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

**Dr. Veena D Sakhardande and Shubhangi Gaikwad**

### 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:** To assess peripheral neuropathic pain before and after foot reflexology among diabetic patients, 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 7<sup>th</sup> days, 14<sup>th</sup> days and 21<sup>th</sup> days. Foot reflexology was effective in reduction of peripheral neuropathic pain among diabetic patients. So H<sub>1</sub> 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

H<sub>0</sub> - There will be no significant effect of foot reflexology on peripheral neuropathic pain in diabetes mellitus patient.

H<sub>1</sub> - 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 (7<sup>th</sup> day)]**

**Table 1:** n =30

Group	Mean	CI95% <sup>2</sup>	SD	Min	Max	P value: < 0.001 (1.948e-6) t statistic: 5.927 Degrees of Freedom (df): 29
Pre- Test	11.033	9.244 -12.823	5.000	1.0	24.0	
Post Test (7 <sup>th</sup> Days)	7.4	5.982 - 8.818	3.962	1.0	15.0	

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

**5.3 Finding of effect of foot reflexology on peripheral neuropathic pain among diabetic patients [Pre test (day 1) and post test (14<sup>th</sup> day)]**

**Table 2:** n =30

Group	Mean	CI95% <sup>2</sup>	SD	Min	Max	P value: < 0.001 (2.783e-11) <sup>1</sup> t statistic: 10.385 Degrees of Freedom (df): 29
Pre- Test	11.033	9.244-12.823	5.00	1.0	24.0	
Post Test (14 <sup>th</sup> Days)	7.967	6.401 - 9.532	4.375	1.0	20.0	

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

**5.4 Findings of effect of foot reflexology on peripheral neuropathic pain among diabetic patients [pretest (day 1) and posttest (21<sup>th</sup> day)]**

**Table 3:** n =30

Group	Mean	CI95% <sup>2</sup>	SD	Min	Max	p value: < 0.001 (7.545e-5) <sup>1</sup> t statistic: 4.607 Degrees of Freedom (df): 29
Pre- Test	11.033	9.244-12.823	5.00	1.0	24.0	
Post Test (After 21Days)	7.467	6.460 - 8.473	2.813	1.0	12.0	

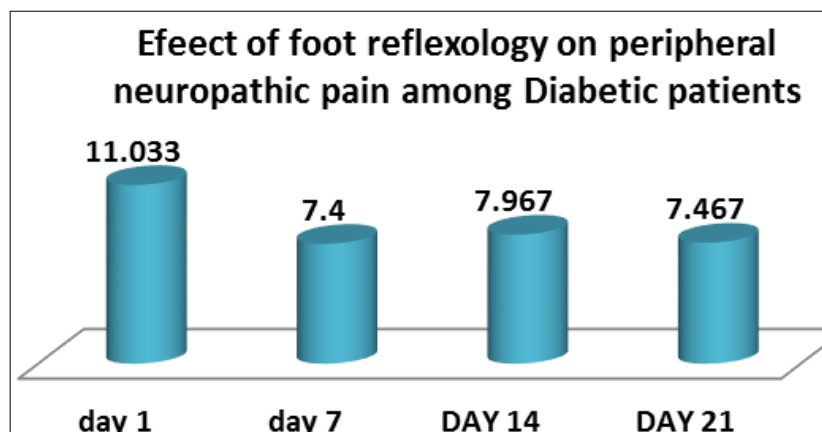
Table No.1 shows that P value is less than 0.001 level of significance, so it shows that there was significant effect of foot reflexology on reduction of peripheral neuropathic pain after 21 days.

**5.5 Day wise effect of foot reflexology on peripheral neuropathic pain among diabetic patients**

Deviation3 Min Max

**Table 5:** n=30

Days	Day 1	Day 7	Day 14	Day 21
Mean	11.033	7.4	7.967	7.467



**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 7<sup>th</sup> days, 14<sup>th</sup> days and 21<sup>th</sup> days. Foot reflexology was accepted i.e. There was significant effect of foot reflexology on peripheral neuropathic pain in diabetes mellitus patient

### **7. Acknowledgement**

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