



# Research Journal of Pharmaceutical, Biological and Chemical Sciences

## Climacteric Symptoms and Health Status of Menopausal Women - North Karnataka

Chandramati J Rokhade<sup>1\*</sup>, Dhiraj J Trivedi<sup>2</sup>, and Khyrunnisa Begum<sup>3</sup>

<sup>1</sup>Sr. Dietician, Dept. of Dietetics, SDM College of Medical Sciences and Hospital, Sattur, Dharwad, Karnataka, India,

<sup>2</sup>Professor and Head, Dept. of Bio-Chemistry, SDM College of Medical Sciences and Hospital, Sattur, Dharwad, Karnataka, India,

<sup>3</sup>Professor and Chair Person, Dept. of Studies in Food Science and Nutrition, Manasa Gangotri, Mysore, Karnataka,

### ABSTRACT

Climacteric refers to the period before and after menopause during which ovarian activity diminishes and gradually ceases. This is the transition period which tends to occur over a period of years and begins with the onset of menstrual irregularities and ends with the last menstrual period. During this period number of symptoms are experienced by women. A cross-sectional study was conducted on 168 women aged between 45-49 years. In depth interview was conducted to collect the necessary information. The data collected was analyzed by using SPSS 16.0 version. The prevalence of obesity was found to be the highest 14.3% followed by hypertension 11.3% and DM Type II 9.5%. The most common climacteric symptoms reported were headache, insomnia, frequent urination, pain in knees and lower back, night sweats and stress incontinence. The onset of climacteric symptoms are multidimensional and vary from individual to individual. They reflect combination of genetic makeups, physical activity, diet, life style, cultural influences and individual perception and expectations.

**Keywords:** Menopause, Climacteric Symptoms, Chronic Energy Deficiency, Waist to Hip Ratio, Health Status

*\*Corresponding author*



## INTRODUCTION

Menopause is a clinical marker of declining ovarian function. It implies permanent cessation of menstruation resulting from loss of ovarian follicular activity. Menopause comprehends approximately one third of woman's life. All women who survive beyond 50 years pass through a period of transition from reproductive to non-reproductive phase of life. During transition, body tries to reprogram the hormonal changes and the symptoms of hormonal imbalance arise. During this transition, the climacteric symptoms are experienced by women. The severity of symptoms may vary from individual to individual in the same population.

The term "Climacteric" refers to the period before and after menopause during which ovarian activity diminishes and gradually ceases. The transition is normally not sudden or abrupt, it tends to occur over a period of years and it is natural process begins with the onset of menstrual irregularities and ends with the last menstrual period [1]. During this period decreasing ovarian function represents major physiological and psychological symptoms. This period may manifest short term symptoms like pain in joint, insomnia and long term complications like obesity, restlessness associated with multiple health issues. These symptoms vary greatly from individual to individual with a wide variation in the frequency. There is lot of dissimilarity of symptoms and health problems among Indian women as compared to Western women. So the regional differences in the climacteric symptoms are important to acknowledge as they lay the foundation for an informed approach towards management of menopause and understanding its impact on women's health. Hence the present study was undertaken to correlate health problems and climacteric symptoms among women of North Karnataka.

## MATERIALS AND METHODS

A cross-sectional study was conducted on 168 women attending dietetics OPD of SDM College of Medical Sciences and Hospital, Dharwad and also who were willing to participate. An informed written consent was taken from the subjects and the study was approved by Institutional Ethical Committee.

**Inclusion Criteria:** Women between the age group 45-49 years.

**Exclusion Criteria:** Women having Diabetes Mellitus Type II, any known cases of thyroid disorders, ovarian problems and history of hysterectomy were excluded from the study population.

A structured questionnaire was developed to collect necessary information and the data was analyzed by using SPSS (16.0)



## RESULTS

**Table 1.** Reveals the socio-demographic profile of the study group. Out of 168 women, 49(29.2%) were illiterate. Among them majority 151(89.9%) were housewives, belonging to nuclear family 157(93.5%). Good number 100(59.6%) of them were from middle socio-economic status.

**Table 1. Socio-demographic Profile of Study Group (N=168)**

Particulars	F	%
Education		
Illiterate	49	29.2
Primary	34	20.2
Secondary	41	24.4
P.U.C.	25	14.9
Graduate	15	8.9
Postgraduate	4	2.4
Occupation		
Housewives	151	89.9
Employed	17	10.2
Type of family		
Nuclear	157	93.5
Joint	11	6.5
Family Size		
Small family(up to 4)	107	63.7
Med family(5 to 7)	52	31.0
Big(>7)	9	5.4
SES		
Low	43	25.6
Middle	100	59.6
High	25	14.9

**Table 2.** Presents anthropometric measurements based on which prevalence of overweight among the study group was found 52.4% and 21.4% were in the normal range of BMI, while 4.2% were having underweight. According to Waist to hip ratio, abdominal obesity was observed only in 47% women whereas 53% of the subjects were in the normal range.

**Table 2. BMI and WHR of Study Group**

BMI	F	%
CED	3	1.7
Underweight	7	4.2
Normal weight but low	10	6.0
Normal wt.	36	21.4
Overweight	88	52.4
Obesity	24	14.3
WHR		
Normal	89	53.0
Abnormal	79	47.0

**CED-** Chronic Energy Deficiency

**WHR-** Waist to Hip Ratio

**Table 3.** Reveals the health status of study group. The prevalence of obesity was high i.e.14.3% followed by hypertension (11.3%), Type II diabetes and CVD (9.5%), other health problems like asthma and piles (6.0%) and arthritis (2.4%) respectively.

**Table 3. Health Status of Study Subjects**

Health Problems	F	%
Obesity	24	14.3
Blood Pressure	19	11.3
DM Type II	16	9.5
CVD	16	9.5
Arthritis	04	2.4
Others	104	6.0

**Table 4.** Presents the symptoms perceived by the subjects. The major physiological symptom reported was headache 100(59.5%), among the vasomotor symptoms, insomnia was found to be high 110 (65.5%), major bladder problem reported was frequent urination 62 (36.9%) and 124(73.8%) women complained about pain in knee.

**Table 4. Climacteric Symptoms of Study Group**

Symptoms	F	%
<b>Physical &amp; Physiological Symptoms</b>		
a)Headache	100	59.5
b)Burning feet	42	25.0
c)Loss of balance	42	25.0
d)Tingling of feet	26	15.5
e)Breast fullness	27	16.0
f)Breast swelling	9	5.4
<b>Vasomotor symptoms</b>		
a)Hot flashes	22	13.1
b)Night sweats	42	25.0
c)Insomnia	110	65.5
<b>Bladder Problems</b>		
a)Frequent urination	62	36.9
b)Urge Incontinence	51	30.4
c)Stress Incontinence	24	14.3
<b>Bone Problems</b>		
a)Achy joints	93	55.4
b)Pain in knees	124	73.8
c)Pain in lower back	100	59.5

## DISCUSSION

The study population consists of majority of housewives belonging to middle socio-economic status and living in a nuclear family. In the present study prevalence of overweight and obesity was found to be high. It is known from the studies that change in the hormonal milieu across the peri menopausal age contributes to increase in body weight and abdominal fat deposition [2]. The health status of the study population presents high prevalence of hypertension which may be related to the hormonal changes during

transition. According to the study conducted by Mass A. H.[3], the decline in estrogen/androgen ratio dilutes the vaso-relaxant effects of estrogens on the vessel wall and promotes the production of vasoconstrictive factors such as endothelin and hence the prevalence of hypertension.

The climacteric symptoms are observed in these age group women but there will be regional differences in the prevalence of symptoms [4]. The most common symptoms reported by our study group were headache, insomnia, frequent urination, pain in knees and lower back, night sweats, frequent urination and urge incontinence. Similar observations were also reported by Sudha S. Bagga A. Nusrut S.[5,6,7]. Possible explanation for such symptoms could be the transition of menopause during which women are more distressed under hormonal fluctuations. Previous research also links the onset of urinary incontinence and stress incontinence with the transition phase [8]. Hormonal imbalance in the transition phase may also be associated with sleep disturbances[9] and pain in knees or lower back may be the outshoot of overweight and obesity during the menopause transition [10].

### CONCLUSION

There are regional differences in the onset of climacteric symptoms. These symptoms are multidimensional and they reflect a combination of genetic bases, physical activity, diet, life style, cultural influences and individual perception and expectations. Each individual's experience of menopause may depend upon many other factors than physiological factor alone. There are results of studies conducted in various parts of the country, but the existing data is scarce and random, hence there is a need for systematic approach to evaluate the health problems and women's experiences during climacteric period. Thus by understanding the problems, women can be educated to overcome physiological and psychological distress.

### REFERENCES

- [1] Chen Y. *Maturitas* 2001;23:128.
- [2] Davis S. R. Castelo- Branco C. Chedraui, P. Lumsden, R.F.Nappi, D.S. and Villaseca P. *Climacteric* 2012; 15:419-429.
- [3] Mass AHEM and Franke HR. *Netherland Heart J* 2009; 17(2):68-71.
- [4] Palacios S, Henderson VW, Sisles N, Tan D, Villaseca P. *Climacteric* 2010; 3:419-428.
- [5] Sudha S, Vishal RT. and Annil M. *JK Science* 2007; 9(1):13-17.
- [6] Bagga A. *Obs and Gynec Today* 2004; 11(10) 60-66.
- [7] Nusrut S. Sohoo N.A. *J Pak Med Assoc* 2009; 59(11)752-754.
- [8] Rekes H. *Maturitas* 1992; 15:101-11.
- [9] Tom SE. *Menopause*.2010; 17(6):1128-35.
- [10] Kawaljit KK, Gurucharan K, Sharda S. *J Hum Eco*.2010;29(1): 57-62.