

Elderly women's Knowledge and Preventive Health Behaviors Regarding Post-Menopausal Problems

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ABSTRACT

Background: Post-menopausal problems pose significant challenges to elderly women. Lack of awareness and poor health practices regarding menopause leads to serious complications and diminished quality of life. **Aim of the study:** This study aimed to assess elderly women's knowledge and preventive health behaviors regarding post-menopausal problems. **Subjects and Methods: Research design:** A descriptive cross-sectional design was utilized. **Setting:** The study was conducted at Elgar Village in Zagazig Center, Sharqia Governorate, Egypt. **Subjects:** A purposive sample of 130 post-menopausal women was selected. **Tools of data collection:** Data were collected using an interview questionnaire that consisted of three parts: socio-demographic data, knowledge assessment related to post-menopausal problems, and preventive health behavior checklist. **Results:** The study revealed that 67.7% of the participants had unsatisfactory knowledge regarding menopause, while only 32.3% had satisfactory knowledge. Regarding preventive behaviors, 77.7% of elderly women had unsatisfactory practices. **Conclusion:** About two-thirds of the studied participants had unsatisfactory knowledge, and over three-quarters demonstrated inadequate behaviors across multiple symptom domains. **Recommendation:** Structured health education initiatives should be implemented to improve post-menopausal health knowledge and behaviors.

Keywords: Elderly women, Knowledge, Post-Menopause problems, Preventive health behavior.

Introduction

Elderly women, especially those in the post-menopausal stage, are particularly vulnerable to a host of complications such as osteoporosis, cardiovascular diseases, urogenital atrophy, and psychological disturbances including anxiety and depression (Chung et al., 2020). Knowledge about menopause and its associated complications is crucial for promoting healthy aging in women. Studies have shown

that women with higher awareness and understanding of post-menopausal health are more likely to seek timely medical consultation and adopt health-promoting behaviors (Loutfy et al., 2021). Unfortunately, many elderly women lack comprehensive information on the changes their bodies undergo during and after menopause. Cultural taboos, health illiteracy, and limited access to healthcare services often hinder the dissemination and

acquisition of essential knowledge, particularly in low- and middle-income countries (Alshammari et al., 2023).

Preventive health behaviors play a vital role in mitigating the risk of chronic conditions that commonly emerge during post-menopause. These behaviors include regular physical activity, balanced nutrition, bone density screenings, cardiovascular check-up (Elsharkawy et al., 2022). Engaging in such practices not only enhances physical well-being but also fosters psychological resilience and a sense of autonomy among elderly women. Evidence suggests that lifestyle modifications initiated during the post-menopausal phase can significantly reduce the incidence of morbidity and mortality associated with aging (Ramezani et al., 2020).

The intersection of knowledge and behavior is a critical domain of inquiry for healthcare professionals and policymakers aiming to promote healthy aging. It has been argued that increasing women's knowledge about post-menopausal complications fosters positive health behaviors, which in turn contribute to reduced healthcare costs and improved quality of life (Nasiri-Amiri et al., 2019). Health education and community-based interventions have been found to be effective in bridging the knowledge-behavior gap, especially when tailored to address the unique cultural and demographic factors influencing women's health-seeking behaviors (Kulik and Metz, 2021).

This study seeks to assess the level of knowledge and preventive health behaviors among elderly women concerning post-menopausal problems. By identifying knowledge gaps and behavioral patterns, the findings aim to contribute to the development of tailored educational interventions and policy recommendations that promote

holistic health and well-being among elderly women.

Significance of the study

The significance of this study is underscored by the increasing prevalence of post-menopausal complications worldwide. For instance, osteoporosis affects over 200 million women globally, and post-menopausal women represent the highest-risk group, especially for fractures that lead to disability or death (Kulik and Metz, 2021). Additionally, the lack of preventive behaviors such as routine screenings, physical activity, and healthy dietary habits significantly contributes to these outcomes. This reinforces the urgency of understanding the extent to which elderly women are equipped with the knowledge and motivation to adopt health-preserving behaviors.

In cities like Zagazig where traditional norms prevail and health infrastructure is strained, elderly women may lack both the information and the resources to engage in preventive health behaviors effectively. By focusing on the Zagazig population, this study addresses a crucial need to explore local patterns of knowledge and behavior, which can inform targeted interventions that align with the specific sociocultural context of Egyptian communities.

Aim of the study

This study aimed to assess elderly women's knowledge and preventive health behaviors regarding post-menopausal problems

Such aim was be fulfilled through the following objectives: -

1. Identify elderly women's knowledge regarding post-menopausal problems.

2. Recognize the preventive health behavior regarding post-menopausal problems among elderly women.

Research questions

1. What is the knowledge of elderly women about post-menopausal problems?
2. What is the preventive health behavior regarding post-menopausal problems among elderly women?

Subjects and methods

Research design

Descriptive Cross-Sectional design was used to conduct this study.

Study settings

The existing study conducted at Elgar Village in Zagazig Center in Sharqia Governorate, Egypt.

Study Subjects

A purposive sample composed of 130 post-menopausal women according to the following inclusion criteria. Age: 57 years or over. Women who had natural menopause. Able to communicate and accept to participate in the study. Women have symptoms of post menopause, Exclusion criteria include Women who had cancer, malignant tumor, chemotherapy, radiotherapy and Women who are use hormonal replacement therapy (HRT). The sample size was calculated by software Epi-info package, assuming poor knowledge of menopausal problems is 72.0% (Elkazeh et al., 2015) among 216 elderly women in Elgar district Zagazig city- Sharqia governorate, level of confidence 95%, margin of error 5% and power of test were 80%. The sample size was be 130 elderly women.

Tools for data collection

Three tools were be used to collect data:

Tool I: A structured interview questionnaire.

It was consisted of three parts.

Part 1: Demographic characteristics of the studied elderly.

This part was be used to assess the personal characteristic of the post - menopausal women and includes: (age, marital status, level of education, residence, current or previous job.....etc.)

Part 2: Menstrual and obstetric History.

It includes questions such as: (age at menopause, duration of post menopause, number of Para...etc.).

Part 3: Elderly women knowledge regarding menopause.

It includes questions about definition of menopause, etiology, manifestations, complications, and treatment of menopause sources of knowledge about menopause, etc...). The total knowledge score was ranged from 0-16. The knowledge scores were depending on the numbers of grades the participant obtained regarding all questions. The total grade was computed out of twelve (16) grades and knowledge was considered satisfactory if the percent score was >75% and unsatisfactory if 75% or less.

Tool II: Menopause Rating scale (MRS)

Menopause rating scale is a self-administered instrument which assess the severity of menopausal symptoms. This scale developed by Heinemann et al (2003) and modified by researcher to collect the data related to postmenopausal symptoms. The scale is composed of 59 items on a 4-point Likert scale "none/mild/ moderate /severe." The items are categorized into four groups of menopausal symptoms: physical, Vasomotor, Psychosocial and Sexual problems. The items checked from "none" to "Severe" were scored from 0 to 3 respectively and the total score was ranged between (0-177). The scores of the items of

each category and of the total scale were summed-up and the total divided by the number of items, giving a mean score. These scores were converted into percent scores. The total score of all items the score of it can be classified as follows:

- ☐ Mild symptoms score: <50%
- ☐ Moderate score: 50% to 70%
- ☐ Sever score: >70%

Tool III: Preventive health behavior

This tool was developed by the researcher after reviewing the related literature (Ahmed et al., 2017). it consisted of 33 items used to alleviate post-menopausal problems such as hot flashes, mood changes vaginal dryness and source of these behaviors. The total score was ranged from 0-66. For each question several correct answers were allotted, a score (2) was given when the answer was completely correct, a score (1) was given when the answer was incompletely correct and a score (0) was given when the answer was wrong or don't know. The preventive health behavior scores were depending on the numbers of grades the participant obtained regarding all questions. the total score of all items the score of it can be classified as follows:

- ☐ Satisfactory score: >75%
- ☐ Unsatisfactory score: 75% or less

Content validity and reliability

It was ascertained by three experts in the field of study who reviewed the tools content for clarity, relevance, comprehensiveness, and understandability. The reliability of tools was tested by measuring their internal consistency. It demonstrated a good level of reliability regarding total knowledge and total menopause rating scale with Cronbach's Alpha. As total knowledge score was 0.823, total menopause rating scale score was 0.817 and the total preventive health behavior

demonstrated an excellent level of reliability with score 0.903.

Field work

Once the permission was granted to proceed with the study, the researcher started to prepare a schedule for collecting the data. Each elderly was interviewed individually by the researcher who introduced herself and explained the aim of study briefly and reassured them that information obtained is strictly confidential and would not be used for any purposes other than research.

After that, the oral approval was obtained to collect the necessary data. The researcher used to go to Elgar village for interviewing the elderly who fulfilling the criteria. The study tools were answered by each elderly during the interview and the time needed ranged from 20 to 30 minutes, according to understanding and cooperation of the elderly. The field work was executed over Six months from the beginning of October 2023 to the end of March 2024, two days per week (Saturday and Friday) from 11 pm to 4 pm.

Pilot study

To ensure the clarity and comprehensiveness of the tool, a pilot study was conducted on a sample of 13 elderly people who were purposely selected from the chosen village; they were not included in the total number of subjects.

Administration and ethical consideration

First, the study proposal was accepted by the Zagazig University Faculty of Nursing's Post Graduate Committee and Research Ethics Committee (REC) with the code of M.D.ZU.NUR/190/13/6/2023. An official letter containing the aim of the study was issued from faculty of nursing Zagazig University to the general manager of the

general administration of Sharqia Governorate (Central Agency for Public Mobilization and Statistics, 2023) explaining the nature and aim of this study and seeking facilitating the role of researchers. Following full explanation of the study's aim, each participant provided their informed consent to participate. Participants were given the right to refuse participation and were informed that they could withdraw at any time while filling out the questionnaire. The elderly was each assigned a code number to protect their anonymity, and they were given the assurance that the information would be kept confidential and used only for research.

Statistical analysis

Data collected from the studied sample was revised, coded, and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. Data were presented using descriptive statistics in the form of frequencies, percentages, and Mean SD. A correlation coefficient "Pearson correlation" is a numerical measure of some type of correlation, meaning a statistical relationship between two variables. Chi-square (χ^2) is a statistical test used to determine the relationship between categorical variables. A linear regression model describes the relationship between a dependent variable, y, and one or more independent variables X.

Significance of the results:

Highly significant at p-value < 0.01.

Statistically significant was considered at p-value < 0.05

Non-significant at p-value \geq 0.05

Results

According to **table (1)** which distributes the demographic characteristics of the studied elderly women, the age distribution shows that 46.9% of the women are between 57-59 years old with a mean age of 60.23 ± 4.97 years. Regarding occupation, 82.3% are housewives. The marital status reveals that 59.2% are married and 85.4% of the studied women were live with their families. Income sufficiency indicates that 74.6% have insufficient income.

Table (2) Distribution of the studied elderly women according to their knowledge regarding menopause portrays that 65.4% of studied elderly women have some information about menopause. The sources of this information are varied, with health care providers being the most common source 43.5%, followed by friends. Regarding the definition of menopause, only 19.2% had a completely correct answer. Regarding causes of menopause 43.1% had a correct answer and 33.8% did not know. Focuses on the knowledge of menopause symptoms and complications. Only 16.9% of the participants had a complete correct answer of menopause symptoms. Knowledge about complications after menopause is also limited, with 53.1% being incorrect answer. All the studied elderly women had no information about a treatment for postmenopausal period.

Figure (1) illustrates that 67.7% of studied elderly women had unsatisfactory knowledge regarding menopause, and 32.3% had satisfactory knowledge.

Table (3) shows that 62.3% of the elderly have information about preventive health behavior. The sources of this information for those who are informed, friends and relative was the highest source 44.4%, followed by healthcare providers 41.9%.

Table (4) summarizes the distribution of elderly participants based on their total preventive health behaviors across various subscales. For vasomotor and physical problems, 74.6% & 76.2% have unsatisfactory behaviors respectively. Meanwhile, the psychological and sexuality problems it was found that 71.5% & 87.7 % do not have satisfactory behaviors respectively.

Figure (2) illustrates that 77.7% of studied elderly had unsatisfactory preventive health behavior, while 22.3% of them had satisfactory behavior.

Table (5) shows that 40.0% of subjects experienced mild vasomotor problems. Physical problems were mild in 42.3% of cases. while psychological problems were mild in 37.7% and sexuality issues were severe in 60.0% of cases.

Discussion

A woman enters the postmenopausal phase when she reaches the end of her reproductive years, which is 12 months without a monthly period. Following menopause, this period is characterized by a permanent cessation of menstruation due to a significant drop in ovarian hormone production, specifically progesterone and estrogen. Post menopause, which typically occurs between the ages of 45 and 55, is associated with a variety of physical and mental change. Hot flashes, dry vagina, mood swings, sleep issues, and a decline in libido are among the chronic symptoms that women may encounter. Additionally, the reduced levels of estrogen increase the risk of developing osteoporosis, cardiovascular diseases, and urogenital atrophy (Santoro & Neal-Perry, 2023; Faubion, Santoro & Pinkerton, 2024). Proper management of this period is essential to maintain quality of

life and prevent long-term health complications.

Regarding the demographic characteristics of the current study the age distribution showed that less than half of the women were between 57-59 years old, with a mean age of 60.23 ± 4.97 years. This could be due to that menopause typically occurs between the ages of 45 and 55, with most women transitioning to the postmenopausal stage by their late 50s or early 60s. By age 60, the decline in estrogen levels is well-established, increasing susceptibility to health concern (Villiers et al., 2023). A similar finding founded in a cross-sectional study of 70 Emirati women using stratified multistage random sampling by Smail et al. (2020), aimed to investigate the quality of life (QOL) of Emirati postmenopausal women aged 40-64 years, revealed that the mean age with Mean \pm SD was (53.4 ± 7.8) years, with a range of 40 to 64 years. The average age was 55 years.

For elderly women's knowledge about menopause; According to the current survey, about two-thirds of older women said they knew something about menopause, but their understanding was shallow, especially when it came to symptoms, problems, and therapies. These findings align with those of Mahadeen et al. (2022), who conducted a study in Jordan that despite exposure to information, most participants had limited understanding of menopausal changes and management. Similarly, Dwi Astuti et al. (2021), in their study "Knowledge and Attitudes Toward Menopause Among Women in Yogyakarta, Indonesia" many women knew about menopause but were not well-versed in its psychological and physiological impacts.

However, a study by Gupta et al. (2019) in India revealed conflicting results, with 72% of women being adequately

informed on menopause, its symptoms, and its impact on health. Geographical differences in community awareness campaigns, educational initiatives, and the accessibility of women's health services may account for this discrepancy.

Further, studies conducted in urban or more developed regions report higher levels of menopause-related knowledge, possibly due to better access to health education programs, media, and digital health platforms (**Kocaöz et al., 2019; Zhu et al., 2024**). Over 40% of women in a study by **Sharma and colleagues (2022)** were aware of hormone replacement therapy and at least one non-hormonal management method, indicating regional variations in the delivery of health education, in contrast to the current study where none were aware of treatments.

The findings indicate that only about one-third of the elderly women in the study showed enough grasp of menopause, while about two-thirds had inadequate knowledge and understanding. These results are consistent with findings from **Mahadeen et al. (2022)** in Jordan, whose study found that most women had misunderstandings regarding menopause and were not aware of the health risks associated with it.

In a comparable way, a research by **Rahman et al. (2023)** in Bangladesh found that ignorance of the menopause led to a failure to identify crucial symptoms and to implement lifestyle modifications necessary to control postmenopausal risks. These findings highlight a gap in reproductive health counseling: even women who frequently visit medical facilities, such those who use contraceptives, may not get adequate education about menopause.

Conversely, higher levels of menopause-related knowledge have been observed in urban or more developed areas. For example, **Kocaöz et al. (2019)** in Turkey, in their study

found that more than 60% of postmenopausal women knew enough, primarily as a result of organized health education and community engagement initiatives.

These findings align with a Chinese study on health-preventive practice knowledge. We also found that friends and family were frequently the primary sources of health information for older women. The study also raised questions about the authenticity of the information shared via unapproved networks. Ideally, healthcare providers should be the main ones to promote scientifically sound and personalized preventive interventions (**Fang et al. 2022**). Additionally, these findings agree with a study by (**Sadeghi et al., 2021**) which emphasized the role of healthcare professionals in disseminating accurate menopause-related health information through various community outreach programs.

However, contradictory results in rural or under-resourced environments show that older women often do not know about the preventive options because of inadequate healthcare infrastructure, a lack of outreach, or cultural norms that discourage seeking medical attention after childbearing. A study by (**Moghasemi et al., 2019**) shows that a lack of healthcare infrastructure in these remote locations causes many women to still suffer despite efforts to educate them about preventive health.

The findings demonstrate that a sizable percentage of senior women engage in inadequate preventive health practices. Despite the existence of these health issues, these results suggest that the older women in this study could not be taking enough preventive health steps. This result contradicts with **Svedberg et al. (2021)**, They discovered increased participation in menopausal and postmenopausal health

preventative practices in their study titled "Health Behaviors During Menopause" conducted in Sweden.

The sub-optimal behaviors may be the result of a general underestimation of the need of preventive care during menopause, a lack of access to appropriate healthcare services, or a lack of education. The results of the current study demonstrate a lack of empowerment and health awareness on menopause and postmenopausal health, which is consistent with the findings of **Svedberg et al. (2021)**. One important finding on preventative health behavior was made by this study: Nearly three-quarters of the older women did not engage in adequate preventive health activity, while just around one-fifth did. This outcome is in line with earlier studies that detailed specific behavioral subscales (vasomotor, sexual, psychological, and physical) where high percentages of poor behaviors were observed.

These findings suggest a worrying pattern that is in line with earlier studies that demonstrated that many postmenopausal women do not take preventative health care while having serious health issues. (**Svedberg et al., 2021**). In their study titled "Health Behaviors During Menopause" According to a Swedish study, a significant percentage of women did not actively engage in preventive measures. This implies that there may be many obstacles to managing one's health during menopause, which may be caused by a lack of knowledge, cultural norms, or restricted access to medical care.

Conclusion

Considering the current study results and the research questions addressed, it can be concluded that elderly women in Elgar Village exhibited a marked deficiency in both knowledge and preventive health behaviors regarding post-menopausal problems. About

two-thirds of the studied participants had unsatisfactory knowledge, and over three-quarters demonstrated inadequate behaviors across multiple symptom domains. Despite some level of awareness, the predominant reliance on informal sources of information points to a significant gap in structured health education and professional guidance.

Recommendations

- Targeted health education initiatives should be implemented in rural areas to enhance elderly women's understanding of post-menopausal problems.
- Addressing common misconceptions and providing practical advice on managing postmenopausal problems and adopting preventive health behaviors.
- Promote media campaigns on postmenopausal health to raise awareness of postmenopausal issues and encourage women to seek guidance from healthcare professionals rather than relying solely on informal sources.
- Additional studies with larger and more diverse samples should be conducted across various regions in Egypt to generalize findings and explore other factors influencing post-menopausal health behaviors

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Authors' contributions

E.S.A., administrated education classes about health problems and care for elderly, contributed extensively in all steps of research. N.M.E.; contributed and Developed in aim & research hypothesis, contributed the overall supervision of research M.M.E.Z; contributed the overall supervision in all the steps of research and interpretation of the data and the conclusion. S.M.S.; contributed in all stages of research, conducted interviews with participators, contributed statistical data analysis and interpretation of data. All authors,

participated, revised and approved the final manuscript.

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Table (1): Distribution of the studied elderly women according to their demographic characteristics (n=130)

Demographic characteristics	N	%
Age		
57-59 years	61	46.9
60-62 years	41	31.5
63-65 years	28	21.6
X ± S.D 60.23 ± 4.97		
Occupation		
Housewife	107	82.3
Worker	23	17.7
Marital status		
Single	8	6.2
Married	77	59.2
Widow	30	23.1
Divorced	15	11.5
With whom do you live with		
Family	111	85.4
Alone	19	14.6
Income		
Sufficient	33	25.4
Insufficient	97	74.6
Weight		
50-<70 kg	41	31.5
70-<90 kg	64	49.3
90-110 kg	25	19.2
X ± S.D 77.53 ± 6.25		
Height		
150-<160 cm	79	60.7
160-<170 cm	41	31.5
170-180 cm	10	7.8
X ± S.D 159.69 ± 24.71		

Table (2): Distribution of the studied elderly women according to their knowledge regarding menopause (n=130).

Items	N	%
Have information about menopause		
Yes	85	65.4
No	45	34.6
Source of this information n=85		
Television	12	14.1
The Internet	20	23.5
Friends and relatives	34	40.0
Health care providers	37	43.5
Definition of menopause		
Complete Correct	25	19.2
Incomplete Correct	64	49.2
Don't know	41	31.6
Causes of menopause		
Complete correct	30	23.1
Incomplete Correct	56	43.1
Don't know	44	33.8
Symptoms of menopause		
Complete Correct	22	16.9
Incomplete Correct	36	27.7
Incorrect	72	55.4
Complications after menopause		
Complete Correct	36	27.7
Incomplete Correct	25	19.2
Incorrect	69	53.1
Is there a treatment for postmenopausal period		
don't know	130	100.0

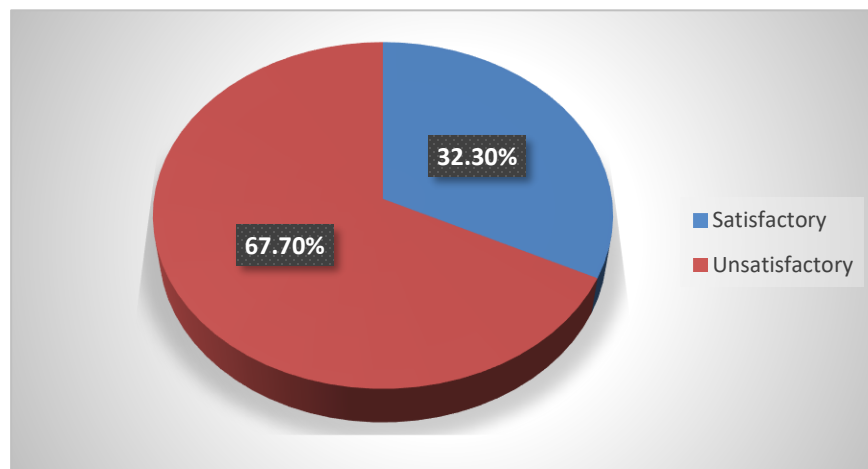


Figure (1): Distribution of the studied elderly women according to their total knowledge regarding menopause (n=130)

Table (3): Distribution of the studied elderly women according to their information about preventive health behavior (n=130)

Have information about Preventive health behavior	N	%
Yes	81	62.3
No	49	37.7
Source of this information (n=81)		
Television	15	18.5
The Internet	18	22.2
Friends and relatives	36	44.4
Health care providers	34	41.9

Table (4): Distribution of the studied elderly women according to their total subscales of preventive health behavior (n=130)

Items	Satisfactory		Unsatisfactory	
	No	%	No	%
Vasomotor problems	33	25.4	97	74.6
Physical problems	31	23.8	99	76.2
Psychological problems	37	28.5	93	71.5
Sexuality problems	16	12.3	114	87.7

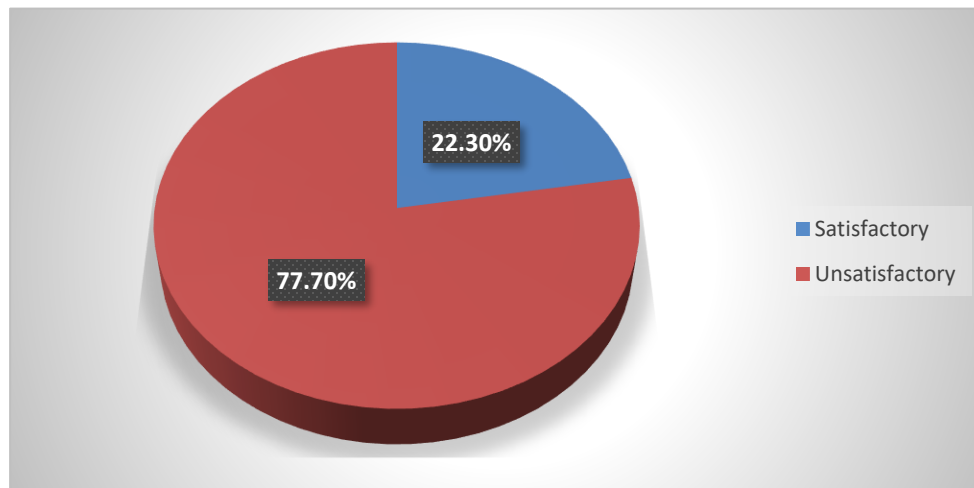
**Figure (2): Distribution of the studied elderly women according to their total preventive health behavior (n=130)**

Table (5): Distribution of the studied elderly women according to their total subscales of menopause rating scale (n=130)

Items	Mild		Moderate		Sever	
	No	%	No	%	No	%
Vasomotor problems	52	40.0	43	33.1	35	26.9
Physical problems	55	42.3	46	35.4	29	22.3
Psychological problems	49	37.7	41	31.5	40	30.8
Sexuality problems	27	20.8	25	19.2	78	60.0

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