A study to assess effect of foot reflexology on peripheral neuropathic pain among diabetic patients

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Abstract
Diabetic peripheral neuropathy is a long-term complication of diabetes. Reflexology for neuropathic pain works with the help of chemical, electrical, and nervous systems of the body – sending messages across to balance organs and parts in far reaching areas of the body. With neuropathy, reflexology has a great option of gently activating the damaged nerve fibers to send and receive correct nerve signals.

Purpose: To assess the effect of foot reflexology on neuropathic pain among diabetic patients.

Objectives:
1. To assess peripheral neuropathic pain before and after foot reflexology among diabetic patients.
2. To compare peripheral neuropathic pain before and after foot reflexology among diabetic patients.

Method: This was quantitative Quasi-experimental pre test post test control group design of 30 patients who were diabetic and had peripheral neuropathic pain, aged 31-60 years. The patients selected for study were diabetic patients who were suffering from peripheral neuropathic pain from Bharati Hospital and research centre Of Pune city. The data for study was collected from September 2017 to 30 March 2018. Non-probability purposive sampling technique was used for the selection of patients. To obtain necessary data for the study, the tool used for data collection was assessment of peripheral neuropathic pain by Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) Pain Scale.

Results: The result shows that there was significant effect of foot reflexology on reduction of peripheral neuropathic pain after 7th, 14th, and 21st days. Foot reflexology was effective in reduction of peripheral neuropathic pain among diabetic patients. So H1 was accepted i.e. There was significant effect of foot reflexology on peripheral neuropathic pain in diabetes mellitus patient.

Conclusion: Foot reflexology was effective in reduction of peripheral neuropathic pain among diabetic patients.

Keywords: foot reflexology, peripheral neuropathic pain, diabetic patients

1. Introduction
Reflexology is a technique based on a system of points on the hands, feet, and ears that correspond, or “reflex,” to other areas of the body. In similitude to the theory to acupressure, reflexology works by applying appropriate pressure to these points stimulates the flow of energy, thus helping to relieve pain or congestions throughout the entire body. A very pleasurable form of bodywork, reflexology is also used to ease stress and promote relaxation.

2. Objectives
The objectives of study were
1. To assess peripheral neuropathic pain before and after foot reflexology among diabetic patients.
2. To compare peripheral neuropathic pain before and after foot reflexology among diabetic patients.

3. Hypothesis
H0 - There will be no significant effect of foot reflexology on peripheral neuropathic pain in diabetes mellitus patient.
H1 - There will be significant effect of foot reflexology on peripheral neuropathic pain in diabetes mellitus patient.
4. Method and material
This was quantitative Quasi-experimental pre test post test control group design of 30 patients who were diabetic and had peripheral neuropathic pain, aged 31-60 years. The patients selected for study were diabetic patients who were suffering from peripheral neuropathic pain from Bharati Hospital and research centre of Pune city. The data for study was collected from September 2017 to 30 March 2018. Non-probability purposive sampling technique was used for the selection of patients. To obtain necessary data for the study, the tool used for data collection was assessment of peripheral neuropathic pain by Leeds Assessment of Neuropathic Symptoms and Signs (LANSS) Pain Scale.

5. Result
5.1 The findings of sample characteristics:
Majority of the samples were from the age group of 41 to 45 years and 80% were male. 73.33% of samples were residing from urban area. Majority of the samples i.e. 33.33 % were illiterate and maximum samples belongs to nuclear family i.e. 60%. 36.67% were had private occupation. 20.5% were practicing home remedies.76.67% were taking regular allopathic treatment and 53.33% were going regularly for follow up to hospital.

5.2 Findings of effect of foot reflexology on peripheral neuropathic pain among diabetic patients [pre test (day 1) and post test (7th day)]
Table 1: n =30

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>CI95%</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>t statistic: 5.927</th>
<th>Degrees of Freedom (df): 29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre- Test</td>
<td>11.033</td>
<td>9.244-12.823</td>
<td>5.00</td>
<td>1.0</td>
<td>24.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Test (7th Days)</td>
<td>7.4</td>
<td>5.982 - 8.818</td>
<td>3.962</td>
<td>1.0</td>
<td>15.0</td>
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<td></td>
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</tbody>
</table>

Table No.1 shows that P value is less that 0.001 level of significance, so it shows that there was significant effect of foot reflexology on reduction of peripheral neuropathic pain after 7th days.

5.3 Findings of effect of foot reflexology on peripheral neuropathic pain among diabetic patients [Pre test (day 1) and post test (14th day)]
Table 2: n =30

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>CI95%</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>t statistic: 10.385</th>
<th>Degrees of Freedom (df): 29</th>
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</thead>
<tbody>
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<td>11.033</td>
<td>9.244-12.823</td>
<td>5.00</td>
<td>1.0</td>
<td>24.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Test (14th Days)</td>
<td>7.967</td>
<td>6.401 - 9.532</td>
<td>4.375</td>
<td>1.0</td>
<td>20.0</td>
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</table>

Table No.1 shows that P value is less that 0.001 level of significance, so it shows that there was significant effect of foot reflexology on reduction of peripheral neuropathic pain after 14th days.

5.4 Findings of effect of foot reflexology on peripheral neuropathic pain among diabetic patients [pretest (day 1) and posttest (21st day)]
Table 3: n =30

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>CI95%</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>t statistic: 4.607</th>
<th>Degrees of Freedom (df): 29</th>
</tr>
</thead>
<tbody>
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<td>Pre- Test</td>
<td>11.033</td>
<td>9.244-12.823</td>
<td>5.00</td>
<td>1.0</td>
<td>24.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Test (After 21Days)</td>
<td>7.467</td>
<td>6.460 - 8.473</td>
<td>2.813</td>
<td>1.0</td>
<td>12.0</td>
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<td></td>
</tr>
</tbody>
</table>

Table No.1 shows that P value is less that 0.001 level of significance, so it shows that there was significant effect of foot reflexology on reduction of peripheral neuropathic pain after 21days.

5.5 Day wise effect of foot reflexology on peripheral neuropathic pain among diabetic patients
Table 5: n=30

<table>
<thead>
<tr>
<th>Days</th>
<th>Day 1</th>
<th>Day 7</th>
<th>Day 14</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>11.033</td>
<td>7.4</td>
<td>7.967</td>
<td>7.467</td>
</tr>
</tbody>
</table>

Effect of foot reflexology on peripheral neuropathic pain among Diabetic patients

Fig 1: Shows the significant mean difference day wise on reduction of peripheral neuropathic pain i.e. from 11.033 to 7.467
5. Discussion
The result shows that there was significant effect of foot reflexology on reduction of peripheral neurotic pain

6. Conclusion
The result shows that there was significant effect of foot reflexology on reduction of peripheral neurotic pain after 7th days, 14th days and 21th days. Foot reflexology was accepted i.e. There was significant effect of foot reflexology on peripheral neuropathic pain in diabetes mellitus patient

7. Acknowledgement
My sincere thanks to all the Participants of the study who made this study possible. Our sincere thanks college authority for permitting us to conduct our research

8. References