

## Menopause Specific Quality of Life and its Psychosocial Determinants among Postmenopausal Women

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### Abstract

### Original Research Article

**Background:** Menopause is one point in a continuum of life stages for women and marks the end of their reproductive years. Menopause can happen in your 40s or 50s, but the average age is 51 in the United States. Menopause is a natural biological process. But the physical symptoms, such as hot flashes, and emotional symptoms of menopause may disrupt your sleep, lower your energy or affect emotional health. Around the time of menopause, many females experience physical symptoms such as hot flashes, night sweats, vaginal dryness, and a reduced sex drive. It can also lead to anxiety, changes in mood, and a reduced sex drive. **Methods:** Quantitative non-experimental approach with cross sectional research design was used for the study to accomplish the objectives. MSQOL Questionnaire, CES -D Depression scale, GAD-7 & the Social Provision Scale were used to collect data. A sample of 100 postmenopausal women were selected by nonprobability purposive sampling technique. The data collected were analyzed using descriptive and inferential statistics. **Results:** Assessment of psychosocial determinants of menopause specific quality of life was done with the help of multiple regression analysis and there was a significant regression equation ( $F_{3,96}=6.89$ ,  $R^2=0.177$ ,  $P=0.000$ ). It shows that, depression (t value 2.89, p value 0.042), Anxiety (t value 3.664, p value 0.000) were significant predictors of menopause specific quality of life. **Conclusion:** The overall findings reveal that psychosocial determinants like depression and anxiety were significant and associated with menopause specific quality of life of postmenopausal women.

**Keywords:** Menopause specific quality of life, psychosocial determinants.

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## INTRODUCTION

Women are the backbone of families and communities. They provide care, support, and nurturing to their families and are essential to the development of children. Women also play a significant role in community building and often take on leadership roles in community organizations [1].

Menopause is one point in a continuum of life stages for women and marks the end of their reproductive years [2]. Menopause can happen in your 40s or 50s, but the average age is 51 in the United States. Menopause is a natural biological process. But the physical symptoms, such as hot flashes, and emotional symptoms of menopause may disrupt your sleep, lower your energy or affect emotional health [3].

Around the time of menopause, many females experience physical symptoms such as hot flashes, night sweats, vaginal dryness, and a reduced sex drive. It can also lead to anxiety, changes in mood, and a reduced sex drive [4]. Most people in post menopause feel lingering symptoms from menopause. The symptoms are less intense. In some cases, they almost disappear. Lingering symptoms are caused by low levels of reproductive hormones. People in post menopause can feel symptoms such as: Hot flashes and night sweats, Vaginal dryness and sexual discomfort, Depression, Changes in sex drive, Weight changes, Urinary incontinence [5].

The transition into menopause is related to different physical and mental changes that may affect

women's health. Studies show that the physical, psychological, social, and sexual changes in menopause have an adverse effect on women's quality of life. Symptoms suffered throughout menopause and socio demographic particularities have an influence in quality of life in postmenopausal women [6].

Quality of life is a subjective component of well-being and one of the indicators proposed for measuring health [7]. The World Health Organization (WHO) defined quality of life as "an individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives, and in relation to his/her goals, expectations, standards and concerns"[8]. Menopause can have psychological, physical, and vasomotor symptoms along with sexual dysfunction. Current health care model fail to recognize that these symptoms profoundly affect a woman's personal and social functioning and ultimately her quality of life [9].

Educational level, menopausal knowledge, participation in decision-making in the family and economic status positively affected most domains of quality of life, whereas being married and having high BMI scores had negative effects [10]. Depressive and anxiety disorders, particularly major depression, dysthymic disorder, and generalized anxiety disorder, seem to be considerable factors affecting the QoL in postmenopausal women [11].

Postmenopausal woman may need treatment if their symptoms are severe or affecting the quality of life. Hormone therapy may be an effective treatment in women under the age of 60, or within 10 years of menopause onset. Medications sometimes used for menopause symptoms include: topical minoxidil 5 percent, antidandruff shampoos, eflornithine hydrochloride topical cream, selective serotonin reuptake inhibitors (SSRIs), nonhormonal vaginal moisturizers, low-dose estrogen-based vaginal lubricants, ospemifene, prophylactic antibiotics, sleep medications, denosumab, teriparatide, raloxifene, or calcitonin. There are several ways to reduce minor-to-moderate menopause symptoms naturally, using home remedies, lifestyle changes, and alternative treatments [12].

## MATERIALS AND METHODS

A cross sectional study design was used to assess Menopause Specific Quality of Life and its Psychosocial determinants among Postmenopausal Women residing at selected urban areas of Bagalkot. The data was collected using a standardised tools (Generalized anxiety disorder 7 (GAD 7) scale, Center for Epidemiological Studies-Depression Scale (CES-D), Social provision scale to assess the Psychosocial determinants (depression, anxiety and social support) and Menopause Specific Quality of Life by using

menopause specific quality of life questionnaire and a descriptive and inferential statistics were used to arrange and evaluate the results.

**Study design:** A cross sectional study design was used to assess Menopause Specific Quality of Life and its Psychosocial determinants among Postmenopausal Women.

**Setting of the study:** The present study was conducted at selected urban areas of Bagalkot [Vidyagiri and Navanagar], Bagalkot district, Karnataka.

**Sample:** Sample for present study consist of post menopausal women who have not experienced menstrual period for over a year aged 45-50 year and residing in selected urban areas [Vidyagiri and Navanagar] of Bagalkot.

**Data collection tool:** The data was collected using a standardised tools (Generalized anxiety disorder 7 (GAD 7) scale, Center for Epidemiological Studies-Depression Scale (CES-D), Social provision scale to assess the Psycho social determinants (depression, anxiety and social support) and Menopause Specific Quality of Life by using menopause specific quality of life questionnaire.

### Description of the tools:

#### Part 1: The Socio-demographic Variables of Postmenopausal Women

**Socio-demographic Variables:** Age, Religion, Educational status, Occupation, Family monthly income, Type of family, Age at menarche, Age at menopause, Duration of married life, Duration of menopause, BMI, Number of children.

#### Part 2: Menopause Specific Quality of Life Questionnaire (MSQOL);

It consists of 27 items which assesses the menopause specific quality of life. For each item the participant is asked to indicate whether you have experienced the problem in the past month, if yes, She is asked to rate how much she has been bothered by the problem with the help of 0-6 point rating scale, The total score range from 0-162.

Where, 0 = not at all bothered, 6 = extremely bothered.

#### Part 3: Center for Epidemiological Studies-Depression Scale (CES-D);

It consists of 20 statements responses are recorded on a 4 point Likert scale.

#### Part 4: Generalized Anxiety Disorder 7 (GAD-7);

It is a 7 item self report scale. Items are rated on a 4 point Likert scale (0= not at all to 3= nearly every day). Score range from 0-21 with higher score indicating more severe GAD symptoms.

#### Part 5: Social Provision Scale:

Social support among Postmenopausal women was measured using social provision scale which has got 24 items all items are answered on a 1 to 4 response scale negatively worded items were reversed coded (2,3,6,9,10,14,15, 18,19,21,22,24) Scale was translated to Kannada and then back translated to English.

**Statistical analysis:** The obtained data were statistically examined in terms of the objectives of the study using inductive statistics. A master sheet was prepared with responses given by the study participants. Frequencies and Percentage was used for the analysis of demographic data. The mean and standard deviation was used as inferential statistics. Multiple regression analysis test was used to determine correlation between Menopause Specific Quality of Life and its Psychosocial determinants.

**Ethical Approval:** A certificate of ethical permission was obtained from ethical committee of the institution and written consent was taken from each participant.

## RESULTS

### Part-I: Findings related to socio-demographic variables

Majority of the postmenopausal women (62%) were from age group 45-50years, Most of the postmenopausal women (89%) were belonging to Hindu

religion, More number (65%) of postmenopausal women were not having formal education, Majority (55%) of postmenopausal women were Homemakers, Majority of the postmenopausal women (67%) were having income of less than 10000, Majority of the postmenopausal women (77%) were married, Majority of the postmenopausal women (67%) were belonging to Nuclear family, Majority of the postmenopausal women (69%) were started their menarche at 12-13years, Majority of the postmenopausal women (54%) were ceased their menstrual cycle at 43-45 years, Majority of the postmenopausal women (84%) were having menopausal state since more than 24 months, Majority of the postmenopausal women (81%) were having above 25 years of marriage life, Majority of the postmenopausal women (66%) were having normal BMI, Majority of the postmenopausal women (81%) were having children in between 1-3.

### Part II: Assessment of Menopause Specific Quality of Life among Postmenopausal Women.

#### Section A: Percentage wise distribution of Postmenopausal women according to their Menopause Specific Quality of Life among Postmenopausal Women.

Categorization of postmenopausal women on the basis of level of menopause specific quality of life was done as follows: 101-162 Poor quality of life, 51-100 Moderate quality of life, 0-50 Good quality of life.

**Table 6.2: Levels of Menopause Specific Quality of Life among Postmenopausal Women**

Levels of Menopause Specific Quality of Life	Range of Score	Frequency	Percentage
Poor Quality of life	101 to162	00	00
Moderate Quality of life	51-100	21	21
Good Quality of life	1-50	79	79

Table 6.2 shows that assessment of levels of menopause specific quality of life, the majority (79%) of postmenopausal women had good menopause specific

quality of life, 21% of postmenopausal women had moderate level of menopause specific quality of life.

#### Section B: Mean and standard deviation of Menopause specific quality of life.

**Table 6.3: Mean and Standard Deviation of Menopause Specific Quality of Life among Postmenopausal women**

Variable	Mean	Standard deviation
Menopause Specific Quality of Life	25.21	17.75

Table-6.3 shows that The Maximum score of menopause specific quality of life of postmenopausal women is 64 & minimum score is 0. The mean and SD of Menopause specific Quality of life of Postmenopausal women 25.21±17.75.

### Part III: Assessment of Psychosocial determinants of Postmenopausal Women.

#### Section A: Percentage wise distribution of Postmenopausal women according to Depression.

Categorization of Postmenopausal women on the basis of Depression was done as follows; less than or equal to 16 considered as mild or no clinical significant depression and more than 16 considered as significant clinical depression.

**Table 6.4: Level of Depression among Postmenopausal Women**

Level of Depression	Range of Score	Frequency	Percentage
Mild or NO Clinically Significant Depression	Less than or equal to 16	98	98
Significant clinical depression	4. >16	02	02

Table 6.4 shows that assessment of depression among postmenopausal women, and findings reveal that majority (98%) of the postmenopausal women were

having mild depression or no clinically significant depression and 2% were having clinically significant depression.

**Table 6.5: Mean and Standard Deviation of Depression**

Variable	Mean	Standard deviation
Depression	4.53	3.91

Table-6.5 shows that maximum score of depression is 16 and minimum score 0, the mean and SD of depression of Postmenopausal women score is  $4.53 \pm 3.91$ .

#### Section B: Percentage wise distribution of Postmenopausal women according to Anxiety.

Categorization of Postmenopausal women on the basis of Anxiety was done as follows; less than or equal to 10 considered as mild or no clinical significant anxiety and more than 10 considered as significant clinical anxiety.

**Table 6.6: Level of Anxiety among Postmenopausal women**

Level of Anxiety	Range of Score	Frequency	Percentage
Mild or NO Clinically Significant Anxiety	less than or equal to 10	72	72
Significant Anxiety	>10	28	28

**Table 6.7: Mean and Standard deviation of Anxiety**

Variable	Mean	Standard deviation
Anxiety	9.15	2.77

Table-6.7 shows that maximum score of anxiety among postmenopausal women is 22 and minimum score 7. The mean and standard deviation of anxiety of Postmenopausal women  $9.15 \pm 2.77$ .

#### Section C: Percentage wise distribution of Postmenopausal women according to Social support.

Categorization of Postmenopausal women on the basis of social support was done as follows; less than 32 considered as poor social support, 32-64 moderate social support and more than 64 considered as having high social support.

**Table 6.8: Level of Social Support among Postmenopausal Women**

Level of Social Support	Range of Score	Frequency	Percentage
Poor Social Support	<32	00	00
Moderate social Support	32 to 64	48	48
High Social Support	>64	52	52

**Table 6.9: Mean and Standard deviation of Social Support**

Variable	Mean	Standard deviation
Social Support	64.09	7.47

Table-6.9 shows that maximum score of social support among postmenopausal women is 84 and minimum score is 48. The mean and standard deviation of social support of Postmenopausal women  $64.09 \pm 7.47$ .

#### Part IV: Association of Psychosocial Factors (Depression, Anxiety, Social Support) with Menopause Specific Quality of Life of Postmenopausal women.

To Find out the association between the Psychosocial Factors (Depression, Anxiety, Social Support with Quality of Life of Postmenopausal women multiple regression analysis was done with psychosocial factors as independent Variables and Menopause specific Quality of Life as dependent Variable.

**Table 6.10 Multiple Linear Regression Analysis to Find the Psychosocial determinants of Menopause specific Quality-of-Life among postmenopausal women**

Sl. No	Determinants	Standardized coefficients	MSQOL of postmenopausal women	
			t value	p value
1	Depression	0.170	2.89	<b>0.042*</b>
2	Anxiety	0.348	3.664	<b>0.000***</b>
3	Social support	-0.035	-0.367	0.714

Assessment of Psychosocial determinants of Menopause specific quality of life was done with the help of multiple regression analysis and there was a significant regression equation ( $F_{3,96}=6.89$ ,  $R^2=0.177$ ,  $P=0.000$ ).

Table 6.10 shows that depression (t value 2.89, p value 0.042) and anxiety (t value 3.664, p value 0.000)

are significant determinants of menopause specific quality of life of postmenopausal women.

#### Part V: Association between Socio demographic and Menopause specific Quality of Life of postmenopausal women.

**Table 6.11: Association between socio demographic and menopause specific quality of life of postmenopausal women**

Sl.no	Variables	Standardized coefficient	MSQOL of postmenopausal women	
			t value	P value
1	Age 51-55	-0.079	-0.558	0.579
2	Muslim	-0.046	-0.392	0.697
3	Primary education	0.130	1.068	0.290
4	Higher secondary	0.265	1.981	<b>0.052*</b>
5	Degree and above	0.244	1.061	0.293
6	Home maker	0.959	1.040	0.302
7	Self employed	0.235	0.560	0.577
8	Employed	0.280	1.068	0.289
9	Farmer	0.762	1.240	0.219
10	Coolie	0.963	1.184	0.241
11	FMI, >10000	-0.427	-0.840	0.404
12	10,001-20,000	-0.296	-0.627	0.533
13	20,001-30,000	-0.189	-0.731	0.467
14	Above 30,000	-0.144	-0.667	0.507
15	Divorce/separated/widow	0.143	1.111	0.271
16	Nuclear family	0.040	0.356	0.723
17	Age at menarche 10-11	0.224	1.265	0.211
18	Age at menarche 12-13	0.291	0.866	0.390
19	Age at menarche 14-15	-0.062	-0.196	0.845
20	Age at menarche 16-17	0.482	2.529	<b>0.014**</b>
21	Age at menopause 40-42	-0.061	-0.172	0.864
22	Age at menopause 43-45	-0.165	-0.409	0.684
23	Age at menopause 46-48	-0.057	-0.190	0.850
24	Age at menopause >48	-0.117	-0.492	0.624
25	Duration of menopause 10-14	-0.286	-2.236	<b>0.029*</b>
26	Duration of menopause 15-20	-0.247	-1.960	<b>0.054*</b>
27	Duration of menopause more than 25 months	-0.334	-2.114	<b>0.038*</b>
28	Duration of marriage	0.411	3.079	<b>0.003***</b>
29	BMI underweight	-0.011	-0.102	0.919
30	Overweight	0.0093	0.323	0.747
31	Obese	0.093	0.817	0.417
32	No. of children-0	0.079	0.677	0.501
33	No. of children more than 3	0.012	0.105	0.917

Table 6.11 Displays that findings regarding association of Menopause specific Quality of Life among postmenopausal women with their selected socio

demographic variables shows that there was a significant association found between higher secondary education [ $t=1.981$ ,  $P=0.05$ ], Age at menarche 16-17 [ $t=2.52$ ,  $P<$

0.014] and Duration of menopause 10-14 months [ $t=2.236, P<0.029$ ], Duration of menopause 15-20 months [ $t=-1.960, p=0.05$ ], duration of menopause above 25 months [ $t=-2.114, p=0.038$ ], duration of marriage [ $t=3.079, p=0.003$ ].

## DISCUSSION

The present study was conducted to find out the Menopause specific quality of life and psychosocial determinants of postmenopausal women at selected areas of Bagalkot in order to achieve the objectives of the study. A cross sectional research design was adopted in this study. Sample size is 100 Postmenopausal women. Sample is selected with the help of non-probability convenient sampling technique.

### Part-I: Description of Sample in terms of their socio-demographic variables.

The percentage wise distribution of sample according to their Age describes that, most of the postmenopausal women (26.4%) were in the age group of 45-50 years and majority (89%) of them were Hindu. The percentage wise distribution of sample according to educational status describes that most of the postmenopausal women (65%) were illiterate and majority (55%) of them were home maker.

Findings of the present study are consistent and supported with the study conducted by **Nidhi P, Shivaswamy, M. S.** at urban Belagavi, Karnataka. The mean age among study participants was  $52.04 \pm 5.58$  years. Majority 200 (58%) were Hindus, while 266 (77.1%) were literates [13].

The percentage wise distribution of postmenopausal women according to their marital status reveals that majority of the postmenopausal women (77%) were married.

Findings of the present study are consistent and supported with the study conducted by **Yerra AK, Bala S, Yalamanchili RK, Bandaru RK, Mavoori A.** In this study majority of the women were married 263 (69.5%) [14].

In the present study the percentage wise distribution of postmenopausal women according to their age at menarche reveals that majority of the postmenopausal women (69%) were started their menarche at 12-13 years.

Findings of the present study are consistent and supported with the study conducted by **Zhu L, Chen X, Bai W, Yan X** at China. The average age of menarche was  $13.75 \pm 1.712$  years and the average number of pregnancies was  $2.44 \pm 1.469$  [15].

In the present study the percentage wise distribution of postmenopausal women according to their

age at menopause reveals that majority (54%) of the postmenopausal women had attained menopause at 43-45 years of age.

Findings of the present study are consistent and supported with the study conducted by **Sudha B, Kumar Y R, Kumar B R, Archana M.** In this study the mean age of menopause was 47.5 years [16].

The percentage wise distribution of postmenopausal women according to their body mass index, reveals that majority of the postmenopausal women (66%) were having normal BMI, 27% were having over nutrition, 4% were obese and 3% were belongs to under nutrition.

Findings of the present study are consistent and supported with the study conducted by **Zhu L, Chen X, Bai W, Yan X** at China. The average BMI was  $23.91 \pm 3.14 \text{ kg/m}^2$ , the average total score of QOL was  $492.51 \pm 145.35$  [15].

The percentage wise distribution of postmenopausal women according to their number of children reveals that majority of the postmenopausal women (81%) were having children in between 1-3.

Findings of the present study are consistent and supported with the study conducted by **Basu S, Ruchira P, Bratati B, Saurabh K.** The average number of children born by the participants was  $3.7 (\pm 1.4)$  [17].

### Part II: Assessment of Menopause Specific Quality of Life among Postmenopausal Women.

#### Section A: Percentage wise distribution of Postmenopausal women according to their Menopause Specific Quality of Life among Postmenopausal Women.

In the present study the percentage wise distribution of postmenopausal women according to their menopause specific quality of life reveals that, majority (79%) of postmenopausal women had good menopause specific quality of life.

Findings of the present study are consistent and supported with the study conducted by **Kaur K H, Arshdeep K, Aarti D.** Findings shows that majority (68%) of the postmenopausal women had good menopause specific quality of life [18].

### Part III: Assessment of Psychosocial determinants of Postmenopausal Women.

#### Section A: Percentage wise distribution of Postmenopausal women according to Depression.

In the present study the percentage wise distribution of postmenopausal women according to their depression reveals that, majority (98%) of postmenopausal women having mild or no significant clinical depression.

Findings of the present study are consistent and supported with the study conducted by **Nobahar M, Hydarinia-Naieni Z, Ghorbani R**. Findings shows that depression levels were mild (22.5%), moderate (13.3%), and severe (1.7%) [19].

#### **Section B: Percentage wise distribution of Postmenopausal women according to Anxiety.**

In the present study assessment of anxiety among postmenopausal women reveals that majority (72%) of the postmenopausal women were having mild or no clinical significant anxiety.

Findings of the present study are consistent and supported with the study conducted by **Nobahar M, Hydarinia-Naieni Z, Ghorbani R**. Anxiety levels were mild (46.7%), moderate (50.8%), and severe (2.5%) [19].

#### **Section C: Percentage wise distribution of Postmenopausal women according to Social support.**

The percentage wise distribution of social support among postmenopausal women reveals that majority (52%) of the postmenopausal women were having high social support.

Findings of the present study are consistent and supported with the study conducted by **Aloufi B, Hassanien NS**. Overall, 42.5% of participants had moderate social support and 34.8 % had high support. The mean of the total social support scale was  $4.3 \pm 1.8$  which was considered a moderate level of social support [20].

#### **Part IV: Association of Psychosocial Factors (Depression, Anxiety, Social Support) with Menopause specific Quality of Life of Postmenopausal women.**

In the present study assessment of Psychosocial determinants of Menopause specific quality of life was done with the help of multiple regression shows that depression (t value 1.787, p value 0.077), Anxiety (t value 3.664, p value 0.000) and social support (t value -0.367, p value 0.714).

Findings of the present study are consistent and supported with the study conducted by **Pala C, Unsal, A, Arslantas D, Ece O, Gokçe D**. There was a moderate negative correlation between the depression scale and QOL scale scores ( $r = -0.405$ ,  $P = 0.001$ ). A weak negative correlation was found between depression and social support scores ( $r = -0.383$ ,  $P = 0.001$ ) [21].

#### **Part V: Association between Socio demographic and Menopause specific Quality of Life of postmenopausal women.**

In the present study findings regarding association of Menopause specific Quality of Life among postmenopausal women with their selected socio

demographic variables shows that there was a significant association found between higher secondary education [ $t=1.981$ ,  $P= 0.05$ ], Age at menarche 16-17 [ $t=2.52$ ,  $P< 0.014$ ] and Duration of menopause 10-14 months [ $t=-2.236$ ,  $P< 0.029$ ], Duration of menopause 15-20 months [ $t=-1.960$ ,  $p=0.05$ ], duration of menopause above 25 months [ $t= -2.114$ ,  $p=0.038$ ], duration of marriage [ $t= 3.079$ ,  $p= 0.003$ ].

Findings of the present study are consistent and supported with the study conducted by **Thapa P, Thebe P**. Marital status, number of children, educational status, occupational status and health seeking behaviour had significant association with the QOL score.

#### **Limitation:**

1. Other socio-demographic and clinical factors could have been included to find out their association between Socio demographic variables and Menopause specific Quality of life among postmenopausal women.
2. Some of Psychosocial problems like work environment and social status could have been included to find out association with Menopause specific quality of life among postmenopausal women.

## **CONCLUSION**

The overall findings reveal that psychosocial determinants like depression and anxiety were significant and associated with menopause specific quality of life of postmenopausal women.

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