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COMPARISION ON ACTIVITY PATTERN AND PREVALENCE OF SELECTED NON-COMMUNICABLE DISEASES AMONG RURAL AND URBAN POST MENOPAUSAL WOMEN

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ABSTRACT

Women spend a significant part of their lives in postmenopausal state and they face many serious health concerns. Life style difference in rural and urban areas affects women health. The aim of this study is to compare the activity pattern and prevalence of selected non-communicable diseases among rural and urban post-menopausal women. For this Cross sectional descriptive study 300 postmenopausal women aged between 45-65 years were selected from rural and urban area (150 from each area) of Tamilnadu, India. Rural subjects were selected from Angarai village in Lalgudi taluk of Trichy district and urban subjects were selected from Chitlapakam in Tambaram, Kancheepuram district. Questionnaire was used to collect details regarding type of activity and usage of medications. The blood samples from the subjects were collected and analyzed for Hb A1C level using standardized methods. Blood pressure was measured using sphygmomanometer. Furuno's CM-200 light ultrasound bone densitometer was used to measure the bone mineral density at calcaneus site. By analyzing the results using Percentile it was found that among the rural postmenopausal women55.3% were involved in sedentary work, 44.7% were involved in moderate work. Whereas among urban postmenopausal women 79.3% were involved in sedentary work, 20.6% were involved in moderate work. Prevalence of Diabetes, hypertension and osteoporosis among urban subjects was 34.6%, 32% and10.6% respectively, whereas among rural postmenopausal women it was l9.3%, 15.3% and 18% respectively. This study concluded that rural postmenopausal women were physically more active than urban subjects. Among the non-communicable diseases, Diabetes and hypertension were more prevalent among urban subjects and osteoporosis was comparatively more prevalent among rural postmenopausal women.

KEY WORDS

Rural and urban postmenopausal women, Activity pattern, Diabetes, hypertension, osteoporosis.

INTRODUCTION

Women have unique health issues. Menopause is defined as generally cessation of periods for 12 months or a period equivalent to three previous cycles or as time of cessation of ovarian function resulting in permanent amenorrhoea [1]. During menopausal transition there is a lot of fluctuation in the hormone levels and thus women may experience many symptoms and conditions. Along with the physical changes that occur after menopause, women may need to improve their health care routines. Serious medical concerns related to menopause are loss of bone tissue that cause osteoporosis , heart disease risks due to age-related increases in weight, blood pressure and cholesterol levels. Women usually suffer from health problems due to reproduction issues, poor nutrition, psychological problems, low social status, and poverty .etc. In 1990, there were about 467 million postmenopausal women worldwide and this figure is expected to rise to 1200 million by 2030. Out of these, 76% will be living in the developing countries [2].Nationwide data suggest that post menopausal group is more vulnerable to developing non-communicable diseases than the reproductive age group. There is an underlying assumption that urban populations will be healthier than their rural counterparts. Research about the features of rural and urban areas that influence health has been relatively sparse but often indicates increased health hazards [3].The present study was

done to compare the activity pattern and prevalence of selected non-communicable diseases among rural and urban post-menopausal women.

MATERIALS AND METHODS

For this Cross sectional descriptive study Rural subjects were selected from Angarai village in Lalgudi taluk of Trichy district ,Tamil Nadu, India and Urban subjects were selected from Chitlapakam in Tambaram , Kancheepuram district of Tamil Nadu State . Free medical camps for women where organized in both the areas .About 264 women from rural area and 310 women from urban area attended the camp. Among them 150 postmenopausal women age between 45-65 years from each area were selected by random sampling method. Inclusion criteria for the sample selection comprises of postmenopausal women age between 45-65 years. Research variables included were activity pattern and diseases such as hypertension, diabetes and osteoporosis. With the brief introduction of the study, informed consent was obtained from all the study participants. Questionnaire was used to collect details regarding type of activity and usage of medications for diabetes and hypertension. Based on their activity pattern subjects were classified as sedentary, moderate or heavy worker. To define high levels of blood pressure the recent criteria recommended by the WHO were used; hypertension: SBP ≥ 140 mm Hg and/or DBP ≥ 90 mm Hg, Participants had to be seated for at least 5 min before the measurement of Blood Pressure. Parameters were recorded twice on the left arm with five minutes interval between the two measurements, using sphygmomanometer. The average of the two measures was used. The blood samples from the subjects were collected by qualified personnel from reputed blood testing laboratory using standardized equipments and it was analyzed for Hb A1C level. Bone mineral density values were measured in terms of quantitative ultra sound device specific T-score criteria which is similar to WHO's criteria [4] .T- score is the number of standard deviation relative to the standard speed of sound value of the young age group. Normal is a T-score of −1.0 or higher. Osteopenia is defined as between −1.0 and −2.5. Osteoporosis is defined as −2.5 or lower. Furuno's CM-200 light ultrasound bone densitometer was used to measure the bone mineral density in calcaeneous site .A single technician performed all quantitative ultra sound measurement to minimize subjective error.

RESULTS AND DISCUSSION

Many studies show that health problems are related to lifestyle. Results of these research variables were analyzed statistically using Percentile.

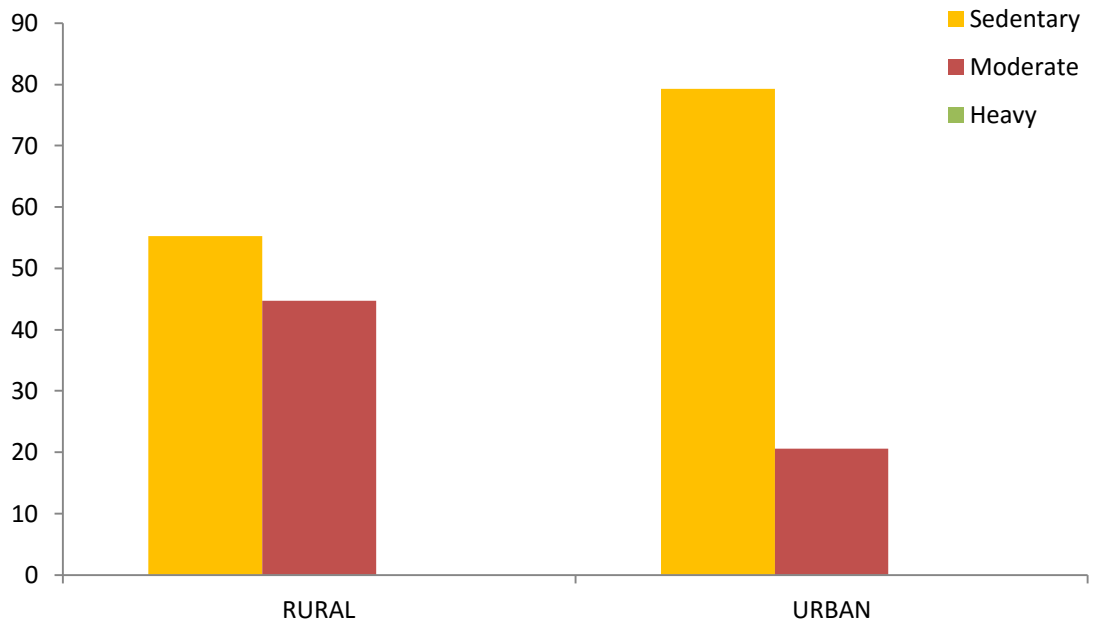
Type of activity pattern has been classified as sedentary, moderate and heavy. Based on their activity level the subjects were classified and the results are shown in the Table 1 below.

Table I: The Number and Percentage of Type of Activity Pattern among Rural and Urban Postmenopausal Women.

S.No	Activity Pattern	Rural Postmenopausal Women		Urban Postmenopausal women	
		Number	Percentage	Number	Percentage
1	Sedentary	83	55.3	119	79.3
2	Moderate	67	44.7	31	20.6
3	Heavy	-	-	-	-

Among the 150 respondents, in rural area 83 respondents (55.3%) were involved in sedentary activity and 67 respondents (44.7%) were involved in moderate activity. In urban area 119 respondents were involved in sedentary activity which was about 79.3 % and 31 respondents were involved in moderate activity which was about 20.6 %. No one was involved in heavy activity in both groups.

Graph 1: the Percentage of Type of Activity Pattern among Rural and Urban Postmenopausal Women are presented through Bar Diagram.



The postmenopausal women will come across many Non communicable diseases which affects the morbidity. The results of selected non -common diseases are illustrated in Table 2.

Table 2: **The Number and Percentage of Prevalence of Non Communicable Diseases among Rural and Urban Postmenopausal Women.**

S.No	Health Problems	Rural Postmenopausal Women		Urban Postmenopausal Women	
		Number	Percentage	Number	Percentage
1	Diabetes	29	19.3	52	34.6
2	Hypertension	23	15.3	48	32
3	Osteoporosis	27	18	16	10.6

The results of the above table shows that among rural postmenopausal women 29 (19.3%) were found to be diabetic, 23 (15.3%) were having hypertension and 27 (18%) were having low bone mineral density. Among Urban postmenopausal women 52 (34.6%) were found to be diabetic, 48(32 %) were having hypertension and 16(10.6%) were having low bone mineral density (osteoporosis).

Graph 2: the Percentage of Prevalence of Non Communicable Diseases among Rural and Urban Postmenopausal Women presented through Bar Diagram.

DISCUSSION

Recent researches have begun to focus its attention toward differences in public health, environmental health, population health, and the differences between urban and rural health behaviors. The result of this study about Comparison on Activity pattern and Prevalence of selected non-communicable diseases among Rural and Urban Post-Menopausal Women showed that majority of the respondents were involved in sedentary activity in both rural and urban area. But comparatively urban postmenopausal women were more involved in sedentary work than rural subjects. Percentage of subjects doing moderate activity were more in rural group than the urban group .No one was involved in heavy activity in both rural and urban postmenopausal women. Activity pattern was better in rural subjects when compared to urban respondents. In rural area only few of postmenopausal women were house wife, many of postmenopausal women were involved in agricultural work, self employment activities and worked as laborers in industry .Whereas in urban area many of postmenopausal women were house wife. Working pattern of the employed postmenopausal women in urban area was also sophisticated and sedentary unlike rural subjects .The findings of the study is consistent with Cook I et al [5] concluded urban women were significantly more sedentary than rural women.

Shehu, R.A. Ibraheem T.O. [6] examined the difference in the sedentary lifestyle of rural urban people of Kaduna state and also investigated the series of health problems suffered by the people of Kaduna state as a result of their sedentary lifestyle. Results of their study revealed that urban people of Kaduna state engage in sedentary lifestyle more than their rural counterparts and health problem suffered by the people of Kaduna state are significantly related to their sedentary lifestyle.

Non-communicable diseases are the leading cause of global disease burden. The results of the study about prevalence of Non-communicable diseases shows that hypertension and diabetes were more prevalent among urban postmenopausal women than rural

subjects ,this is mainly because majority of urban postmenopausal women were leading a sedentary and sophisticated lifestyle than rural postmenopausal women. Dietary habits were also different between the two groups. Urban postmenopausal women were consuming fat rich and ready –to eat foods which have preservatives and high salt . The findings of this study is congruence with Gupta R. [7] concluded that prevalence of hypertension has been reported to be more among urban adults than rural adults . Studies carried out in India have reported lower prevalence of diabetes in rural areas [8] and that physical activity [9] is higher in rural population than migrant or urban groups.

The results of this study show that Osteoporosis was more prevalent among rural postmenopausal women than urban subjects. Low educational level and low socioeconomic status were observed among rural subjects than urban subjects. Their nutrient intake was comparatively less than the requirement. Intake of dairy products and calcium rich foods was also less among the rural subjects .The results are consistent with previous research reporting that low educational level was related to increased risk of osteoporosis [10]. Vibha and Ananya Ray Laskar [11] study also reports that osteoporosis is comparatively more prevalent among rural postmenopausal women.

CONCLUSION

The present study about comparison on activity pattern and prevalence of selected non-communicable diseases among rural and urban post-menopausal women concluded that urban post-menopausal women were more sedentary than rural subjects. Results on prevalence of non-communicable diseases showed that hypertension and diabetes were more prevalent among urban subjects were as osteoporosis was more common among rural post-menopausal women.

Lifestyle modifications, screenings, early identification, and appropriate intervention may prevent many chronic conditions that cause morbidity and mortality during postmenopausal years .Awareness should be created among women to recognize their special health needs beyond the reproductive age. They should adopt healthy and good lifestyle. Policies should also specially focus on women's needs.

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