

Health Educational Protocol for Calming Menopausal Stage Transition Among Premenopausal Women

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Abstract

Evaluate effect of Health educational protocol for Calming Menopausal stage Transition among premenopausal women. Quasi experimental study design, subject sixty-two women from obstetrics and gynecology out patients' clinics in in General Hospital of Kafre El-Sheikh city, 40 years old that categorized according to menopausal stages. Data was gathered at baseline and posttest done immediately after termination of the intervention while follow-up test done after a period of three months. Mean age of the participants was 51 ± 8.7 , it was found that 93.5%, 77.4%, 74.2%, 71.0%, 67.7% and 22.6% were complaining of hot flushing, vaginal dryness, headache & constipation, urinary incontinence, nervousness & irritability, and vaginal bleeding respectively. A significant improvement was detected regarding the hot flushing, vaginal dryness, headache, constipation, nervousness, irritability and urinary incontinence. Also, knowledge, application of the Kegel exercise, the mind/body relaxation technique, and deep breathing exercises had highly significant between pre-test and follow-up test. In Conclusion, improvement was noted in women knowledge, skills, and menopausal problems after the implementation of the educational intervention. Recommendation: Health education programs should be carried out to improve knowledge and actions about menopausal health for safe and comfortable transition stage among Egyptian women.

Keywords: *Menopausal Health problems, Menopausal Intervention, Comfortable menopause.*

Introduction

All women will experience menopause (mean age 51) with a gradual decline in ovarian reproductive hormone production starting at age 40. In most women, peri- and post-menopause are accompanied with several symptoms at varying. The climacteric syndrome comprises vegetative, physical, psychological, and urogenital symptoms. Overall, up to 80 % of women suffer from the climacteric syndrome with a significant impact on quality of life, reduced work productivity and, possibly, overall impaired health (Genazzani et al. 2021).

Perimenopause is the term used to describe the menopause transition years. In women who have a uterus, perimenopause describes the years before and after the final menstrual period. As a medical convenience, perimenopause is technically defined as the time from which menses start to become irregular and FSH levels have increased, the various possible perimenopause effects often start before and continue after this neatly-defined time slot (Derry, 2022).

The production of progesterone and estrogens by the ovaries becomes increasingly erratic throughout the perimenopause, frequently exhibiting large and sudden swings in levels. Fertility decreases during this time, but is not thought to stop until the menopause is formally declared. Once a year has elapsed since the last time menstrual blood was seen, the official date is established retrospectively (Hill, 2021).

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The term "menopause," which literally means "end of monthly cycles," was coined to characterize this transition in female humans, where the cessation of monthly menstruation or menses is typically used to signify the end of fertility. It usually (but not always) happens to women in their midlife, that is, in their late 40s or early 50s, and it marks the end of a woman's reproductive life (Greenblatt & Heithecker, 2019). Women who smoke typically reach menopause earlier than women who do not smoke and more prone to experience menopausal symptoms like night sweats, a racing or pounding heart, trouble falling asleep, and loss of interest in most activities (Matsuura et al. 2022).

The term post menopause is applied to women who have not got a menstrual bleed for a at least one year, presuming they are not pregnant or lactating and that they do, in fact, still have a uterus. Therefore, post menopause refers to the entire period of a woman's life that occurs after her final menstrual cycle, or more precisely, the entire span of time that follows the point at which her ovaries stop producing ovum.

Literature Review

Menopause and the postmenopausal period are natural life transitions, not illnesses or disorders. The impacts of the transition themselves vary in intensity; for some women, it might be a challenging moment in their lives, but not for others (Isobe, 2020).

The symptoms and signs that can accompany the menopause transition years can seriously interfere with daily activities, negatively impact a woman's sense of wellbeing, and lower her quality of life. Functional issues frequently cause the menopausal process to proceed much more quickly and worsen the afflicted woman's physical and mental health (Greenblatt & Heithecker, 2019).

Many symptoms may manifest during the menopause transition years as the body adjusts to the rapidly rising and falling levels of natural hormones. The extent to which these effects are annoying varies greatly from woman to woman, as does the range of affects (Matsuura et al. 2022). There have been mixed findings from cohort studies about medical disorders related to menopause (Macêdo et al. 2023).

One study, for instance, discovered a correlation between menopause and hot flashes, as well as joint and muscular discomfort and mental disorders. It seemed from the same study that vaginal dryness, lower libido, and poor sleep quality were unrelated to menopause. On the other hand, this research did discover a correlation with inadequate sleep (Santoro, 2021). Therefore, it is beneficial for women to know what to anticipate during the perimenopause and, should the need arise, what resources are available to help with the transition (Ojo, 2022).

The main concerns of menopause are hot flashes, dry vagina, anxiety, and difficulty sleeping. The widespread consensus is that estrogen insufficiency is the source of these problems, despite the fact that the exact causes are unknown (Rostami-Moez, 2023). But given that these problems are not universal among women going through menopause, that they vary from woman to woman, and that different women react differently to treatment, it seems unlikely that an estrogen deficit alone can account for them. Factors such as menopause-related information, attitude, perception, and behavior are believed to play a role in the emergence of these problems, in addition to estrogen insufficiency (Ali, 2021).

Evidence-based information about health and illness is presented in an organized manner in health education. Also, the majority of women are curious about menopause and its potential side effects (Hickey, 2024).

Education can take place in community settings, in groups, or one-on-one with patients. It might involve the direct exchange of ideas with the healthcare provider, workshops, or the presentation of certain educational materials (Stute & Lozza-Fiacco, 2022). Women should, for instance, be educated on the connection between menopausal symptoms and life stress, as well as the particular stress-reduction techniques that are available to them. Research revealed that women who participated in a general education program about menopause, covering subjects such as stress and stress management, had improved

knowledge, more reasonable expectations, more positive attitudes toward menopause, and less discomfort related to menopause (Hickey, 2024).

This work aims to assess health educational protocol for calming menopausal stage transition among premenopausal women

Research Methodology

Study design: Quasi-experimental one group pretest-post-test design was utilized to fulfill the aim of the study. By using one group pretest- posttest design, single case is observed at two time points, one before the education and one after the education.

Research Hypothesis

H1: The posttest- mean scores of women knowledge regarding calm menopausal transition who are exposed to educational protocol will be higher than the pretest –mean scores.

H2: The posttest - mean scores of women practices regarding calm menopausal transition who are exposed to educational protocol will be higher than the pretest –mean scores.

Sample: A convenient sample consisted of 62 premenopausal women who agree to participate in the study. All of the women gave their informed consent and signed a consent form, and they were advised that their privacy and confidentiality would be protected both before and after the study. Women considered for this study were healthy and premenopausal women.

Setting: Interview with women and pre-test was done in obstetric and gynecological out patient clinic in General Hospital of Kafr Elsheikh city, and the educational protocol was applied in specific class present within the hospital.

Tools: The development of a Structured Interviewing questionnaire followed an assessment of relevant national and international research. It was developed by researchers to evaluate health educational protocol for calming menopausal stage transition among premenopausal women. It contained the socio demographic data such as age, menopausal stages, education, occupation, marital status; also questions about menopausal knowledge were included vasomotor, psychosocial, physical and sexual aspects.

Scoring of the Tool

For each question, every correct answer had been scored 1 point and 0 score for incorrect answer. the answer given a score of: (less than 50% means poor, 50% -< 70% means satisfactory, more than 70% means good).

Inclusion criteria were as following:

- Women at any age, having menopausal symptoms.
- Naturally occurring premenopause (final three months of regular menstrual cycles) and perimenopause (three to eleven months of amenorrhea or greater irregularity if still cycling).

Exclusion criteria were as following:

- Using any kind of medication and/or hormone replacement therapy (chemical or herbal) six months before to the study.

- Engaging in physical activity for more than five minutes per day and twenty minutes per week. Any woman who failed to meet even one of the inclusion criteria would be excluded from the study.

Operational Steps

The study sample was evaluated in three times (before educational protocol, immediately after educational protocol and three months after educational protocol) by pre and posttest. In order to collect data, researchers used a self-administered questionnaire containing socio demographic data such as age, menopausal stages, education, occupation, marital status, questions about menopausal knowledge including: Vasomotor, psychosocial, physical and sexual aspects and the answer given a score of: (less than 50% means poor, 50% -< 70% means satisfactory, more than 70% means good). Researchers had group that had 62 women. Following an initial assessment and estimation of educational needs, a weekly educational protocol was carried out for five weeks respectively. The educational protocol was conducted in five sessions, lasting three hours each week, with each session occurring in a distinct week. The definition of menopause and how it occurs (the first session), menopausal symptoms and complications (the second session), methods to reduce menopausal complications (the third and fourth session), and the impact of exercise on menopausal symptoms (the fifth session) were all covered in the educational sessions. Each session concluded with women receiving a summary of the prescribed protocol. During the instructional protocol, pamphlets, posters, and role plays were used.

Ethical Consideration Kafr El Sheikh University's research ethics committee granted primary approval on May 29, 2023 the manager of the general hospital had then granted permission. While participation in the study was entirely voluntary, ethical issues included keeping the material secure and ensuring that no other party could access it without the women's consent.

Statistical Analysis

Statistical Package for the Social Sciences (SPSS) software (version 20) was used on a personal computer to score, tabulate, and analyze data. To compare knowledge and exercise performance results (total score) between groups before and after the protocol, use the Chi-square test, which is statistically significant ($P < 0.05$).

Research Findings and Discussions

Results

Table 1. Socio Demographic Characteristics

Item	No.	%
Age		
35 < 45 Yrs	10	16.2
45 - 55 Yrs.	26	41.9
> 55 Yrs.	26	41.9
SD ± Mean	51± 8.7	
Menopausal stages		
Pre/ Perimenopause	10	16.2
Menopause	26	41.9
Post menopause	26	41.9
Education level		
Illiterate	8	12.9
Read and write	22	35.5
Secondary school	18	29.1
University	14	22.6
Occupation		

House wife	36	58.1
Employee	26	41.9
Marital status		
Married	38	61.3
Divorced	2	3.2
Widow	22	35.5

The total numbers of participant were sixty two women; their mean age was 51 ± 8.7 . It was found that, 35.5% were read and write, 41.9% from them were in perimenopausal & in post-menopausal stages, 58.1% were house wife and 61.3% were married while 35.5% were widow. Table 1

Table 2. Assessment of Common Menopausal Problems According to Age

Age Problem	35 - < 45 Yrs.		55 - 45 Yrs.		> 55 Yrs.		Chi square	
	n	%	N	%	N	%	X ²	P
Vaginal bleeding	4	40	6	30	4	12.5	4.226	0.12
Hot flushing	10	100	20	100	28	87.5	4.009	0.13
Urinary incontinence	8	80	12	60	24	75	1.816	0.40
Irritability	10	100	12	30	20	0.625	5.713	0.05*
Headache	10	100	16	80	20	62.5	6.116	0.04*
Nervousness	10	100	12	30	20	0.625	5.713	0.05*
Vaginal dryness	10	100	14	70	24	75	3.654	0.16
Constipation	10	100	16	80	20	62.5	6.116	0.04*

*=Statistically significant ($P \leq 0.05$)

It was found that all women > 55 years old complained hot flushing, irritability, headache, nervousness, vaginal dryness and constipation while 80% and 40% of them complained urinary incontinence and vaginal bleeding respectively. It was noted also that, there are statistically significant difference between aging and some health problems such as irritability, headache, nervousness and constipation ($P \leq 0.05$). Table 2

Table 3. Menopausal Health Problems According to Menopausal Stage

Stage Problem	Pre/pri menopause		Menopause		Post Menopause		Chi square	
	N	%	N	%	N	%	X ²	P
Vaginal bleeding	4	40	8	30.8	2	7.7	6.030	0.04*
Hot flushing	10	100	24	92.3	24	92.3	0.822	0.66
Urinary incontinence	6	60	16	61.5	22	84.6	4.056	0.13
Irritability	8	80	18	69.2	16	61.5	1.172	0.55
Headache	10	100	20	76.9	16	61.5	5.754	0.05*
Nervousness	8	80	18	69.2	16	61.5	1.172	0.55
Vaginal dryness	8	80	22	84.6	18	69.2	1.805	0.40
Constipation	10	100	20	76.9	16	61.5	5.754	0.05*

*=Statistically significant ($P \leq 0.05$)

Vaginal bleeding, headache and constipation occur in post-menopausal stage more than in other stages with significant differences ($P = 0.05$). Also, hot flashes, irritability, and nervousness increased in post-menopausal stage than in other stages. While the occurrence of urinary incontinence increased in pre-menopausal stage more than other stages. Table 3

Table 4. Evaluation of Common Menopausal Health Problems

Problem	Pre-test		Immediate-test		Follow-up test		P- Value
	N	%	N	%	N	%	
Vaginal bleeding	14	22.6	13	21	12	19.4	0.97
Hot flushing	58	93.5	30	48.4	2	3.2	<0.001**
Urinary incontinence	44	71	35	56.5	4	6.5	<0.001**
Irritability	42	67.7	19	30.6	0	0	<0.001**
Headache	46	74.2	27	43.5	6	9.7	<0.001**
Nervousness	42	67.7	23	37.1	0	0	<0.001**
Vaginal dryness	48	77.4	48	77.4	48	77.4	1.00
Constipation	46	74.2	31	50	0	0	<0.001**

**=Statistically highly significant ($P \leq 0.01$)

A salient improvement was seen between pre-test and follow-up test in all menopausal health problems except in vaginal dryness and vaginal bleeding. There are highly significant differences in hot flushing, Urinary incontinence, Irritability, Headache, Nervousness, and Constipation ($P \leq 0.01$). Table 4

Table 5. Total Score of Women' Knowledge About Menopause

Score	Pre-test		Immediate-test		Follow-up test		X ² P
	N	%	n	%	N	%	
Poor	50	80.6	23	37.1	0	0	<0.001**
Satisfactory	12	19.4	11	17.7	16	25.8	
Good	0	0	28	45.2	46	74.2	

**= statistically highly significant ($P \leq 0.001$)

There are highly significant differences of the women knowledge (poor, satisfactory and good) compared with the pre-test and follow-up test ($P = <0.001$). Table 5

Table 6. Total Score of Women' Exercise Performance

Procedure/ Score	Pre-test		Immediate-test		Follow-up test		P-value
	No	%	No	%	No	%	
1- Deep breathing exercise							<0.001*
Poor	62	100	6	9.7	24	38.7	
Satisfactory	0	0	6	9.7	3	4.8	
Good	0	0	50	80.6	35	56.5	
2- Mind relaxation technique							<0.001*
Poor	59	95.2	15	24.2	20	32.3	
Satisfactory	3	4.8	4	6.6	4	6.6	
Good	0	0	43	69.4	38	61.3	
3- Physical relaxation technique							<0.001*
Poor	60	96.8	2	3.2	29	46.8	
Satisfactory	2	3.2	2	3.2	2	3.2	
Good	0	0	58	93.5	31	50	
4- Kegel exercise							<0.001*
Poor	62	100	6	9.7	33	53.2	
Satisfactory	0	0	10	16.1	6	9.7	
Good	0	0	46	74.2	23	37.1	

* *= statistically highly significant ($P \leq 0.01$)

After educational intervention, an improvement was seen in the percentages of exercise performances of all participant women with highly significant differences ($P = <0.001$). Table 6

Discussion

Due to longer life spans, women in developed nations now spend over one third of their lives post-ovarian failure. In developed countries, women typically live to be 80-85 years old, while in developing countries, they usually live to be 60-70 years old (World Bank Group, 2024). WHO 2023, states that menopause typically occurs between the ages of 45 and 50, but there can be significant differences between developed and developing countries. In the year 1990, there were 467 million women who were 50 years old and older, with 40% residing in developed regions and 60% in developing countries worldwide. The world population is projected to reach 1200 million by 2030, while the percentage of postmenopausal women in developed regions is predicted to fall to 24%, creating a concerning situation for developing nations. Around 5 to 8 percent of the population in developing countries consists of post-menopausal women, representing a relatively small portion. In developed nations, it accounts for more than 15 percent of the entire population. It is expected that by 2030, this percentage will significantly rise in all regions across the globe. As a result, it highlights the significant necessity of a public health system for women after menopause (WHO, 2022).

The current research focused on evaluating and putting into practice an educational program to help women have a comfortable transition through the stages of premenopausal, perimenopause, menopause, and post-menopause. The results of the study showed that the education program improved menopausal health knowledge in all areas except vaginal dryness and bleeding. Additionally, women's exercise performance also increased, highlighting the importance of implementing educational interventions. Research conducted by Timmana et al., 2021 demonstrates that an educational program is effective in reducing negative impacts on overall health and enhancing quality of life for women going through menopausal transition.

It is evident that the majority of females in our research had completed elementary school and showed a low quality of life. This is consistent with the research by Munn et al., 2022, which focused on Menopause knowledge and education in women under 40, involving 738 participants. 80% of these women indicated a lack of knowledge about menopause, resulting in emotions such as anger that had a detrimental impact on their lives.

Symptoms of menopause typically persist throughout the entire menopausal transition (until around the mid-50s), although some women may continue to experience them indefinitely. Hot flashes, night sweats, irritability, nervousness, headaches, urinary incontinence, and vaginal dryness were the prevalent symptoms in the research, with variations among women. Some research shows that menopausal signs and symptoms could differ among different cultural groups. For instance, hot flashes affect about 80% of American women, whereas only 10% of Japanese women experience this symptom. Certain researchers believe that this could be attributed to variations in dietary habits, way of life, or societal views on aging (Talaulikar, 2022).

Frequently, the initial indication of approaching menopause is a alteration in the duration of your menstrual cycle. The length between periods can vary, either being longer, shorter, or a mix of both. The current research found that 14 percent of the sample surveyed reported experiencing vaginal bleeding. El Khoudary et al., 2022, determined that excessive bleeding may indicate the presence of fibroid tumors, uterine polyps, or uterine cancer and requires assessment by a healthcare provider.

The most prevalent symptom of menopause is hot flashes. Based on certain research, hot flashes are experienced by up to 70% of women going through perimenopause and have a significant impact on their daily lives (Sandru, 2021). Typically lasting 2-3 years, some women may have them for as long as 5 years. A smaller number of people may possess them for over 15 years (Hardy et al., 2018). While Hachul et al., 2021 found around 42% of women experience hot flashes during menopause, with most occurring in the premenopausal phase (67%), a contrast to this study's findings showing that 80% of women face hot flashes

during menopause. All of them are in the pre-menopausal stage. This could be because of variations in diet, lifestyle, or cultural beliefs about getting older.

Current research shows that around 40 percent of women going through menopause experience urinary leakage, known as urinary incontinence. This finding is in line with other studies that have found a higher prevalence of urinary incontinence among post-menopausal women, as noted by Mushtaq et al., 2023 and Huang et al., 2023.

Sexual changes, along with vaginal dryness, become more common in the early post menopause period. Vaginal dryness might be tied to certain sexual issues women experience, like pain during intercourse. Kaur, 2021 discovered that around 56% of women experience vaginal dryness after menopause, which aligns with our study's results showing that 48% of menopausal women reported issues with vaginal dryness.

Menopausal women experience hormonal shifts leading to higher rates of constipation, exacerbated by stress, poor lifestyle choices, and menopausal anxiety. This study counters previous research by Gul & Bulut, 2021 which found no constipation issues among menopausal women with high quality of life. The cause might be that the females in the research adhered to a healthy routine, consuming ample water, engaging in frequent exercise, and incorporating plenty of fiber into their diet. Baena et al., 2022, suggests that an exercise program as part of one's lifestyle had a beneficial impact on symptoms related to menopause, particularly in areas such as couple dynamics, mental well-being in women aged 45 to 60. can prevent or correct the issue. This aligns with the findings of the present study, which revealed highly significant differences between the pre-test and post-test results ($P < 0.001$).

In relation to the muscle relaxation technique discussed in this research, results showed that scores in the study group improved significantly one month after the intervention compared to before ($P < 0.001$). This finding is in line with the research of Aksu & Erenel, 2022 Findings showed a significant difference in scores before and after the intervention in the study group ($P = 0.05$) (Huang et al., 2023).

The current research effectively taught women various psychophysical methods including deep breathing exercises, mind relaxation techniques, physical relaxation techniques, and kegel exercises, showing a significant difference between pretest and follow-up test results. This is in line with the findings of Badr El Din et al., 2012 except for kegel exercises. Statistical discrepancies in pre/post-tests related to menopausal symptoms indicate the positive impact of our psychophysical intervention.

Summary

The purpose of this study was to assess how educational interventions can improve the experience of transitioning through menopause. Our research revealed that providing suitable training to women going through menopause can enhance their overall health. Educational intervention and education lead to improved health by reducing menopausal stage issues and intensity. Hence, it is stressed that there is a crucial need to plan and execute a suitable educational program to enhance the quality of life for this demographic. Participants had an average age of 51 ± 8.7 , 12.9% had no literacy skills, and vaginal bleeding rose as participants grew older. The rate of urinary incontinence rose in relation to the pre-menopausal stage. There was a notable improvement observed in all menopausal issues except for vaginal dryness and vaginal bleeding between the initial test and the follow-up tests, showing highly significant differences regarding these problems. Following the educational intervention, there was an increase in the percentages of knowledge and exercise performances.

Conclusion

The results of the research showed that Egyptian women lack sufficient understanding about menopause. However, the educational program aimed at decreasing menopausal symptoms has a notable impact on increasing knowledge scores in pre-menopausal women compared to their initial test scores. It provides valuable knowledge to community and maternal health nurses, inspiring them to organize health awareness

campaigns. This in turn assists in enhancing the quality of life for women during the menopausal transition by increasing the understanding of pre-menopausal women.

Recommendation

- More educational program should be carrying out for women to make different aging changes safer and comfortable.
- Additional educational program should be done to manage post-menopausal problems related to hormonal deficit.
- The research can be replicated with a larger sample size to confirm the results and improve their overall applicability.
- A comparative study can be performed to determine the similarities or differences in knowledge and practices between urban and rural populations.
- Different teaching strategies can be utilized for a similar study.

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