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## A study to assess the effects of pranayama on quality of life (QoL) and blood pressure among menopausal women in the urban community

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### Abstract

Menopause is an aspect of each lady's life when a lady's conceptive framework eases back down and inevitably stops. This stage normally happens between the age of 40-60 related with hormonal, physical and mental changes. This is called menopause. Menopause can likewise happen when ovaries are eliminated or quit working. Menopause happens as the ovaries quit delivering estrogen, making the conceptive framework progressively or suddenly shut down. The current investigation expects to survey the impacts of pranayama on Quality of Life (QoL) and pulse among menopausal women in the metropolitan network at Vadapalani. An evaluative exploration approach has been embraced for the investigation and the examination configuration picked was one gathering pretest post-test research configuration was led among 60 menopausal ladies. Organized survey was utilized to gather the segment information and WHO QoL-Bref instrument was utilized to gather the information identified with personal satisfaction of menopausal ladies and sphygmomanometer was utilized to gather the blood pressure. Pre-test was finished by utilizing organized meeting poll strategy. Menopausal women rehearsed pranayama every day in the first part of the day and night for 15 moment. Following a day ago intercession post-test were finished by a similar poll. The examination finding unmistakably induces that there was huge improvement in the degree of personal satisfaction of menopausal women was watched and furthermore the pulse has been kept up around typical level. This obviously deduces pranayama was discovered to be compelling in improving the personal satisfaction and for keeping up the circulatory strain among menopausal women.

**Keywords:** Pranayama, quality of life (QoL), blood pressure, menopausal women, urban community area

### Introduction

Menopause is a part of every woman's life. When a woman's reproductive system slows down and eventually stops, This stage usually occurs between the age of 40-60 associated with hormonal, physical and psychological changes. This is called menopause<sup>[1]</sup>. Menopause is not an illness but it is a natural biological process. The common symptoms include irregular menstruation changes in sexual desire, Hot flashes, Profuse Night sweats, Insomnia, Fatigue, Headache, vaginal dryness and urinary problems changes in appearances, mood changes, sleep disturbances, palpitations, backache, memory loss & depression. Though the risk for heart diseases and osteoporosis occurs after menopause<sup>[2]</sup>.

A study was conducted to observe effect of yoga on menopausal symptoms using a randomized and interventional study for the menopausal womens. Main outcome measures Total Menopause Rating Scale (MRS) score and three subscale scores (somato vegetative, psychological and urogenital) were measured on day 1 and day 90 in the study group which performed yoga (asana, pranayama and meditation) under supervision for three months, and were compared with the control group that did not perform yoga<sup>[3]</sup>. MRS has been designed to measure health-related quality of life of ageing women. It consists of 11 symptoms and three subscales. The result shows that the yoga is effective treating the menopausal symptoms and should be considered as it is an effective alternative therapy for the management for the menopausal symptoms<sup>[14]</sup>. So, the researcher felt the need that to contribute newer practices among menopausal women. This study is to assess the effects of pranayama on Quality of Life (QoL) and blood pressure among menopausal women in the urban community at Vadapalani. The purpose of the study<sup>[1]</sup> assess the pretest level of QoL and blood pressure among menopausal women<sup>[2]</sup>, to assess the post-test level of QoL and

blood pressure among menopausal women [3], to determine the effects of pranayama on Quality of Life (QoL) and blood pressure among menopausal women and [4] to associate the post-test level of QoL and Blood pressure among menopausal women with their selected demographic variables.

**Methods and Materials**

An evaluative research approach with one gathering pretest and post-test research design was utilized to conduct the study in metropolitan region of Vadapalani, Chennai.60 samples were selected by using non-probability convenient sampling technique. The data collection period was done with prior permission from the Principal of Saveetha College of Nursing and an authorized setting permission was obtained from authority of urban area at Vadapalani, Chennai. The motivation behind the examination was disclosed to the examples and composed educated assent was gotten from them. Semi-organized meeting was utilized to gather segment information and WHO QoL\_Bref device was utilized to gather the information relating to personal satisfaction and sphygmomanometer was utilized to quantify the pulse 5. Pre-test was finished by utilizing organized meeting poll strategy and by utilizing changed menopausal rating scale. Menopausal ladies rehearsed pranayama every day in the first part of the day and night for 15 mom.ent. Following a day ago intercession post-test were finished by a similar poll (Demographic and WHO Bref - QoL) and by utilizing sphygmomanometer. The information were examined utilizing engaging and inferential statistics. The example attributes were depicted utilizing recurrence and rate. Paired't' test was utilized to evaluate the viability of pranayama on QoL and circulatory strain. Chi square was utilized to relate the post-test level of QoL and circulatory strain with the selected demographic variables.

**Results and Discussion**

**Section A: Sample characteristics**

Among 60 samples, most of them 25(41.6%) were in the age group of 47 – 48 years, 24 (40%) had primary education, 45(75%) were housewives, 27(45%) were moderate workers, 38(63.4%) were both vegetarian and non-vegetarian, 32(53.3%) had normal delivery and 27(45%) had 2 deliveries.

**Section B: Assessment of pretest level of QoL and blood pressure among menopausal women.**

With respect to physical domain the mean score was (48.98± 7.35), psychological domain (28.02±6.31), social domain (30.05±7.18), environmental domain (36.55±5.88). The overall Quality of Life (QoL) revealed a mean score of 43.75±3.26. (Table 1)

In the pretest, with respect to systolic BP, 31(51.67%) had pre hypertension and 29(48.22%) had stage I hypertension and regarding diastolic BP, 42(70%) had pre hypertension, 15(25%) were normal and 3(5%) had stage I hypertension. (Table 2)

In the post test, with regard to physical domain the mean score was (64.68± 5.33), psychological domain (52.80±8.59), social domain (68.75±9.57), environmental domain (54.43±7.16). The overall Quality of Life (QoL) revealed a mean score of 60.17±3.79. (Table 3)

In the post test, relative to systolic BP, 54(90%) had pre

hypertension, 4 (6.67%) were normal and 2 (3.33%) had stage I hypertension and regarding diastolic BP, 46 (76.67%) were normal and 14 (23.33%) had pre hypertension. (Table 4)

**Table 1:** Frequency and percentage distribution of pretest level of Quality of Life among menopausal women. N = 60

Quality of Life Domain	Mean	S.D
Physical domain	48.98	7.35
Psychological domain	28.02	6.31
Social domain	30.05	7.18
Environmental domain	36.55	5.88
<b>Overall</b>	<b>43.75</b>	<b>3.26</b>

**Table 2:** Frequency and percentage distribution of pretest level of blood pressure among menopausal women. N = 60

Blood Pressure	Systolic BP		Diastolic BP	
	No.	%	No.	%
Normal	0	0	15	25.0
Pre hypertension	31	51.67	42	70.0
Stage 1 hypertension	29	48.33	3	5.0
Stage 2 hypertension	0	0	0	0

**Table 3:** Frequency and percentage distribution of post test level of Quality of Life among menopausal women. N = 60

Quality of Life Domain	Mean	S.D
Physical domain	64.68	5.33
Psychological domain	52.80	8.59
Social domain	68.75	9.57
Environmental domain	54.43	7.16
<b>Overall</b>	<b>60.17</b>	<b>3.79</b>

**Table 4:** Frequency and percentage distribution of post test level of blood pressure among menopausal women N = 60

Blood Pressure	Systolic BP		Diastolic BP	
	No.	%	No.	%
Normal	4	6.67	46	76.67
Pre hypertension	54	90.0	14	23.33
Stage 1 hypertension	2	3.33	0	0
Stage 2 hypertension	0	0	0	0

**Section C: Effectiveness of pranayama on Quality of Life (QoL) and blood pressure among menopausal women.**

The present study depicts that the pretest mean score of QoL was 35.90 with S.D 3.26 and in the post test the mean score was 60.17 with S.D 3.79. The calculated ‘t’ value was 40.392 which was statistically highly significant at  $p<0.001$  level. The analysis shows that the pretest mean score of systolic BP was 137.10 with S.D 6.40 and in the post test the mean score was 129.90 with S.D 7.59. The calculated ‘t’ value was 9.808 which was statistically highly significant at  $p<0.001$  level. The pretest mean score of diastolic BP was 81.70 with S.D 4.06 and in the post test the mean score was 74.37 with S.D 13.07. The calculated ‘t’ value was 4.385 which was statistically highly significant at  $p<0.001$  level. The above finding clearly infers that administration of pranayama on Quality of Life and blood pressure among menopausal women was found to be effective in improving the Quality of Life and maintaining blood pressure among menopausal women. (Table 5)

Another study was additionally upheld by Little, M. *et al.* (2010) [11] The point of this investigation was to measure the effect of an endorsed pranayama practice on Emotional Intelligence, specifically its impact on a person's point of

view and their reaction/responses to life. This different contextual investigation (N=8) of about a month term assessed the impacts of a day by day practice of nadi shodhana (substitute nostril breathing) on Emotional Intelligence (EI). Members were enrolled from wellness focuses and Yoga schools in rural Melbourne and the haphazardly chosen bunch comprised of eight females with an age scope of 18 to 50. Members were instructed the nadi shodhana breathing practice and approached to rehearse it

for eight rounds in the wake of rising every morning. A 'self-revealing' Trait Emotional Intelligence survey was utilized in starting, halfway and toward the finish of the examination. The four categories of EI measured well-being, self-control, emotionality and sociability. The result shows there was improvement noted in the regions of Self Control. This examination demonstrated improvement in two of the zones of EI, following the every-day practice of nadi shodhana pranayama [11].

**Table 5:** Comparison of pretest and post-test level of Quality of Life (QoL) and blood pressure among menopausal women. N = 60

Variables	Pretest		Post Test		‘t’ Value
	Mean	S.D	Mean	S.D	
Quality of Life (QoL)	35.90	3.26	60.17	3.79	t = 40.392*** p = 0.0001, (S)
Systolic BP	137.10	6.40	129.90	7.59	t = 9.808*** p = 0.0001, (S)
Diastolic BP	81.70	4.06	74.37	13.07	t = 4.385*** p = 0.0001, (S)

\*\*\*p < 0.001, S – Significant

The present study also depicts that the demographic variables occupation had shown statistically significant association with post-test mean score of Quality of Life (QoL) among menopausal women at p < 0.05 level and the other demographic variables had not shown statistically significant association with the post-test mean score of QoL among menopausal women.

**Conclusion**

The study findings concluded that the women had reduction in the level of blood pressure and improved quality of life. Hence pranayama can be incorporated as an effective therapy in managing Blood pressure and improving QoL among menopausal women.

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