

A Study on Dietary Control of Working Women After Menopause in Ganjam District of Odisha

Jyotirmayi Rath¹, Panad Mousmi²

¹Lecture in Home Science, SBRG women's College, Berhampur University, India

²Lecture in Home Science, Niranjana Government Women's College, Berhampur University, India

Abstract

Food is an integral part in every stages of life, and diet indicates the appropriate food habit for a particular health condition. Humans, especially women whose life is embedded in many responsibilities, often skip attention to the right kind of food. The women in the working class, who has reached their menopause (end of the menstrual cycle), suffer even with an additional difficulties as during the phase a lot of hormonal changes occur, imparting many health complications like sleeplessness, mood swings, fatigue, etc. A study was carried out in Ganjam District of Odisha with 150 working women who had attended menopause. A survey was undertaken using a structured questionnaire to understand general characteristics of working women after menopause, their dietary habits, health and lifestyle, and challenges faced by the women folks. The study identifies that 56% of women suffer from hot flashes, 50% suffer from sleep disturbances, and 60% suffer from weight gain. Also it was observed that many working women had irregular meals and low calcium and protein intake. Due to irregular meals and lack of awareness, they suffer in many ways. Irregular working hours, stress, lack of time for meal planning, and family food preferences were found to be major barriers in the right kind of eating. In this study, the overall observations was that poor dietary habit are linked with increased menopausal symptoms and health issues. Practical implementation of healthy dietary practices was found to be low, while awareness levels was moderate. The findings suggest that a balanced diet, regular meal timing, reduced intake of processed food, family and social support, and physical activity can improve the dietary habits and health of the study population. Additionally, the study highlights the need for awareness programs that focus on dietary management for working postmenopausal women. Better dietary planning and time management strategies can also help in improving the nutritional status of the study group. Considering the dual burden of work and menopause-related challenges, support from family, workplace, and society plays a key role in managing health and well-being. With appropriate intervention and education, working women can be guided towards healthier lifestyles post-menopause. This study aims to bring attention to the often-overlooked dietary needs of the working women in postmenopausal phase and emphasizes the importance of structured support systems to promote better health outcomes.

Keywords: Diet, nutrition, working women, menopause, health, lifestyle

INTRODUCTION:

Menopause is a natural phase in a women's life that typically occurs between the ages of 45 years to 55 years. At one end it is the cessation of reproductive age and on the other it comes along with many health complications. These complications affects the quality of life and the women they are in

workforce it become even more difficult for them to manage health along with the work life. Due to patriarchal societal structure, women priorities others health that is they take care of other family members well but give little importance given to self-care. Additionally the loss of luteal phase progesterone diminished metabolic flexibility, menstrual irregularities which lead to health complications in the transition period. Post menopause year come with an increased risk of health related complications like cardiovascular diseases, metabolic syndromes, diabetics, weight gain etc. which make the life of women even difficult in that scenario appropriate dietary measures can be beneficiary in reducing the difficulty in postmenopausal women Silva *et al.* (2021).

Hence the study was designed to gain understanding about the dietary controls in postmenopausal woman, with an objective to access the dietary pattern and nutritional intake of women. Along with menopausal symptoms and related health issues that women are facing post menopause. Understanding the dietary association with health implication especially in postmenopausal years might help in opening new path ways for women for better health status and wellbeing in the late phase of life.

Material and Methodology:

A cross sectional study has designed to understand the dietary practices and health status of postmenopausal women. Using survey method the study was conducted at Ganjam district of Odisha. The women who has attended their natural menopause and were in work force (any kind of time bound job for which they were getting a payment) has been selected as the sample for the study. A structured questionnaire was used for conducting the survey. For analysis central tendency were computed and inferences were made.

Result And Discussion:

The Demographic Profile: The demographic profile of respondent age, educational qualification, marital status and working hours are presented in the table 1.

Table 1 depicts the distribution, and it shows one third of the respondent in age group below or equal to 50 years of age, and similar distribution of women are in 51 years to 60 years of age and rest one third are above 60 years of age. Table 1 depicts that none of the respondent are illiterate, while 6.66 percent of women educated up to metric, none are undergraduate, while one third has completed their graduation and about two third respondents has completed their post-graduation. Alnjadat *et al.* (2024) in a study at Jordan found 2 percent women to be illiterate, 26.4 person educated upto primary or secondary level, 20.4 percent had diploma and 51.2 B. SC and Postgraduate. This study shows an increased number of women completed higher studies that might be due to design of the study as it is being conducted with working women.

Table 1: General profile of the Respondent

Variables	Category	Frequency (Percentage) Distribution
Age	≤50	50 (33.33)
	51-60	50 (33.33)
	>60	50 (33.33)
Educational qualification	Illiterate	0 (0.00)
	Metric	10 (6.66)
	Undergraduate	0 (0.00)

	Graduates	50 (33.33)
	Post graduates	90 (60.00)
Marital Status	Unmarried	20 (13.33)
	Married	120(80.00)
	Divorced	0 (0.00)
	Widow	10(6.67)
Working Hours	≤8 hours	120 (80.00)
	>8 hours	30 (20.00)

Table 1 also shows 13.33 percent of women were unmarried while majority that is 80 percent are married and no one is divorced and 6.67 percent of women are widows. Alnjadat *et al.* (2024) in Jordan had similar finding, that is 82.6 percent of women as married, 4.7, 5.7 and 7 percent women are single, widow and divorced respectively. The table also shows among the working women participants, a clear majority that is 80 percent of women works for 8 hours or less while remaining 20 percent of women has a long working hour that is more than 8 hours a day.

Menopause and health conditions of Respondent: Menopause is associated with many health related issues, where the life style dis-orders and ageing again adds to their difficulties. Hallajzadeh *et al.* (2018) in Silva *et al.* (2021) in a review study added that postmenopausal women has higher prevalence of metabolic syndrome compared to similar aged premenopausal women. The table 2 shows about health and life style status of menopausal women.

It shows that 20 percent of women entered their menopausal age before 45 years, while about 53 percent women entered menopause between 45 to 50 years of age and remaining that is about 26 percent entered menopausal phase after 50 years of age. Grisotto *et al.* (2022), in a systematic review highlighted the findings of Smithe *et al.* (2017) and Boutot *et al.* (2017), modification in lifestyle through diet can help in modify in ovarian ageing, which in turn would be helpful in getting menopause age in right time that is in between 45 years to 55 years. As early or late entering to menopausal phase lead to certain sever health issues like diabetic and cancer respectively. Studies also found specific foods like refined flours as causes of early entering of natural menopause and plant proteins, oily fish, fresh legumes help in lowering the early menopausal risk in Dunneram *et al.* (2018) in Grisotto *et al.* (2022). Ko and Kim (2020) in Silva *et al.* (2021) says reduced energy expenditure lead to obesity in postmenopausal women and a low-energy diet recommended for post-menopausal women to prevent metabolic alterations.

Table 2. Menopause and health conditions of Respondent

Variables	Categories	Frequency (Percentage) distribution
Menopause Age	Before 45	30 (20.00)
	45-50	80 (53.33)
	After 50	40 (26.67)
Menopausal Symptoms	Hot Flashes	40 (26.67)
	Mood swings	90 (60.00)
	Sleep disturbance	80 (53.33)
	Joint pain	90 (60.00)

	weight gain	80 (53.33)
	Bone pain	50 (33.33)
	Osteoporosis	20 (13.33)
	None	10 (6.67)
Health conditions	Hypertension	70 (46.67)
	Diabetes	60 (40.00)
	Thyroid disorder	40 (26.67)
	Heart disease	10 (6.67)
	None	50 (33.33)
Hours of Sleep	≤5hours	20 (13.33)
	5-8 hours	100 (66.67)
	>8 hours	30 (20.00)
Physical activity	Daily	60 (40.00)
	Sometimes	70 (46.67)
	Never	20 (13.33)

This study shows health conditions of respondent in table 2. Table 2 shows about 26 percent of respondent has menopausal symptoms of hot flashes, 60 percent has mood swings, about 53 percent has sleep disturbance, 60 percent has joint pain, about 53 percent has weight gain, about 33 percent has bone pain, about 13 percent has osteoporosis and about 6 percent women said they has no records of any health issues. Similarly about 46 percent has hypertension, 40 percent has diabetic, about 26 percent has thyroid disorder, about 6 percent has heart disease and one third has no such health condition. Table 2 depicts about 13 percent of respondent sleep 5 hours or less than 5 hours a day, about 66 percent of respondents sleep between 5 to 8 hours and remaining 20 percent sleep more than 8 hours a day. Table 2 on physical activity level shows 40 percent do physical activities (exercise) daily, about 46 percent do physical activity sometimes and about 13 percent never do any physical activity. Alnjadat *et al.*(2024) in a similar study at Jordan found 39.8 percent of participants reported to be not exercising, rest others does either for 10 minutes, 40 minutes or 5-t 6 days a week, but in this study it shows more number of women are doing physical exercise. Erdelyi *et al.* (2024) highlighted, physical exercise ensures metabolic health and reduces number and intensity of hot flashes. Dubasi *et al.* (2019) in Alnjadat *et al.* (2024) on physical activity says adherence to exercise and healthy diet can play vital role in health of menopause women.

Dietary Habit of Respondent: Healthy diet pattern in postmenopausal days will reduce the chances of metabolic syndromes, Silva *et al.* (2021) and table 3 shows the dietary habit of respondent.

The table 3 shows 20 percent of respondent has a habit of having 2 meals a day, about 46 percent has 3 meal pattern and about one third have a dietary habit of more than 3 meal a day. Alnjadat *et al.* (2024) in a study at Jordan found the women in menopause, 55.9 percent consume three meal a day.

Table 3. Dietary Habit of Respondent

Variables	Categories	Frequency (Percentage) Distribution
Meal per day	2 meals	30 (20.00)
	3 meals	70 (46.67)

	More than 3 meals	50 (33.33)
Habit of skipping breakfast	Regular	20 (13.33)
	Some times	110 (73.33)
	Never	20 (13.33)
Food habit	Vegetarian	75 (50.00)
	Non vegetarian	75 (50.00)
Consume tea coffee	Never	30 (20.00)
	Rarely	20 (13.33)
	1-2 times a day	50 (33.33)
	≥ 3 times	50 (33.33)
Water consumption	Enough	90 (60.00)
	Non enough	60 (40.00)

The table also shows about 13 percent has regular habit of skipping breakfast, about 73 percent skip breakfast sometime and about 13 percent never skip breakfast. Table 3 also depict half of the respondent has vegetarian food habit and other half has non vegetarian food habits. On tea and coffee consumption it was found that 20 percent never consume tea or coffee, about 13 percent rarely consume tea and coffee, while about one third consume tea or coffee once or twice a day and a similar distribution of respondent consume tea or coffee more than 3 time or more than 3 times a day. Similarly on water consumption habit it was found that 60 percent consume enough water (that is 8- 10 glass in minimum per day) regularly, while remaining 40 percent do not consume enough water.

Food and Nutritional intake of respondent: The study also highlights the consumption of different food groups and different nutrients intake by respondents. The table 4 shows distribution of different food group consumed by respondents.

It was observed that 46 percent of respondents consume milk regularly while about 64 percent, about 73 percent, 80 percent regularly consume fruit, green leafy vegetable, whole grain and millet respectively. And remaining people that is about 53 percent, 35 percent, about 26 percent and 20 percent of respondents does not (sometimes/never) consume milk, fruit, green leafy vegetables and 20 percent respectively. Grisotto *et al* (2022) in a systematic review found the consumption of fruit, vegetable and milk consumption and menopausal health has inconsistent findings. Dunneram *et al.* (2017) in US based coherent study found a high intake of oily fish, fresh legumes are related to delay in natural menopause, whereas foods like refined pasta and rice are responsible for early interventions. Willett *et al.* (2019) in Silva *et al.* (2021) highlights at least five servings of fruits and vegetables per day; and moderate dairy consumption as an option for relaxation of metabolic disorders in postmenopausal years.

Table 4. Food and Nutritional intake of respondent

Variables	Categories	Frequency (Percentage) Distribution
Milk in diet	Regularly	70 (46.67)
	Sometimes /never	80 (53.33)
Fruit in diet	Regularly	97 (64.67)
	Sometimes /never	53 (35.33)
Green leafy vegetable in	Regularly	110 (73.30)

diet	Sometimes /never	40 (26.67)
Whole grain and millet in diet	Regularly	120 (80.00)
	Sometimes /never	30 (20.00)
Junk and fast food in diet	Regularly	130 (86.67)
	Sometimes /never	20 (13.33)
Calcium rich food	Daily	50 (33.33)
	Sometimes /Never	100 (66.67)
Protein rich food	Daily	79 (52.67)
	Sometimes /Never	71 (47.33)
Take dietary supplements	Yes	53 (35.33)
	No	97 (64.67)

On Junk food and fast food consumption the table 4 shows about 86 percent of women regularly consume junk and fast food and remaining about 13 percent sometimes or never consume junk or fast food.

On some nutrients intake table 4 shows about one third of women consume calcium rich diet, while rest about two third either sometime or never consume calcium rich diet. And about 52 percent reported that they take protein rich food and about 47 percent either sometimes or never consume such food. And about 35 percent of women take dietary supplements and rest about 64 percent of women do not take any dietary supplements.

Menopausal Diet practice and awareness among Respondent: Table 5 gives information about the dietary practice and awareness level of the participants.

Table 5 shows that half of the women respondents self-reported that they were aware about diet related specifications to be practised in menopausal years while remaining half reported that they were unaware of such dietary controls. Also the table depicts about 7 percent has a different diet for controlling the menopausal symptoms and remaining about 92 percent of respondents do not has any such dietary controls. On exploring and analysing the challenges faced by the participants on maintaining a healthy diet it was found that, about 58 percent face challenges due to lack of time, about 30 percent face challenges due to lack of awareness, none said financial constraint as a cause of such scenario, while 40 percent said they are in such difficulty due to family food preference.

Table 5. Menopausal Diet practice and awareness among Respondent

Variables	Category	Frequency Distribution (Percentage)
About dietary control	Aware	75 (50.00)
	Unaware	75 (50.00)
Diet for controlling menopausal symptoms	Have	11 (7.33)
	Do not have	139 (92.67)
Challenges in maintaining healthy diet	Lack of time	88 (58.67)
	Lack of awareness	46 (30.67)
	Financial constrains	0 (0.00)
	Family food preferences	60 (40.00)

In this survey in Ganjam (the study location), when the suggestion for better dietary habit was asked to the participants in the post menopause life stage, responses came as follow “nutritious food to be consumed for good health”, “women should have foods rich in protein and calcium”, “Balanced diet”, “rich in whole foods like fruits, vegetables whole grains lean proteins and healthy fats is recommended”, “eat a balanced diet rich in calcium, protein, fiber, and healthy fats while limiting sugar, salt, and processed foods”. Some respondents also suggested, “lack of time and not giving importance of self-care as major issue for poor health”, “Breathable cotton underwear”, “regular washing and gentle intimate care”, were also part of the suggestions.

Studies after doing reviews suggest that women should be watchful for their muscle mass, energy intake in peri-menopause (both pre and postmenopausal).

Conclusion:

The study was an initiative to understand the health conditions, dietary pattern and dietary control of women in post menopause years especially among the working women. The dietary pattern of working women compromised one due to lack of time impacting quality of life. Studies have shown that healthy food choices include protein and plant protein. Vitamin and minerals are important hence fruit and vegetable which are the important sources should be included in diet. Along with the above good lipids (PUFA), whole grain need to be included (as source of dietary fiber) in diet. Consumption of milk is also suggested to meet calcium requirement in diet, which reduce the risk of osteoporosis. Refined sugar, alcohol, smoking should be avoided especially in postmenopausal years for better health in women. This study among the working women of Ganjam district of Odisha, have a good food habit. They include milk, fruit, whole grain cereals and vegetables in their diet. The study population was found to have lesser lifestyle disorder as well. But the association of food practices and health implication was beyond the scope of the study.

Studies also found practice of regular exercises for physical fitness also important in late years for better metabolic balance. The study population does physical activities (exercise) that might be another factor for better health conditions.

The study found the low level of awareness level of women regarding dietary control, food and its association to health implication in menopausal years. But lack of time and food preference of family were the prominent causes for food choices in their diet while financial constrain was reported by none that might be due to the reason the sample belong to working class.

Hence the study suggests analysis of food in relation to health as further scope of study in this regard. And active awareness initiative for spreading knowledge regarding dietary control in postmenopausal years can be beneficial for women for better food choices and practices.

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