



Physical Activity Among Perimenopausal Women: A Descriptive Study In South India

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Abstract

Background of study:- Menopause is a period around the end of a women's reproductive life. There are a lot of hormonal changes occurring during this time which triggers the ovaries or pituitary gland in the brain. It is commonly expressed in the form of physical symptoms or psychological changes. The physical activity level is minimal during menopause transition period and shows the reduction in daily expenditure in women and shift toward a more sedentary lifestyle during the transition period.

Aim:- To identify the level of physical activity among Perimenopausal women.

Method:- A quantitative survey approach was used for this study. Ethical clearance was obtained from institutional ethics committee, permission obtained from concerned authority and informed consent was taken from the study participants. The sample comprised of 97 perimenopause women, were selected by non-probability purposive sampling technique. A standardized International physical activity questionnaire (short form) was used for data collection. The data was analysed by descriptive and inferential statistics.

Result:- Among the selected Perimenopausal women, majority of the women, 53.1% had low level of physical activity. 34.7% of perimenopausal women had moderate level of physical activity and only 12.2% of women had high level of physical activity. In terms of domains of the tool it showed that less women (12.3%) were involved in walking. The computed chi-square proved that there was no significant association with the level physical activity and demographic variable like age in years ($\chi^2=1.654$, $P= <.427$), Area of work ($\chi^2=6.949$, $P=.326$), occupation ($\chi^2=7.156$, $P=.307$), Educational qualification ($\chi^2= 6.761$, $P= .563$), Area of living ($\chi^2= 1.518$, $P=.468$), non-communicable ($\chi^2 = 9.009$, $P=.061$).

Conclusion:- The study showed majority of the perimenopausal women had low level of physical activity. Though they were working women the need of assessment implies more and more women need to be encouraged to participate in various forms of physical activities.

Key words:- Peimenopause, physical activity, menopause, sedentary lifestyle.

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INTRODUCTION

Menopause is a stage of women's life when reproductive capacity ceases. India has a large population, with 43 million perimenopausal women and it is projected to be 103 million by 2026. Menopause is an unspoken, unattended, reality of life, the cause of which is still deciphered completely by man. Menopause is one such midlife stage which might be overcome easily or make a lady miserable. This

phase of life is shrouded with lots of myths and taboos.¹ Women in the midlife face many challenges, such as hormonal changes, increased weight gain, loss of bone and muscle mass, and digestive issues².

Menopausal symptoms are certainly experienced by the perimenopausal women³, though well tolerated by some women, may be Particularly troublesome in others. Severe symptoms compromise overall quality of life

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for those experiencing them. There is under-reporting of symptoms among Indian women due to socio cultural factors⁴. A study showed that most prevalent perimenopausal symptom reported by the participants was joint and muscular discomfort in 49 (98.0%) women followed by physical and mental exhaustion in 94.0% to be the most common symptom among Nigerian women.⁵

A Questionnaire based survey carried out in 100 perimenopausal women aged 45 to 55 years. on assessment of levels of physical activity in perimenopausal women. The results showed that out of 100 subjects only 17 women were categorized as active with moderate physical activity for 30 minutes on 5 or more days of week and 10 did vigorous physical activity for 20 minutes for 3 or more days a week and were called as active. Out of the 10 active only 4 did flexibility and no strengthening.⁶

A descriptive study was conducted on high physical activity level if reduce Menopause symptoms in 305 women aged 40 to 65 years by using International physical activity questionnaire to assess the physical activity level and the Menopause rating scales(MRS) assess the severity of menopausal symptom. The results shown Physical activity was significantly associated ($p < 0.001$) with leisure time (according to IPAQ domains). Most postmenopausal women had high PA level (59.66%). Significantly less women with high PA levels had severe urogenital symptoms: 10.82% of participant with a low PA level, 11.15% with a moderate PA level and 4.26% with a high PA level ($p = 0.046$).⁷

The study concluded that Women with high and moderate PA levels have less severe menopausal symptoms compared to inactive women

Assessing physical activity level of perimenopausal women provides vital data that determines the degree of physical inactivity at the societal and individual levels. Observing and following-up individuals' physical activity regularly helps to recognize their physical fitness level. This helps to detect physical inactivity early, and thus can start to modify individuals' behaviour to create more active lifestyles. The WHO realized the risk of physical inactivity on health. It recommended periodically observing the physical activity

level of different social groups to weed out the phenomenon of physical inactivity⁸

A study was conducted about Association between physical activity and menopausal symptoms in perimenopausal women the result suggest that a moderate level of physical activity was associated with reduced psychosocial and physical symptoms but not with changes in vasomotor and sexual symptoms.⁹ Indulging in various forms of physical activities is never out of date and may prove to be beneficial in one or another form. The knowledge of one's physical activity throw light on the need of planning any educational intervention. In this regard the study aimed at assessing the physical activity of perimenopausal women using short form of International physical activity questionnaire.

METHODS

This study was carried out in one of the Deemed to be University in South India. Ethical clearance was obtained (YEC2/781). The research design adopted for the study was descriptive design. The sample comprised of 97 perimenopausal women who were nonprofessional health workers from a selected university which has Medical college hospital and other programs. The samples were selected by using non probability purposive sampling technique. The investigator used international physical activity questionnaire (short form) to assess the physical activity level among the perimenopausal women. The international physical activity questionnaire short form consist of four domains -average daily time spent sitting, walking, and engaging in moderate and vigorous PA over the last seven days. Physical activity questionnaire which is easily available in public domain (<http://www.ipaq.ki.se/ipaq.htm>) is comprehensive enough to assess the needed data on physical activity.

Reliability of the tool was tested by test retest method using Karl Pearson correlation ($r=0.8$). The inclusion criteria for the selection of the samples were women who are contraindicated for exercise. The perimenopausal women who are not able to read and write English or Kannada, having any co morbid condition affecting physical activity are excluded from the study. Data collected were



analysed by descriptive and inferential statistics using SPSS version 23, (2015).

RESULTS

The finding of the study demonstrated that among 97 perimenopausal women, a majority of the subject (64.3%) were in the age of 45-50 years maximum number of subjects were worked in hospitals (74.5%), most of women have primary level of education (50%), and the area of residency is urban (77.6%) and rural (21.4%). Majority of the subjects (52.1%) had low level of physical activity, followed by 34.7% were having moderate level of physical activity and few (12.2%) had high level of physical activity.

Domain wise distribution of physical activity (table 2) though showed very less women spent time in sitting (15.46%) but less women spent in physical activity in other domains too. (Walking (12.37%), Moderate type of physical activity (41.71%), Vigorous physical activity (27.83%)

Table 1: Frequency and percentage distribution of women according to demographic variable N=97

| Sl. No: | Variables | Frequency | Percentage |
|---------|---------------------------|-----------|--------------|
| 1. | Age (in years) | 63 | 64.3% |
| | 1.1) 45-50 | 34 | 35.1% |
| | 1.2) 51-55 | | |
| 2. | Area of work | 73 | 74.5% |
| | 2.1) Hospital | 12 | 12.2% |
| | 2.2) Canteen | 2 | 2.1% |
| | 2.3) College | 10 | 10.2% |
| | 2.4) Hostel | | |
| 3. | Occupation | 7 | 7.1% |
| | 3.1) Peons | 55 | 56.1% |
| | 3.2) House Keeping | 9 | 9.2% |
| | 3.3) Security guards | 26 | 26.5% |
| | 3.4) Canteen workers | | |
| 4. | Educational status | 50 | 51% |
| | 4.1) Primary | 25 | 25.5% |
| | 4.2) Secondary | 22 | 22.5% |
| | 4.3) Graduate | | |
| 5. | Area of living | 21 | 21.4 |
| | 5.1) rural | 76 | 77.6 |
| | 5.2) urban | | |

The data in table 1 depicts the distribution of women according to demographic variables in term of frequency and percentage.

Figure 1: Distribution of women according to their level of physical activity.

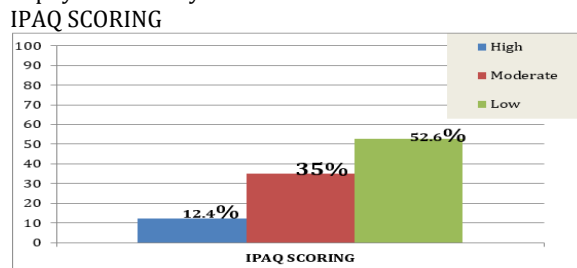


Figure 1. Bar diagram showing the distribution of women according to the Level of physical activity (based on IPAQ score)

Table 2: Frequency distribution of physical activity according to IPAQ domains N=97

| Type of physical activity | Frequency (%) |
|------------------------------------|---------------|
| Vigorous physical activity | 27 (27.83%) |
| Moderate type of physical activity | 43 (41.71%) |
| Walking | 12 (12.37%) |
| Sitting | 15 (15.46%) |

To find the association between the level of physical activity among perimenopausal women and selected demographic variable, the following hypothesis was tested by using chi-square test:

H₁: There is a significant association of level of physical activity with selected demographic variables.

Table. 3 Association of the level of physical activity with demographic variables n=97

| SL.NO | Demographic variable | χ^2 | df | p value |
|--------------|---------------------------|----------|----|---------|
| 1. | Age in years | 1.654 | 2 | .427 |
| | 45-50 | | | |
| 2. | 50-55 | 6.949 | 6 | .326 |
| | Area of work | | | |
| | Hospital | | | |
| | Canteen | | | |
| 3. | College | 7.156 | 6 | .307 |
| | Hostel | | | |
| | Occupation | | | |
| | Office staff | | | |
| 4. | House keeping | 6.761 | 8 | .563 |
| | Security guard | | | |
| | Canteen workers | | | |
| | Educational qualification | | | |
| 5. | Primary | 1.518 | 2 | .468 |
| | Secondary | | | |
| | Graduate | | | |
| 6. | Area of living | 9.009 | 4 | .061 |
| | Rural | | | |
| | Urban | | | |
| | Non communicable disease | | | |
| | Diabetics | | | |
| Hypertension | | | | |
| Other | | | | |
| None | | | | |

*Significance: p < 0.05



The p value for all the variable is more than 0.05. Hence H_1 was rejected. which suggests that there is no significant association of level of physical activity among perimenopausal women with selected demographic variables like age in years ($\chi^2=1.654$, $P= <.427$), Area of work ($\chi^2=6.949$, $P=.326$), occupation ($\chi^2=7.156$, $P=.307$), Educational qualification ($\chi^2= 6.761$, $P= .563$), Area of living ($\chi^2= 1.518$, $P=.468$), non-communicable ($\chi^2 = 9.009$, $P=0.061$).

Discussion

Among the subjects studied, the majority (64.3%) belonged to the age group of 45-50 years. Most of women only had primary level of education (50%), and the area of residency is from urban (77.6%) and rural (21.4%). A similar cross sectional study was conducted on how "high physical activity level may reduce menopausal symptoms in Poland among 40-65 aged women showed that 39.5% of them had high education level and 10.28 % of participants lived in rural areas.⁷

The present study findings show that the majority of the subjects (52.6%) had low levels of physical activity. Among them, 35.1% had moderate levels of physical activity and very few (12.4%) had high level of physical activity.

A study was conducted on 336 healthy women aged 45–55 years about the influence of physical activity level on climacteric symptoms in menopausal women assigned to the high physical activity group felt better and had less severe climacteric symptoms.¹⁰

The present study shows the no significant association between demographic variable and physical activity. A similar cross sectional study on physical performance in relation to menopause status and physical activity (PA) showed that there is no significant interaction between menopausal stage and PA on physical performance.¹¹

Limitations of the study

- IPAQ short form questionnaire was used which is very brief to collect the detailed physical activity related report.
- The sample were currently working women

and not the sedentary workers.

Conflict of interest

The author declares no conflict of interest.

Conclusion

The participation of physical activity among perimenopausal women may reduce their menopausal symptoms and assured the quality of life. The study shown that the levels of physical activity among perimenopausal was very low level. The women do not perform any regular physical activity, including resistance exercises, aerobic training, stretching exercises and relaxation. Thus shows that study has a clear implication to sensitize the general population regarding the need of physical activity during perimenopause.

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Additional documents

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“But the wisdom that is from above is first pure, then peaceable, gentle, and easy to be intreated, full of mercy and good fruits, without partiality, and without hypocrisy”.[James 3:17](#)

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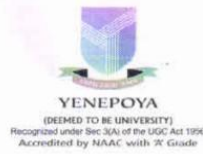
Datesignature of candidates

Place

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Ref: No. Y/REG/ACA/Research study/2021

23.07.2021

The Principal
Yenepoya Nursing College

Sub: Permission to conduct a research study

Ref: Request letter received from the 3rd year B.Sc. Nursing students

Permission is hereby granted to the following 3rd year B.Sc. Nursing students to conduct the research study on "A study assess the physical activity among perimenopausal women in selected deemed to be university" among the D group workers (housekeeping) of constituent colleges of Yenepoya (deemed to be university). However, the student needs to obtain necessary clearance from SRB/Ethics Committee before starting the study.

1. Ms. Ansu Shaji
2. Ms. Aneena Felix
3. Mr. Muhammad Sahad


REGISTRAR

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