

# EFFECT OF FOOT REFLEXOLOGY ON THE QUALITY OF LIFE AMONG MENOPAUSAL WOMEN IN SELECTED SCHOOLS IN MANGALORE

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**Abstract :**

The study was conducted to identify the effect of foot reflexology on the quality of life among menopausal women employed in various schools from 01.08.2011 to 01.10.2011. An evaluative approach with one group pre-test post-test design was used for the study. The present study was conducted among various schools in Mangalore. The collected data from 117 samples were analyzed using descriptive and inferential statistics. Distribution of the samples based on the quality of life revealed that 78.6% had a good quality of life, 15.4% had an average quality of life and 6% had a very good quality of life. With regard to the menopausal symptoms, 55.6%, 24.8% and 19.7% experienced mild, moderate and severe symptoms respectively. 52 women with moderate to severe symptoms were selected and administered foot reflexology for 10 consecutive days. The mean post-test scores of the subjects in the quality of life was 59.43 were significantly greater than the mean pre-test score of 53.89 and the mean post-test scores in the menopausal symptoms was 16.82 which was significantly lower than the mean pre-test score of 21.82. The study also revealed a negative correlation ( $r = -0.653$ ,  $p < 0.005$ ) between the quality of life and menopausal symptoms. There was significant association between the demographic variables and the quality of life.

**Keywords:** Quality of life, Menopausal women and Foot Reflexology.


**Introduction :**

Modern medicine has significantly increased the life expectancy of women across the world. Menopause is a physiological event in the life of a woman. It is caused by the aging of ovaries which leads to a decline in the production of ovarian Gonadotrophins Estrogen and Progesterone. The deficiency of these hormones elicits various somatic, vasomotor, sexual and psychological symptoms that impair the overall quality of life of women. The nature, frequency and severity of symptoms vary not only among the individuals of the same population with

different cultures, ethnicities and women from different countries, but also at different stages of menopause. Although the occurrence of these symptoms is natural, the discomfort caused by them varies among individuals. Treatment for the relief from these symptoms has mainly been focused on hormonal replacement. Today, importance has been imposed on the use of complementary and alternative therapies for the relief of the symptoms related to the physical, mental, social health etc. Reflexology is one such therapy which has been considered wonderful during this time. It helps the body to let go and relax. It is wonderful at reducing the symptoms of menopause by rebalancing the nervous and endocrine system and thus helping to create a smooth transition.

The World Health Organization defines QOL as an individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards and concerns.

Research has shown that the quality of life of women is affected by the occurrence of the menopausal symptoms based on their severity. Reducing the severity of the

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different cultures, ethnicities and women from different countries, but also at different stages of menopause. Although the occurrence of these symptoms is natural, the discomfort caused by

menopausal symptoms can help improve the quality of life. Even though, medical treatment has proved effective in decreasing the symptoms, complementary therapies are now gaining popularity for their simplicity and cost effectiveness. Complementary therapies such as yoga, relaxation techniques, reflexology etc. has proved to be effective in management of various problems and improving the quality of life. One such complementary therapy is foot reflexology. Foot reflexology is based on the principle that the foot is like a chart of the body: divided into ten reflex zones, it is a mirror image of the body. Each reflex zone corresponds to a part of the body. Specific manipulation and pressure of reflex points reduces and eliminates blockages in the corresponding glands or organs, and therefore restores a healthy balance.

A randomized controlled trial of reflexology for menopausal symptoms was conducted in 2002 with a sample of 76 women, the outcome was measured using the Women's Health Questionnaire as well as the visual analogue scale to measure the severity and frequency of hot flushes and night sweats. The result showed that the mean scores for anxiety fell from 0.43 to 0.22 in the reflexology group while compared to the control group. The mean scores for depression fell from 0.37 to 0.20 in the reflexology group when compared to that of the control group. Similar changes were noted for the severity of hot flushes and night sweats. Thus it can be concluded that foot reflexology was effective in the treatment of the physical symptoms.

In a cross sectional hospital based survey conducted in Sindh Pakistan from November 2007 to August 2008, to assess the frequency of menopausal symptoms and their impact on the quality of life of women. The study results showed the mean age of women was 52.17+ 6.019 years. Mean length of time since menopause was 8.39+ 6.0 years. It was also noted that the most prevalent symptom among the study subject was body ache 165 (81.7%). 134 (66.3%) reported hot flushes, 139 (68.8%) and 134 (66.3%) reported lack of energy and decrease in physical strength respectively.

Methods :

In order to accomplish the main objective of assessing the effectiveness of foot reflexology on the quality of life among menopausal women, one group pre-test post-test design which is a pre experimental design was adopted. The study was conducted at various schools in Mangalore. Purposive sampling technique was used for selection of 52 samples.

Pre-test was administered to the participants using the standardized quality of life scale and menopausal rating scale. The demographic data was also collected along with this. After the pre-test, the researcher administered foot reflexology to the participants for a period of 10 days for a duration of 10 minutes. On the 10th day of intervention, the investigator administered a post-test to re-assess the quality of life and menopausal symptoms using the same scales. The collected data were analyzed using descriptive and inferential statistics.

Results :

Major findings of the study:

#### SECTION 1: DESCRIPTION OF DEMOGRAPHIC CHARACTERISTICS

- Highest percentage of the subjects i.e. 32.5% (38) were in the age group of 51-55 years.
- Majority of the subjects i.e. 59% (70) were graduates.
- Major portion of the subjects were married i.e. 98.3% (115).
- Most of the menopausal women were from the teaching profession i.e. 87 women (87%).
- Referring to the women in the menopausal group, majority of the subjects belonged to nuclear family i.e. 77.8% (91).

#### SECTION 2: THE QUALITY OF LIFE AND SEVERITY OF MENOPAUSAL SYMPTOMS

Among the 117 women in the menopausal age assessed, 52 menopausal women were selected through purposive sampling based on the severity of symptoms and inclusion criteria. Their quality of life and the severity of menopausal symptoms were assessed and tabulated in master sheet. The data was analyzed in terms of frequency and percentage to determine the quality of life and severity of menopausal symptoms before performing Foot

Reflexology.

TABLE 1: DISTRIBUTIONS OF PRETEST SCORES ON THE QUALITY OF LIFE OF THE MENOPAUSAL WOMEN

N=117

Quality of life	Score range	Frequency	Percentage(%)
Poor	0-25	-	-
Average	26-50	18	15.4
Good	51-70	92	78.6
Very good	71-100	7	6

Table 1 shows the distribution of the menopausal women according to their quality of life, in which the majority of the women 92 (78.6%) had a good quality of life, 18 (15.4%) had an average quality of life and 7 (6%) had a very good quality of life.

TABLE 2: DISTRIBUTION OF PRETEST SCORES ON THE SEVERITY OF MENOPAUSAL SYMPTOMS OF THE MENOPAUSAL WOMEN

N=117

Menopausal Symptoms	Score Range	Frequency	Percentage (%)
Mild	1-11	65	55.6
Moderate	12-21	29	24.8
Severe	22-33	23	19.7
Very severe	34-44	-	-

Table 2 shows the distribution of the menopausal women according to the severity of the menopausal symptoms, in which majority of the women 65(55.6%) experienced mild symptoms, 29 (24.8%) experienced moderate symptoms and 23 (19.7%) experienced severe symptoms.

### SECTION 3: EFFECT OF FOOT REFLEXOLOGY ON THE QUALITY OF LIFE AND MENOPAUSAL SYMPTOMS

TABLE 3: PAIRED- t TEST FOR PRETEST AND POSTTEST QUALITY OF LIFE SCORES IN MENOPAUSAL WOMEN

n=52

Variable	Mean	SD	t Value	df	LOS
Pre-test	53.89	8.32	10.30	51	0.00 P<0.05 HS
Post test	59.43	5.77			

The data presented in table 4 shows that the mean difference of pretest and posttest quality of life scores of the samples was 5.34 and the standard deviation was 2.55. the calculated 't' value of quality of life score using paired 't'

test, was 10.30, which was more than the table value, 2.97 at 0.05 level of significance ( $p < 0.05$ ). Hence research hypothesis was accepted, indicating that there was significant improvement in the quality of life following foot reflexology.

TABLE 4: PAIRED-t TEST FOR THE PRETEST POSTTEST SCORES OF MENOPAUSAL SYMPTOMS

n=52

Variable	Mean	SD	t Value	df	LOS
Pre-test	21.82	3.19	22.75	51	0.00 ( $p < 0.05$ ) HS
Post test	16.82	2.79			

ttab (51)= 2.937, HS = Highly significant

Data presented in table 4 shows that the mean difference of pretest and post test scores was 5 and standard deviation was 0.4. The calculated 't' value of the menopausal symptoms using paired 't' test, was 22.75, which was more than the table value, 2.97 at 0.05 level of significance ( $p < 0.05$ ). Hence research hypothesis was accepted, indicating that there was significant decrease in the severity of the menopausal symptoms following foot reflexology.

### SECTION 4: CORRELATION BETWEEN THE QUALITY OF LIFE AND THE SEVERITY OF MENOPAUSAL SYMPTOMS

TABLE 5: KARL PEARSON'S CORRELATION COEFFICIENT FOR QUALITY OF LIFE AND MENOPAUSAL SYMPTOMS

N=117

Variable	r Value	LOS
QOL & MRS		0.00
	- 0.653	$p < 0.05$
		HS

HS= highly significant

The table 5 shows that there is a negative correlation between the quality of life and severity of menopausal symptoms. Hence the research hypothesis is accepted. There exists a correlation between the quality of life and menopausal symptoms

### SECTION 5: ASSOCIATION BETWEEN THE QUALITY OF LIFE WITH THE SELECTED DEMOGRAPHIC VARIABLES.

TABLE 6: ASSOCIATION BETWEEN QUALITY OF LIFE AND SELECTED DEMOGRAPHIC VARIABLES

N=117

Demographic Variables	<Median	>Median	2 value	c df	p-Value
AGE					
40-45 years	4	8	7.642	3	0.04 P<0.05 S
46-50 years	16	20			
51-55 years	17	21			
56-60 years	22	9			
EDUCATION					
High School	11	3	7.378	2	0.025 P<0.05 S
P.U.C	19	14			
Graduate	29	41			
RELIGION					
Hindu	18	26	2.562	2	0.278 p>0.05 NS
Muslim	8	6			
Christian	33	26			
OCCUPATION					
Teaching	42	45	0.628	1	0.428 p>0.05 NS
Non-Teaching	17	13			
MONTHLY INCOME					
<5000	3	1	3.177	3	0.365 p>0.05 NS
5001-10000	14	16			
10001-15000	18	24			
>15000	24	17			
TYPE OF FAMILY					
Nuclear	43	48	1.651	1	0.199 p>0.05 NS
Joint	16	10			

Table 6 shows the association between the quality of life with the selected demographic variables. It can be seen that there is a significant association between the quality of life and age, where the value is 7.642 which is less than the table value of 7.82 at 0.05 level of significance. There is also significant association between the quality of life and education, where the calculated value is 7.378, which is greater than the table value of 5.99 at 0.05 level of significance.

There is no association between the quality of life and the other demographic variables like religion, occupation, monthly income and type of family.

c2tab(3)=7.82, c2tab(2)=5.99, c2tab(1)=3.84, S= Significant, NS= Non-Significant, Median = 61.67

#### Discussion :

The mean pre-test scores of the 52 clients selected for the intervention 53.89, whereas after the intervention the post test mean scores were increased to 59.43. The calculated 't' value of the quality of life using paired 't' test, was 10.30, which was more than the table value, 2.937 at 0.05 level of significance. The mean post test scores of women with menopausal symptoms was 16.82 which was less than the pre-test score of 21.82. Hence it was concluded that foot reflexology is an effective technique to improve the quality

of life brought about by reduction in the menopausal symptoms.

In a similar study conducted by Williamson, et al., showed a significant decrease in the menopausal symptoms with a mean (SD) scores from 0.43 (0.29) to 0.22 (0.25) following foot reflexology. The  $p < 0.001$  which signifies that foot reflexology is an effective technique in improving the overall quality of life by decreasing the severity of the menopausal symptoms.

Another similar study was conducted to measure the impact of menopausal symptoms on the quality of life and the effect of foot reflexology in 1998. The study result showed that the subjects gave a very low quality of life rating for health states with menopausal symptoms yielding a value of 0.64 for severe menopausal symptoms and 0.85 for mild symptoms. Foot reflexology was then administered to the subjects with poor quality of life. Comparison of the quality of life rating before and after the treatment showed significant improvement with the mean increase in the utility value after relief of severe and mild symptoms were 0.56 and 0.18 respectively. Thus the study concluded that the quality of life may be severely compromised in women with menopausal symptoms and perceived improvements in the quality of life following foot

reflexology making it an effective method for the relief of symptoms.

#### Conclusion :

Aging is a natural process of biological maturation. Menopause is a normal part of life, just like puberty. It is also known as climacterium or "change of life". Menopause is a natural biological process, not a medical illness, but could be a frightening experience for some women. Menopausal symptoms not only bring about changes in the physical and psychological health of the individual but also affect their social and environmental relationships. On the whole these symptoms can drastically affect the overall quality of life of a person. Foot reflexology is one of the simple and easily learned techniques for the relief of these symptoms.

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