PREVALENCE OF RHEUMATIC MUSCULO SKELETAL DISORDERS IN A RURAL POPULATION OF SOUTH INDIA, KERALA using WHO -ILA-COPCORD Bhigwan Model -a BJD India NAN initiative
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   Calicut Medical College

Date Begun – PHASE I: 15\textsuperscript{th} August 2008

Date Completed – PHASE III: 30\textsuperscript{th} June 2009
**Geographical Location:**
Mavoor Panchayat, Kunnamangalam Block, Calicut district, Kerala

**Selection design:**
2 subcentres in Mavoor panchayat (rural setting) - Simple Random sampling

**Population size:**
5000 Population (1127 Households)

**Sample:**
Population over 15 years in these households.
Methodology

• Standard COPCORD Methods Followed.
• Only deviation being selection of study units by random sampling.
• Utilisation of **Accredited health workers** under the National rural health mission for data collection.
RESPONSE RATE

Target Population:
5000 population over 15 years of age.

• PHASE I – 5000

• PHASE II – 1476/5000 (29%)

• PHASE III–1322/1476(89.5%)
<table>
<thead>
<tr>
<th>Pain location</th>
<th>Bhigwan (India) N=4092</th>
<th>Indonesia N=4683</th>
<th>China N=4213</th>
<th>Australia N=1437</th>
<th>Kerala N=5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain at any site</td>
<td>17.9</td>
<td>24</td>
<td>-</td>
<td>-</td>
<td>17.2</td>
</tr>
<tr>
<td>Neck</td>
<td>6.5</td>
<td>5</td>
<td>4.6</td>
<td>17</td>
<td>2.4</td>
</tr>
<tr>
<td>Back any site</td>
<td>13.1</td>
<td>15.7</td>
<td>-</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>Calf pain</td>
<td>6.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11.7</td>
</tr>
<tr>
<td>Shoulder</td>
<td>7.4</td>
<td>11</td>
<td>4.6</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Elbow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Hand/wrist</td>
<td>7.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.2</td>
</tr>
<tr>
<td>Knee</td>
<td>12.7</td>
<td>12.2</td>
<td>27</td>
<td>15</td>
<td>16.2</td>
</tr>
<tr>
<td>Ankle/feet</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10.2</td>
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<tr>
<td>Any joint</td>
<td>15.8</td>
<td>18</td>
<td>33</td>
<td>32</td>
<td>13</td>
</tr>
<tr>
<td>Soft tissues any site</td>
<td>15.9</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>14</td>
</tr>
</tbody>
</table>
Diagnostic breakup of diseases: ACR Criteria

- RA: 27%
- SSA: 5%
- SRD: 34%
- INF: 7%
- STR: 14%
- VS: 6%
- M&N: 2%
- Others: 1%
- RA: 2%
- VS: 6%
## Phase III disease Breakup and Prevalence Estimates

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number</th>
<th>Prevalence</th>
<th>Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA</td>
<td>26</td>
<td>0.5</td>
<td>0.24-0.60</td>
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<tr>
<td>SSA</td>
<td>69</td>
<td>1.38</td>
<td>1.06-1.70</td>
</tr>
<tr>
<td>JRA</td>
<td>1</td>
<td>0.02</td>
<td></td>
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<tr>
<td>OA</td>
<td>357</td>
<td>7.14</td>
<td>6.43-7.85</td>
</tr>
<tr>
<td>STR</td>
<td>185</td>
<td>3.7</td>
<td>3.18-4.22</td>
</tr>
<tr>
<td>Connective tissue</td>
<td>1</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Infections</td>
<td>93</td>
<td>1.86</td>
<td>1.49-2.23</td>
</tr>
<tr>
<td>SRD</td>
<td>449</td>
<td>8.9</td>
<td>8.19-9.77</td>
</tr>
<tr>
<td>Vertebral spine</td>
<td>83</td>
<td>1.66</td>
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<tr>
<td>Trauma</td>
<td>24</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>M&amp;N</td>
<td>27</td>
<td>0.54</td>
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</tr>
<tr>
<td>Others</td>
<td>7</td>
<td>0.14</td>
<td></td>
</tr>
</tbody>
</table>
LOGISTIC HURDLES

- Manpower
- Health volunteers
- Doctors
- Budget
- Medical facilities
CONCLUSIONS

• Unrecognised Aches, woes and Pains are the Submerged part of the Ice berg in the Community.

• Dominance of Soft tissue pain and rheumatism and degenerative disorders.

• Psychosomatic component?

• Need for Life style modifications-Community education programmes.

• Health economics to be explored.
ACKNOWLEDGMENT

• BJD – India NAN
• Dean, Calicut Medical College
• LSG, Mavoor Panchayat, Kunnamangalam Block