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Effectiveness of foot massage on blood pressure among patients with hypertension

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Abstract

The present study aims to determine the effectiveness of foot massage on blood pressure among patient with hypertension at mappedu. A quantitative quasi experimental research design was used for the present study. A total of 30 hypertension clients who fall into the inclusion criteria was selected as samples by using purposive sampling technique among which 30 samples in the experimental group. The demographic data variables was collected in the group, followed by that the pretest was conducted on before monitoring blood pressure, immediately after the foot massage the intensity level of blood pressure the group was assessed by using systolic pressure and diastolic pressure was initiated in the experimental group. The post test was conducted on the day by day after foot massage and the intensity level of blood pressure was assessed by using the sphygmomanometer in experimental group. The results of the study revealed that there is a significant reduction in the intensity level of blood pressure at the level of $p < .0001$ after the intervention among experimental group. Thus, the study proves that foot massage can be used as an effective nursing intervention for reducing the blood pressure among the hypertension clients and it is a easily applicable technique and also considered as cost effective method with no side effects.

Keywords: Foot massage, reducing blood pressure, hypertension clients

Introduction

The Hours of India (2013) revealed that, as per WHO wellbeing insights 2012, the prevalence of hypertension in India was 23.1% in men and 22.6% in ladies equivalent or over 25 years age. The raised pulse was a high danger condition that caused roughly 51% of death from strokes and 45% from coronary vein ailment. It was considered straightforwardly answerable for 7.5 million passings in 2004, about 12.8 percent of the absolute of every single worldwide demise. Dr. Purshottam Lal (Padma Vibhushan), Interventional Cardiologist likewise included that around one billion individuals or 25 percent of the world's grown-up populace was hypertensive. About 7.5 million passings consistently and an untold number of cardiovascular occasions like strokes, coronary episodes, cardiovascular break down, aneurysms, etc. was additionally detailed in a similar article.

According to the World Wellbeing Measurements 2012, of the assessed 57 million worldwide passings in 2008, 36 million (63%) were expected to non-transferable sicknesses (NCDs). The biggest extent of NCD passings is brought about via cardiovascular infections (48%). Regarding ascribed passings, raised pulse is one of the main social and physiological danger factor to which 13% of worldwide passings are credited. Hypertension is liable for 57% of stroke passings and 24% of computer aided design in India. Hypertension is accounted for to be the fourth supporter of sudden passing in created nations and the seventh in creating nations.

Reflexology Relationship of Canada (2011) characterizes reflexology as "a characteristic mending craftsmanship based on the rule that there are reflexes in the feet, hands and ears and their referral regions inside zone related territories, which compare to each part, organ and organ of the body. Through utilization of weight on these reflexes without the utilization of devices, the feet being the essential region of use, reflexology eases strain, improves flow and advances the characteristic capacity of the related zones of the body".

Dr. Jesus Manzanares, M.D (2010) at the College Medical clinic and Sagrado Corazon Clinic in Barcelona, Spain examined the adequacy of reflexology therapy on Hypertension in 54 patients with hypertension. He split them into two gatherings. One gathering had an overall reflexology treatment done meeting.

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The objective meetings zeroed in on the heart, prevalent frontal cortex, thoughtful thoracic ganglions, and kidneys. At the point when the testing was finished the specialist found that half (27 individuals) had the option to accomplish lower circulatory strain levels, even while diminishing their customary drug.

Lu WA, Chen GY, Kuo Disc (2011) directed an examination to research the impact of footreflexology to bring down pulse in sound subjects and patients with coronary course ailment. 17 individuals with angiographically patent coronary supply routes and 20 patients with computer aided design selected as the control and computer aided design bunches the rate change in pulse 30 and an hour after foot reflexology was littler than that in the control, and the rate change in nVLF an hour after foot reflexology was littler than that in the control. It was presumed that foot reflexology might be utilized as a productive subordinate to the remedial routine to build the vagal tweak and reduction pulse in both solid individuals and computer aided design patients.

Methods and Materials

A quantitative research approach with Pre-Experimental research design with one group pre-test and post-test design was used to conduct study at Mappedu. 30 samples were selected by using a purposive sampling technique. The inclusion criteria for clients with below the age group of 70 years, client with diagnosis for a period of less than 10 years, client who knows English and Tamil language, who were willing to participate in the study. The exclusion criteria for the client not willing to participate, client who are having foot ulcers, client with who are psychologically instable, client who are neuropathies. The data collection period was done with prior permission from the Director of Medical administrative office at Mappedu. The purpose of the study was explained to the samples and written informed consent was obtained from them. The demographic data were collected, blood pressure monitoring regarding hypertension clients, and then he will be assessing the hypertension patient level, foot massage with the monitoring blood pressure level use of Barthel Index Scale & level of blood pressure Assessment Scale (Tinetti Assessment Scale). After that the hypertension patient will able to monitor the period of three week.

Results and Discussion

Section- A: Demographic characteristics

Among 30 samples, 30 belongs to the experimental group, With regards to age, 0 (0%) were in the age group of 31-40years, 14 (46.67%) were in the age group of 41-50 years, 7 (23.33%) were in the age group of 51-60 years, 9(30%) were in the age group of 61-70 years. With regards to sex, 13 (43.33%) were male, 17(43.34%) were female. With regards to educational qualification, 4(13.33%) had illiterate, 2(6.67%) had primary education, 13(43.33%) had secondary education, 10(33.33%) had higher education and 1(3.33%) had graudate. In regards duration of hypertension, 20(66.67%) were <5 years, 10 (33.33%) were 5-10 years. With regards to habits, 10(33.33%) were somking habits, 6(20%) were alcoholism, 1(3.33%) were tobacco use, with regards of physical activity, 5(16.67%) had sedentary activity, 17(56.67%) had moderate workers, 8(26.66%) had heavy workers. With regards the exercise, 2(6.67%) presented exercise, 28 (93.33%) presently no exercise, 8

(26.7%).

Section B: Comparison of mean and standard deviation of blood pressure level among patient with hypertension during pre and post-test at mappedu

Table 1: Comparison of mean and standard deviation of blood pressure level among patient with hypertension during pre- test at mappedu n=30

Pre test Blood pressure Level	Blood pressure	Mean	Standard Deviation	Mean Difference
	Systolic blood Pressure	139.4	5.89	49
	Diastolic blood Pressure	90.4	1.2	

The above table shows the comparison of mean and standard deviation of pre and post test scores among hypertension patient. In Pre-test the mean and the standard deviation of systolic blood pressure was 139.4 ± 5.89 in the experimental group. In Pre-test the mean and the standard deviation of diastolic blood pressure was 90.4 ± 1.2 in the experimental group. The mean difference of systolic blood pressure and diastolic blood pressure is 49 in experimental group.

Table 2: Comparison of mean and standard deviation of blood pressure level among patient with hypertension during post-test at mappedu

Pre test Blood pressure Level	Blood pressure	Mean	Standard Deviation	Mean Difference
	Systolic blood Pressure	134.73	3.33	53
	Diastolic blood Pressure	81.33	2.60	

The above table shows the comparison of mean and standard deviation of post test scores among experimental group. In Post-test the mean and the standard deviation of systolic blood pressure was 134.73 ± 3.33 in the experimental group. In Post-test the mean and the standard deviation of diastolic blood pressure was 81.33 ± 2.60 in the experimental group. The mean difference of systolic blood pressure and diastolic blood pressure is 53 in experimental group

Section C: Effectiveness of foot reflexology on blood pressure score among experimental group n=30

Table 3: Experimental group

Experimental group		Mean	SD	Paired 't' Value	Df
SBP	Pre test	139.4	5.89	**5.89	29
	Post test	134.73	3.33		
DBP	Pre test	90.4	1.2	**20.79	
	Post test	81.33	2.60		

Table value = 2.46

**Highly Significant at p≤0.01

The above portraits the paired 't' test value which was calculated to analyse the effectiveness of foot reflexology on blood pressure level among experimental group. The calculated 't' value 5.89 was greater than the table value t = 2.46 at p≤0.01. It shows that foot reflexology was effective on reducing the high blood pressure among the patients with hypertension. Hence, the hypothesis H1 is retained.

Section-C Association between the blood pressure scores

and their selected demographic variables

Table 4: Association between the blood pressure scores and their selected demographic variables at mapped n=30

Demographic Variables	Pre-test		Post-test	
	SBP	DSP	SBP	DBP
Age	0.4	2.39	0.74	3.33
Sex	0.62	0.74	0.33	2.95
Educational status	12.02	12.21	11.5	6.48
Habit	0.95	0.72	1.17	5.76
Physical activity	3.16	0.68	1.85	1.89
Exercise	1.85	0.23	1.23	6.97
Duration of Hypertension	4.3	6.66	2.17	2.34

The table displays that in the experimental group, with regard to systolic blood pressure there was a significant association found between sex, education, income, physical activity, exercise, duration of hypertension, habit. Hence, the hypothesis H3 is accepted for the above mentioned variables and rejected for age, habit. With regard to diastolic blood pressure, there was a significant association found between education, duration of hypertension, age, sex, habit, physical activity, exercise.

Conclusion

From the results of the present study, it was concluded that foot massage was found to be an effective intervention in reducing the intensity level of blood pressure among hypertension clients. Thus, foot massage can be used as a part of nursing intervention in hypertension client for minimising the blood pressure and the main benefits of this foot massage is that it has no side effects and can be easily applicable.

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