease. Extreme severity (6.1%) was reported by those who had a duration of disease greater than 40 years followed by 6.6% with duration of disease 20-40 years, and 5.3% with less than 20 years of disease duration.

Of the participants, 5.5% had extreme severity of numbness, followed by 16% and 27% experienced moderate and mild level severity respectively. Irrespective of the duration of the disease, 51% revealed that they did not suffer from numbness. Extreme severity was reported by 6.1% those who had the disease for over 40 years, followed by 5.5% with duration of disease 20-40 years, and 5.3% with less than 20 years of disease duration.

Extreme severity of fatigue was reported by 4.5% and mild or moderate severity by 13% and 42% respectively. 39% did not experience any form of fatigue. Extreme severity was reported by 6.1% of those who had a duration of disease greater than 40 years followed by 4.4% with duration of disease 20-40 years, and 3.9% with less than 20 years. This shows that sleep disturbances, itching, weakness, and numbness were more prevalent among those with long duration of disease compared to those with short duration of the disease. Table 3 shows details of somatic disturbances with respect to the duration of the disease.

**Table 3: Distribution of participants' somatic disturbances according to severity and duration of Disease**

| Somatic disturbances | Severity  | Duration of disease |      |             |      |           |      | Total |
|----------------------|-----------|---------------------|------|-------------|------|-----------|------|-------|
|                      |           | <=20 years          |      | 21-40 years |      | 40+ years |      |       |
|                      |           | No.                 | %    | No.         | %    | No.       | %    |       |
| Sleep Disturbances   | Nil       | 41                  | 53.9 | 34          | 37.4 | 6         | 18.2 | 81    |
|                      | Tolerable | --                  | --   | --          | --   |           |      | --    |
|                      | Mild      | 21                  | 27.6 | 37          | 40.7 | 13        | 39.4 | 71    |
|                      | Moderate  | 11                  | 14.5 | 13          | 14.3 | 10        | 30.3 | 34    |
|                      | Extreme   | 3                   | 3.9  | 7           | 7.7  | 4         | 12.1 | 14    |
| Fatigue              | Nil       | 36                  | 47.4 | 31          | 34.1 | 11        | 33.3 | 78    |
|                      | Tolerable | 2                   | 2.6  | 1           | 1.1  | --        | --   | 3     |
|                      | Mild      | 24                  | 31.6 | 47          | 51.6 | 13        | 39.4 | 84    |
|                      | Moderate  | 11                  | 14.5 | 8           | 8.8  | 7         | 21.2 | 26    |
|                      | Extreme   | 3                   | 3.9  | 4           | 4.4  | 2         | 6.1  | 9     |
| Weakness             | Nil       | 32                  | 42.1 | 28          | 30.8 | 9         | 27.3 | 69    |
|                      | Tolerable | 2                   | 2.6  | 1           | 1.1  | --        | --   | 3     |
|                      | Mild      | 29                  | 38.2 | 47          | 51.6 | 14        | 42.4 | 90    |
|                      | Moderate  | 9                   | 11.8 | 9           | 9.9  | 8         | 24.2 | 26    |
|                      | Extreme   | 4                   | 5.3  | 6           | 6.6  | 2         | 6.1  | 12    |
| Itching              | Nil       | 43                  | 56.6 | 54          | 59.3 | 11        | 33.3 | 108   |
|                      | Tolerable | --                  | --   | 2           | 2.2  | --        | --   | 2     |
|                      | Mild      | 18                  | 23.7 | 15          | 16.5 | 13        | 39.4 | 46    |
|                      | Moderate  | 11                  | 14.5 | 15          | 16.5 | 4         | 12.1 | 30    |
|                      | Extreme   | 4                   | 5.3  | 5           | 5.5  | 5         | 15.2 | 14    |
| Numbness             | Nil       | 35                  | 46.1 | 52          | 57.1 | 15        | 45.5 | 102   |
|                      | Tolerable | --                  | --   | 1           | 1.1  | --        | --   | 1     |
|                      | Mild      | 24                  | 31.6 | 20          | 22.0 | 10        | 30.3 | 54    |
|                      | Moderate  | 13                  | 17.1 | 13          | 14.3 | 6         | 18.2 | 32    |
|                      | Extreme   | 4                   | 5.3  | 5           | 5.5  | 2         | 6.1  | 11    |

### **Somatic Disturbances Score and Duration of the Disease: Median and Range**

The median score was the same for males and females in the case of fatigue and weakness. But in the case of sleep disturbances, the median score observed was 'nil' among those with duration of the disease below 20 years. But it was 'mild' among participants with duration of disease 21-40 years and in those with a duration of >40 years. This finding was statistically significant. Itching and numbness too showed a difference in the median score but the variations were not statistically significant. The details are given in Table 4.

**Table 4: Somatic disturbances and duration of the disease: Median, minimum and maximum score**

| Somatic disturbances |             | Duration of the disease |     |     |            |     |            |           |     | P value |        |
|----------------------|-------------|-------------------------|-----|-----|------------|-----|------------|-----------|-----|---------|--------|
|                      |             | <=20                    |     |     | 21-40      |     |            | >40       |     |         |        |
|                      |             | Min                     | Max | Med | Min        | Max | Med        | Min       | Max |         | Med    |
| Sleep Disturbances   |             | 0.0                     | 4.0 | 0.0 | 0.0        | 4.0 | 2.0        | 0.0       | 4.0 | 2.0     | <0.001 |
| Fatigue              |             | 0.0                     | 4.0 | 2.0 | 0.0        | 4.0 | 2.0        | 0.0       | 4.0 | 2.0     | NS     |
| Weakness             |             | 0.0                     | 4.0 | 2.0 | 0.0        | 4.0 | 2.0        | 0.0       | 4.0 | 2.0     | NS     |
| Itching              |             | 0.0                     | 4.0 | 0.0 | 0.0        | 4.0 | 0.0        | 0.0       | 4.0 | 2.0     | NS     |
| Numbness             |             | 0.0                     | 4.0 | 2.0 | 0.0        | 4.0 | 0.0        | 0.0       | 4.0 | 2.0     | NS     |
| 0-Nil                | 1-Tolerable | 2-Mild                  |     |     | 3-Moderate |     |            | 4-Extreme |     |         |        |
| Min- Minimum         |             | Max-Maximum             |     |     |            |     | Med-Median |           |     |         |        |

### Somatic Disturbances and Stage of the Disease

Among the different stages of the disease, weakness (77%) was prevalent in participants in stage seven, followed by sleep disturbances (75%), fatigue (68.8%), itching (58.3%), and numbness (48%). Itching was the least reported somatic disturbance in all stages. Details are given Table 5.

### Somatic Disturbances Score and Stage of the Disease: Median and Range

The distribution of the scores related to somatic disturbances was not statistically different among the different stages of the disease except sleep disturbances. In the case of sleep disturbances, the median was 'nil' in respondents with disease stage 4 but was 'mild' in the case of other stages of the diseases.

**Table 5: Distribution of participants' somatic disturbances according to severity and stage of the Disease**

| Somatic disturbances | Severity  | Stage of the disease |      |     |      |     |      |     |      | Total |
|----------------------|-----------|----------------------|------|-----|------|-----|------|-----|------|-------|
|                      |           | 4                    |      | 5   |      | 6   |      | 7   |      |       |
|                      |           | No.                  | %    | No. | %    | No. | %    | No. | %    |       |
| Sleep                | Nil       | 45                   | 54.2 | 6   | 35.3 | 18  | 34.6 | 12  | 25.0 | 81    |
| Disturbances         | Tolerable | --                   | --   | --  | --   | --  | --   | --  | --   | --    |
|                      | Mild      | 23                   | 27.7 | 9   | 52.9 | 15  | 28.8 | 24  | 50.0 | 71    |
|                      | Moderate  | 12                   | 14.5 | 1   | 5.9  | 14  | 26.9 | 7   | 14.6 | 34    |
|                      | Extreme   | 3                    | 3.6  | 1   | 5.9  | 5   | 9.6  | 5   | 10.4 | 14    |
| Fatigue              | Nil       | 38                   | 45.8 | 5   | 29.4 | 21  | 40.4 | 14  | 29.2 | 78    |
|                      | Tolerable | 2                    | 2.4  | --  | --   | --  | --   | 1   | 2.1  | 3     |
|                      | Mild      | 27                   | 32.5 | 12  | 70.6 | 22  | 42.3 | 23  | 47.9 | 84    |
|                      | Moderate  | 13                   | 15.7 | --  | --   | 5   | 9.6  | 8   | 16.7 | 26    |
|                      | Extreme   | 3                    | 3.6  | --  | --   | 4   | 7.7  | 2   | 4.2  | 9     |
| Weakness             | Nil       | 34                   | 41.0 | 7   | 41.2 | 18  | 34.6 | 10  | 20.8 | 69    |
|                      | Tolerable | 2                    | 2.4  | --  | --   | --  | --   | 1   | 2.1  | 3     |
|                      | Mild      | 32                   | 38.6 | 9   | 52.9 | 24  | 46.2 | 25  | 52.1 | 90    |
|                      | Moderate  | 11                   | 13.3 | 1   | 5.9  | 4   | 7.7  | 10  | 20.8 | 26    |
|                      | Extreme   | 4                    | 4.8  | --  | --   | 6   | 11.5 | 2   | 4.2  | 12    |
| Itching              | Nil       | 47                   | 56.6 | 13  | 76.5 | 28  | 53.8 | 20  | 41.7 | 108   |
|                      | Tolerable | --                   | --   | --  | --   | 2   | 3.8  | --  | --   | 2     |
|                      | Mild      | 19                   | 22.9 | 1   | 5.9  | 9   | 17.3 | 17  | 35.4 | 46    |
|                      | Moderate  | 13                   | 15.7 | 3   | 17.6 | 8   | 15.4 | 6   | 12.5 | 30    |
|                      | Extreme   | 4                    | 4.8  | --  | --   | 5   | 9.6  | 5   | 10.4 | 14    |
| Numbness             | Nil       | 40                   | 48.2 | 12  | 70.6 | 26  | 50.0 | 24  | 50.0 | 102   |
|                      | Tolerable | --                   | --   | --  | --   | --  | --   | 1   | 2.1  | 1     |
|                      | Mild      | 24                   | 28.9 | 3   | 17.6 | 14  | 26.9 | 13  | 27.1 | 54    |
|                      | Moderate  | 15                   | 18.1 | 2   | 11.8 | 7   | 13.5 | 8   | 16.7 | 32    |
|                      | Extreme   | 4                    | 4.8  | --  | --   | 5   | 9.6  | 2   | 4.2  | 11    |

## Discussion

The morbidity associated with lymphatic filariasis is significant and lifelong, and affects all domains of function and health, resulting in complex interactions between body function, personal factors and participation in domestic as well as socio-cultural activities. Ultimately this will affect the individual, the family and the society<sup>6-8</sup>. One study reported a female preponderance in all types of disturbances and in the degree of severity. The frequency of somatic disturbances varies with the duration of the disease, with the highest frequency being reported in patients in whom the duration of disease was greater than 40 years<sup>9</sup>. The most prevalent somatic disability observed in this study was weakness. Compared to other somatic disabilities, extreme difficulty was reported in the case of weakness and fatigue.

It is important to seriously consider expanding the non-pharmacological interventions from the physical level to psychological, social and even the economic disabilities level.

The present study highlights the somatic disturbances, a disability characteristic in chronic lymphatic filariasis experienced by the victims. Disabilities may present with considerable variation among the affected individuals. Disability is dependent on the nature of the victims' role and obligations and their attitudes towards the disability.

## Conclusion

Analysis of the prevalence of somatic disturbances based on the severity showed variations between the two genders. With regard to the duration of the disease also, the severity of the somatic disturbances increased as the duration of the disease increased. The present study did not show any significant difference in the somatic disability related to the different stages of the disease.

The following measures may be considered to reduce or alleviate the somatic disabilities due to the disease.

- Implementing community-based home care to reduce the impact of disability
- Educating, motivating and training the affected victims on the strategies to cope with the impact of disability

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