The social impact of Mseleni Joint Disease

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Summary
An extensive survey was done at Mseleni and the emphasis of this article is to point out the hardships which co-exist with, and are aggravated by Mseleni Joint Disease — for the individual as well as for the whole community.

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KEYWORDS: Osteoarthritis; Joint Diseases; Activities of Daily Living; Socioeconomic Factors; Education; Pensions; Family Size

Social background
In order to understand the social effects of the disease certain facts need to be born in mind:

Household Unit
Households vary in size from one member up to twenty or more (the extended family). These households function socially and economically as a unit and it is important to consider not only the problems of individuals but also of the household units.

Importance of Women
The menial tasks of daily family living are largely undertaken by the women and girls. Collecting water and wood, hoeing in the fields, cooking and washing are all traditionally female tasks. This must be borne in mind when considering the impact of the high prevalence of the disease among women.

Economy
The three elements of the economy are shown in Fig 1. The relative importance of each element varies. In years of poor harvest, gathering becomes relatively more important. In the case of those people who are disabled or elderly and unable to perform the work involved in self-sufficiency and gathering, cash economy becomes more important.

Settlement Pattern
The people live in distinct communities but not in...
Mseleni Joint Disease

Figure 1: Showing the three elements of the economy (after GP Lind)

Figure 2: Map of Maputaland showing major communications, rivers and lakes. The area in which Mseleni Joint Disease (MJD) is found is shown as is the region in which the current survey was undertaken.

Findings

These are based on a 50% sample of 274 neighbouring homes which were visited in the area shown on the map (Fig 2). The important findings relative to the social problems are considered below.

1. Female Preponderance

Females are affected more than males in a ratio 5:1 (Fig 3).

Figure 3: Age distribution of MJD for both sexes. Women are affected more than men (in a ratio of 5:1).

Figure 4: Age distribution of females resident in all households showing the distribution of MJD cases.
Mseleni Joint Disease

2. **High Incidence**

The high incidence in females can be seen from Figs 4 and 5. Fifty-eight percent of women over 30 years have MJD. Although the incidence in the elderly women is very high, 63% of all sufferers are below old age pensionable age.

3. **MJD Households Have More Old People**

Households were termed MJD households if they contained one or more member with MJD, or non-MJD households if there were no sufferers. A household with an MJD sufferer is clearly at a disadvantage because of the dependence of the sufferer on others for some of the daily tasks. Figs 6 and 7 illustrate that these MJD households also have a higher percentage of old people — increasing the burden of these households even more.

4. **Resources and Income**

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Cash Income</th>
<th>Both</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>MJD Households</td>
<td>19</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Non-MJD Households</td>
<td>10</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>MJD Households</td>
<td>8</td>
<td>40</td>
<td>28</td>
</tr>
<tr>
<td>Non-MJD Households</td>
<td>6</td>
<td>48</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 1 shows the percentage of households with livestock, cash income, both of these and neither of these. Those with neither are considered totally destitute. Excluding pensions 54% of homes with MJD are totally destitute and 37% of non-MJD households. Even with pensions included, 24% of MJD households are still destitute and 29% of non-MJD households. 73% of MJD households have no cash income except pensions.

**Table 2. Sources of income in 138 households for a 2 month period.**

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total pension income</td>
<td>R6 713</td>
<td>66%</td>
</tr>
<tr>
<td>Income from migrant workers</td>
<td>R2 144</td>
<td>21%</td>
</tr>
<tr>
<td>Locally generated income</td>
<td>R1 396</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>R10 253</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The sources of regular cash income for the community are shown in Table 2. The high dependence on pension
Mseleni Joint Disease

income contrasts with the low level of income generated in the area. If all those entitled to pensions actually received them, the total income for 2 months would double (from R10,253 to R20,522) and 83% of cash income would come from pensions, bringing cash income to virtually all MJD households.

The per capita income is R75 per annum. If pensions are excluded this figure is only R26 per annum. However if all those who qualify for pensions received them it would rise to R150 per annum.

5. Problems of Pensions

<table>
<thead>
<tr>
<th>Number Entitled</th>
<th>Number Who Receive</th>
<th>% of Entitled Who Receive</th>
</tr>
</thead>
<tbody>
<tr>
<td>MJD Only</td>
<td>86</td>
<td>19</td>
</tr>
<tr>
<td>Old Age Only</td>
<td>28</td>
<td>16</td>
</tr>
<tr>
<td>MJD And Old Age</td>
<td>51</td>
<td>32</td>
</tr>
</tbody>
</table>

Of the 20% of the population who are entitled to pensions, only 8% actually receive (40% of those entitled).

Of the pensions entitled, 52% are disability pensions; 48% of pensions entitled are old age pensions.

Not only do many who are entitled not receive pensions, even those who apply may have a considerable delay before receiving their pension. Of those who applied for reference books in May 1983, some received them in January 1984. Others were still waiting. No-one who applied for a pension in April 1983 had received a pension by February 1984.

6. Housing

Table 3: Summary of Pension Position.

<table>
<thead>
<tr>
<th>Walking distance (h)</th>
<th>Number of houses</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>20</td>
</tr>
<tr>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>1.5</td>
<td>20</td>
</tr>
<tr>
<td>2+</td>
<td>20</td>
</tr>
</tbody>
</table>

Figure 8: Distance assessed by a one way trip to a store, to collect wood and to fetch water is shown. The most serious problem is the long distance to water supplies.

and households receiving pensions. The number of people per housing unit in a pension household was 1.43. The number of people per housing unit in a destitute household was 1.97. The difference between these values was shown to be statistically significant at the 0.1% level.

This again highlights the importance of pension income in the community.

7. Problems of daily living

Distances to water and wood supplies and stores are given in Fig 8. 60% of households are more than 1 hour round trip to water, whereas very few households are far from wood. Nearly half the households are 2 hours or more round trip from the store.

Table 4 shows the percentage of women in different categories who indicated that they performed various tasks as shown. Comparison of the two old age columns indicates that MJD sufferers are less able to collect water or gather wood than non-MJD. This shows that MJD exacerbates the problems faced by the elderly. The survey indicated that a number of people in this category had to pay for water and wood collection.
Table 4. Performance of daily tasks by women.

<table>
<thead>
<tr>
<th>People performing tasks</th>
<th>Old Age (over 60) n = 58</th>
<th>Disabled (under 60) n = 60</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-MJD (n = 15)</td>
<td>MJD (n = 43)</td>
</tr>
<tr>
<td></td>
<td>MJD — limp or better (n = 21)</td>
<td>MJD — 1 stick or worse (n = 40)</td>
</tr>
<tr>
<td>Water collection %</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Wood gathering %</td>
<td>47</td>
<td>27</td>
</tr>
<tr>
<td>Cooking %</td>
<td>53</td>
<td>52</td>
</tr>
</tbody>
</table>

This was particularly true of old MJD sufferers living alone.

Comparison of the younger MJD sufferers (below 60) shows that whereas in milder or early cases women still perform daily tasks, once the disease has progressed to the stage where one stick is required, this ability is severely limited. It was noted that ⅔ of the MJD sufferers under 60 were already in the 1 stick or worse category. A similar proportion of these younger MJD sufferers collect water and gather wood as old age pensioners who do not have MJD.

8. Problems of Schooling

All children aged 6-18, whether at home or not, were included in the schooling survey. In addition older children still at school were included.

It was found that 62% of children surveyed in non-MJD households were in school compared to only 41% of children in MJD households. The distribution of children from sub A (first year) to standard 10 is shown in Fig 9 for both MJD and non-MJD households. The average age per standard is also shown.

Figure 9: The distribution of children from MJD households and non-MJD households who are in school according to educational standard. The average age of children in each standard is given; 41% of children in MJD households are in school compared to 62% in non-MJD households.

Figure 10: Difficulties in schooling – distances. Distance as assessed by time for a one way trip is shown. The problem for higher primary and secondary school children is clear.

Fig 10 shows the distance of schools from home. It can be seen that whereas 80% of households are within an hour’s walk of the lower primary school, 50% of households are more than 2 hours’ walk from higher
primary and secondary schools; 50% of children in higher primary or secondary schools must therefore either spend 4 hours or more walking to and from school each day, or board nearer school. In either case their ability to help with tasks in the home is considerably lessened. The household may be very dependent on these children for doing tasks and this may partly explain why few progress to higher classes. To send an older child to school may therefore not only be a financial sacrifice but also limit further the ability of the household unit to cope with tasks of daily living.

Cost of schooling (including school clothes, books, fees) is at least R40 for first year, R120 for standard 5, R180 for standard 9. This should be compared to the per capita income of R75 per annum.

9. Surgical Needs (see Fig 11)
Of 138 patients assessed by a physiotherapist 69 needed a total of 117 major joint operations. A further 26 patients were assessed as too early and may need surgery later. If this is projected to the estimated 3000 cases it means ±1500 patients need ±2500 major joint operations. To estimate the cost of this in medical

Schools are so far away that many households cannot afford to let a healthy child on whom they depend, be away from home for so many hours.

and support services is impossible. The logistical problems at present are immense — patients must go far away from home for a prolonged period and many are not willing to do so. A much better solution would be to establish an orthopaedic centre in the area. To do 2500 cases in 10 years mean 5 major operations per week and an extra 40 hospital beds.

A recent assessment of 22 cases who have had major surgery, mostly hip replacements, in the past 4 years showed that they had all had considerable pain relief, and many had improved mobility. Some have been able to resume household tasks which were impossible before the operation.

Conclusion
This paper has attempted to point out some of the problems facing the community where MJD is prevalent. Some of the problems to be tackled are:
1. Social welfare services — there is no social worker at Mseleni and the nearest magistrate's office is 65 km away.
2. Field work — the vehicle and driver sponsored by the Cripple Care Association have done invaluable work, but more are needed.
3. Reference books and pensions — applications

Figure 11: Chart showing 138 MJD patients classified by a physiotherapist according to surgical need.

already made need to be followed up and many more people still await help with this.
4. Water — adequate supplies close to the communities are needed.
5. Schooling — free schooling with provision of books and supplies is needed together with school transport for secondary schools.
6. Employment — work opportunities must be generated both for local sufferers and to attract migrant workers back to the area.
7. Orthopaedic centre — should be established locally to tackle the clinical problems.

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