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Original Research Article

A Comparative Study on Health Problems among the Rural and Urban Post-Menopausal Women of Telangana

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Abstract:

Background: Hormonal changes after the menopause and the process of ageing cause marked health issues among the post-menopausal women, which varies between urban and rural women. The objective of the study was to assess the health problems among rural and urban postmenopausal women.

Methods: A cross sectional comparative study was conducted among 300 rural and 300 urban post-menopausal women in the field practice area of Gandhi Medical College, Hyderabad from August 2015 to September 2017. The information from respondents was collected using pre designed semi structured questionnaire administered in their local language after taking informed consent.

Results: The mean age at menopause of rural women was found to be 46.21 ± 3.33 and that of urban women was 47.40 ± 3.45. Vasomotor symptoms such as Hot flushes, night sweats, increased sweating are found to be more among urban population. Among the non-communicable diseases, Majority (37.6%) were hypertensive .Obesity was among 18.5% of the women and diabetes mellitus among 16.3%.

Conclusions: Of the physical symptoms, most commonly reported was muscle and joint ache and among non-communicable diseases, more than one third were diagnosed with hypertension followed in a descending order by cataract, obesity, diabetes, coronary artery disease, malignancies and stroke.

Keywords: Post Menopause, Post-Menopausal Problems, And Health Problems.

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Introduction

Menopause is one of the physiological events in a woman's life. According to the scientific group 1981, World Health Organisation defined menopause as "Permanent cessation of menstruation results from loss of ovarian follicular activity" and the period after 12 months of amenorrhea as Post menopause. [1]

The loss of estrogen causes marked physiological changes such as hot flushes, dyspnoea, irritability, fatigue and decreased strength and calcification throughout the body. Apart from somatic and psychological derangements related to low estrogen levels, there are long-term consequences of change in ovarian hormones associated with ageing such as cardiovascular problems, osteoporosis, and urinary problems and so on. [2] Postmenopausal phase is beyond the boundaries of reproduction and do not fall completely into elderly group. The socioeconomic, nutritional status and physical activity between rural and urban population influences postmenopausal women's health. Only few Indian studies have attempted to determine the rural-urban differences in these women.

Objectives:

1. To determine health problems among the post-menopausal women of rural and urban areas in Telangana.
2. To compare the health problems among the rural and urban post-menopausal women

Material and Methods

A community based cross sectional study was conducted in rural area Narsingi of Rajendranagar mandal, RR district and urban area Bholakpur that are the field practice areas of Gandhi Medical College, Hyderabad from August 2015 to September 2017. The sample size was calculated by taking the prevalence of fractures as 2.66% from a study conducted among urban and rural postmenopausal women by Sarkar A et al [3], at 5% significance and 2% absolute precision using the formula n = 4PQ/L2 (n=259). However, 300 from rural and 300 women from urban area were included in the study. The six sub areas in urban among the 19 sub areas of UPHC, Bholakpur and six sub centres from 14 sub centres of PHC Narsingi were selected by simple random sampling.

In each of these areas, 50 post-menopausal women were interviewed using systematic random sampling to get required sample of 600. Only those women who have attained natural menopause were included in the study and the women who were seriously ill were excluded.

A pre designed semi structured questionnaire was administered in their local language after taking informed consent. The information collected was regarding demographic characteristics, the menopausal symptoms and chronic health problems and the physical examination findings height, weight, waist hip ratio, blood pressure. The data on menopausal & physical symptoms was collected if the patient experienced that symptom 15 days retrospectively from the date of survey to reduce recall bias. Ethical approval was obtained from Institutional ethical committee, Gandhi Medical College. The data collected was compiled, tabulated and analysed using MS excel and epi info.

Results

The mean age of the respondents in rural area was 56.02 ± 7.38 and that in the urban area was 55.01 ± 6.46. Higher proportion of the women i.e, 211 (70.3%) of the rural were illiterate and nearly half 51.7% (155) of urban women are illiterate (Fig.1).

The mean age at menopause in rural was found to be 46.21 ± 3.33 and that of urban women was 47.40 ± 3.45. About a half of the study population (50.4%) attained menopause in the age group 45 – 49 years. There was a statistically significant relationship between locality and age at menopause (Table.1).

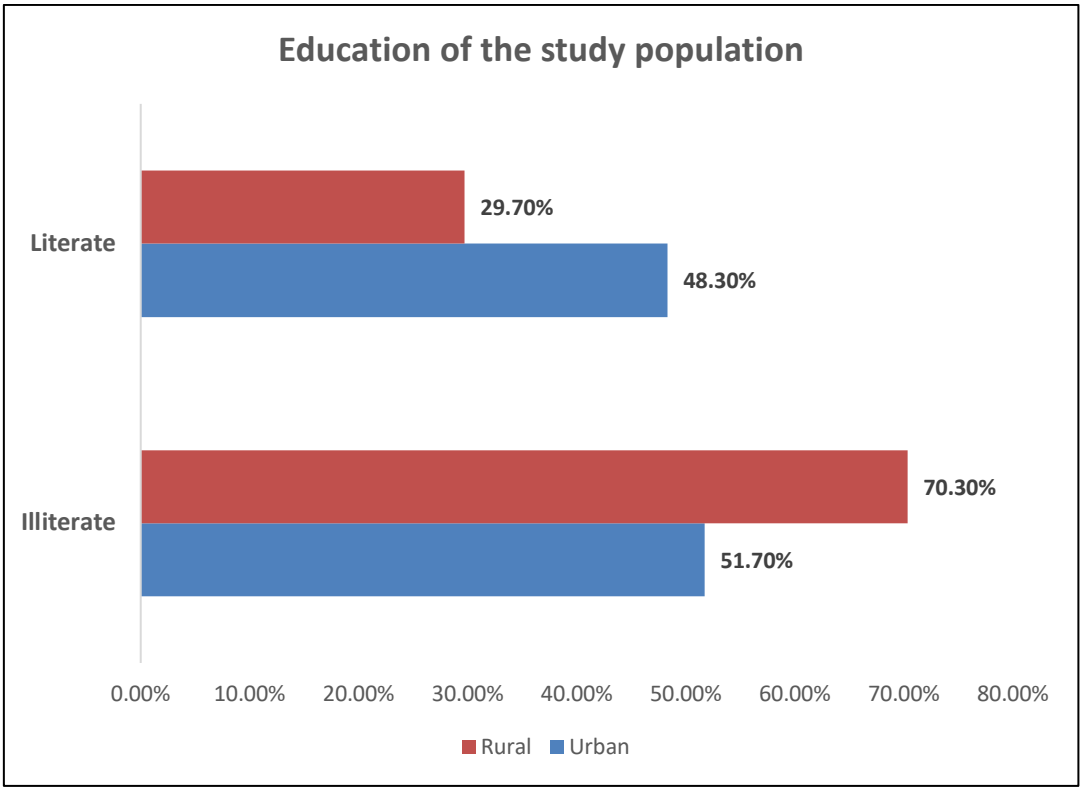

Figure 1: Distribution of the study population according to education

Table 1: Relationship of age at menopause and rural/urban locality:

Mean age at menopause	Rural	Urban	Z score	p value
	46.21 ± 3.33	47.40 ± 3.45	4.35	p<0.05

Health Problems:

Vasomotor symptoms:

Of the total women, 52 %(312) of the women reported hot flushes followed by 45.2 %(271) who complained night sweats and 43.8 %(263) increased sweating. About 56.7% urban and 47.3% rural women reported hot flushes (Fig.2). Among the physical symptoms, most commonly reported symptom was muscle and joint pains (75%) followed by 67.3% who reported decreased libido, 59% who reported palpitations, 57.7% complained of decrease in vision. Postmenopausal bleeding found among 4.2% of the total women (Table.2).

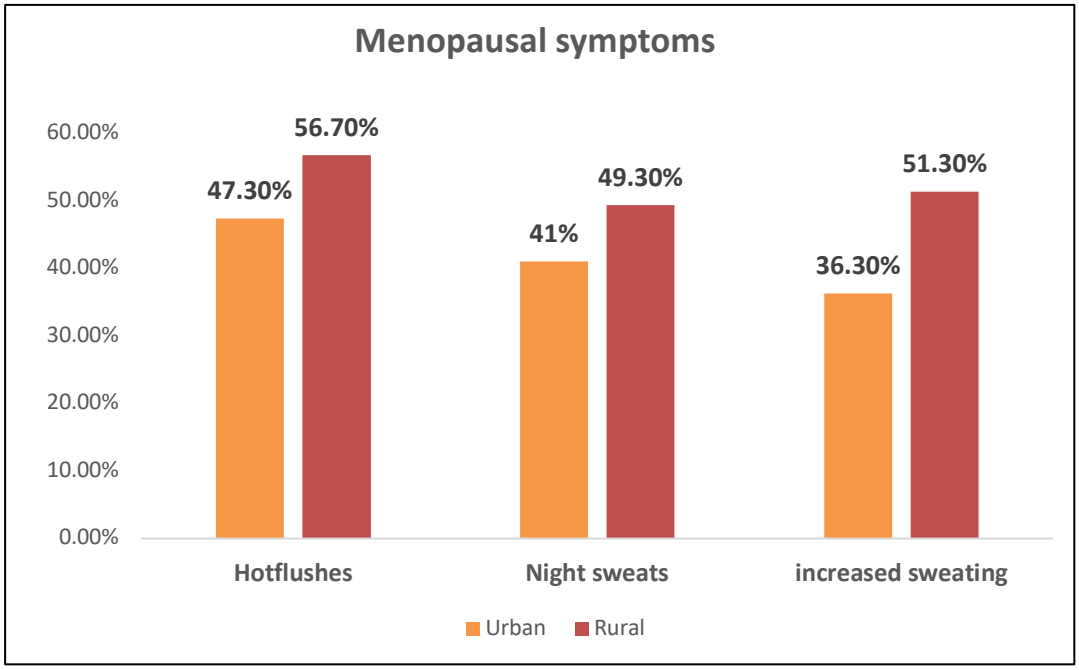

Figure 2: Menopausal symptoms among post-menopausal women

Table 2: Distribution of postmenopausal women according to physical symptoms (multiple responses may be present)

Symptoms	Rural (%)	Urban (%)	Total (%)
Paraesthesia	101(33.7)	88(29.3)	189(31.5)
Frequent headaches	175(58.3)	141(47)	316(52.6)
Palpitations	189(63)	165(55)	354(59)
Hyperacidity/ulcers	105(35)	129 (43)	230(38.3)
Constipation	63(21)	52(17.3)	115 (19.2)
Hirsutism	19(6.3)	29(9.7)	48(8)
Back ache	158(52.7)	140(46.7)	298(49.7)
Muscle and joint pain	241(80.3)	209 (69.7)	450(75)
Decrease in vision	159(53)	187(62.3)	346(57.7)
Dry skin	106(35.3)	139(46.3)	245(40.8)
Difficulty in hearing	40(13.3)	31(10.3)	71(11.8)
Stress incontinence	71(23.7)	94(31.3)	165(27.5)
Urge incontinence	45(15)	65 (21.7)	110(18.3)
Decreased libido	189(63)	215 (71.7)	404(67.3)
Post-menopausal bleeding	8 (2.7)	17 (5.7)	25 (4.2)

Information regarding non-communicable diseases was recorded based upon the history and the medical records of the participants. Among the total women, majority (37.6%) found to be hypertensive followed by cataract among 24%. Obesity found among 18.5% of the women followed by diabetes mellitus among 16.3 % (Table.3).

Table 3: Distribution of the participants according to non-communicable diseases (multiple responses may be present)

Morbidity	Rural (%)	Urban (%)	Total (%)
Stroke	8(2.7)	4(1.3)	12 (2)
Myocardial infarction	16(5.3)	23(7.7)	39((13)
Hypertension	101(33.6)	125(41.6)	226(37.6)
Diabetes	43(14.3)	62(20.7)	98(16.3)
Malignancies	6(2)	9(3)	15(2.5)
Obesity (BMI>30kg/m2)	46(15.3)	65 (21.7)	111 (18.5)
Cataract	80(26.7)	64(21.3)	144(24)

Of the total postmenopausal women, according to body mass index (BMI), 18.5% were obese and 32.2% were overweight. Obesity and overweight was found more among urban with prevalence of 21.7% and 35.3% respectively.

Abdominal obesity with waist circumference > 88 cm was found among 31% of the total women. Waist hip ratio ≥ 0.85 cm which is taken as additional predictor for risk of cardiovascular diseases apart from waist circumference was 35.7% among rural and 44% in urban women (Table.4).

The prevalence of vasomotor symptoms, Hypertension, Obesity, diabetes and urinary problems found to be high among urban women as compared to rural women, which was found to be statistically significant. There was no statistical association between musculoskeletal problems and area of residence (Table.5).

Table 4: Distribution of the study population according to Anthropometric measurements

Anthropometry	Rural (%)	Urban (%)	Total (%)
Body Mass Index			
Underweight (<18.5)	13(4.3)	6(2)	19(3.2)
Normal (18.5 -24.99)	154(51.3)	123(41)	277(46.1)
Overweight (25-29.99)	87(29)	106(35.3)	193(32.2)
Obese(≥30)	46(15.4)	65(21.7)	111(18.5)
Waist Circumference			
≤88 cm	219(73)	195(65)	414(69)
>88 cm	81(27)	105(35)	186(31)
Waist- Hip ratio			
< 0.85	193(64.3)	168(56)	361(60.2)
≥ 0.85	107(35.7)	132(44)	239 (39.8)

Table 5: Relationship of Prevalence of morbidities with area of residence

Morbidity	Rural (%)	Urban (%)	Chi square	p value
Vasomotor symptoms	194 (64.7)	226 (75.3)	8.12	<0.01
Hypertension	101 (33.7)	125 (41.7)	4.08	<0.05
Obesity	46 (15.3)	65 (21.7)	3.99	<0.05
Diabetes mellitus	43 (14.3)	62 (20.7)	4.16	<0.05
Musculoskeletal problems	275(91.7)	276 (92)	0.02	>0.05
Urinary problems	98 (32.7)	130 (43.3)	7.24	<0.01

<0.05 – significant, <0.01- highly significant association. On comparing the mean systolic blood pressure and area of residence, there was higher mean among rural women compared to urban women and the difference was statistically significant (Table.6).

Table 6: Relationship of physical parameters and area of residence among women

Mean	Rural	Urban	p value
Height (Cm)	150.44 ± 4.98	152.82 ± 4.46	<0.05
Weight (Kg)	56.88 ± 11.01	60.62 ± 9.94	<0.05
BMI(kg/m2)	25.09 ± 4.52	25.94 ± 4.01	<0.05
SBP (mm Hg)	124.22 ± 16.21	123.42 ± 17.43	>0.05
DBP (mm Hg)	82.56 ± 10.56	80.53 ± 11.83	<0.05

*z test

Discussion

In the present study, 52% suffered from hot flushes, 45.2% with night sweats and 43.8% with increased sweating. The study findings were almost similar to a study conducted by Nabarun Karmakar et al where, the prevalence of hot flushes was 60%, night sweats was 41% and increased sweating among 47%.[4] The present study findings differed from a study where, 12.2% reported hot flushes and 8.7% reported night sweats. [5] In the present study, it was observed that the prevalence of hypertension among urban women was 41.7% and among rural women was 33.7%. Similar findings were found in a study conducted in Tamil Nadu, where prevalence of hypertension was found higher among urban women. [6] The prevalence of obesity was 21.7% among urban women and the association was significant. The occurrence of obesity among postmenopausal women may be due to advancing age, decreased basal metabolic rate further added by low physical activity leading to increase in fat deposition. Diabetes was found higher among urban women (20.7%) than rural women (14.3%). And these findings were also concurrent to a study conducted by Ankita Goyal, where higher proportion of urban women (29.5%) were diabetic compared to 23% of rural women. [7]

In a study conducted by Sai C Das et al, the prevalence of symptoms like Muscle / joint pain (74.1%) and hearing deficit (12.9%) were almost similar to the present study whereas other symptoms hyperacidity 69.1%, palpitations 65.4%, headache 44.5% and constipation 5.4% differed from the present study. [8]

About 43.3% of urban and 32.7% of rural women complained of urinary problems. This could be due to more literacy and awareness among the urban women, which led to reporting of symptoms significantly. It was concurrent to a study conducted in Nagpur, where bladder problems were reported among 48.8% of urban women which was higher compared to rural women and the difference was statistically significant. [9] And were in contradict with a study conducted by Sudhaa Sharma, where the prevalence of bladder problems were slightly higher among rural women. [10]

The means of weight and body mass index were high among urban women [weight – 60.62 ± 9.94, BMI – 25.94 ± 4.01] compared to rural women [weight – 56.88 ± 11.01, BMI – 25.09 ± 4.52]. The study findings were different when compared to a study conducted by M M Sagdeo et al, where the mean weight of urban and rural women was 64.35 ± 7.14 and 55.67 ± 6.90 respectively [9].

In the present study, obesity (according to BMI) was found among 18.5% of the women and overweight among 32.2% of the women. The present study findings were concurrent to a research done by Gayathry et al, where obesity was 15.8%, overweight was 36.8% and underweight was 5.3%. [11] Also in a study conducted by E S Sharanya Shre et al, the prevalence of obesity was 33% among the postmenopausal women which was contrary to the present study. [12]

Conclusion

Urban women attained menopause at a later age compared to rural women. Nearly half of the women complained of vasomotor symptoms. Among the physical symptoms, most commonly reported was muscle and joint ache and among the non-communicable diseases, more than one third were diagnosed with hypertension followed in a descending order by cataract, obesity, diabetes, coronary artery disease, malignancies and stroke.

Recommendations:

The health workers at the primary level should be equipped and trained with knowledge and skills regarding menopausal issues as they play a pragmatic role in assessing health needs of the community and using telemedicine with expert consultation at primary health care especially in rural and remote areas.

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