Analysis on the Knowledge, Attitude and Practices Regarding Menopause and Hormonal Replacement Therapy Among Surgically Menopause Women

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Abstract

Background: Surgical menopause results in abrupt reduction of ovarian hormones and is linked with heightened risk of cardiovascular diseases as well as, musculoskeletal, neurocognitive, psychiatric and urogenital changes, including sexual dysfunction.
Objective: To explore the knowledge, attitude and practices (KAP) of surgically menopause women towards menopause and hormonal replacement therapy (HRT)
Methods: A descriptive cross-sectional study conducted from May 2024 to April 2025 among 92 surgically menopause women. Respondents answered a validated questionnaire regarding their KAP on menopause and HRT.
Results: Majority of the respondents were 41-45 (40.2%) and 46-50 (42.4%) years old at the time of surgery. The most common symptoms were hot flashes/night sweats (60.9%) and vaginal dryness (55.45%) with onset occurring more than 12 months after surgery. Participants demonstrated a neutral understanding of both knowledge on menopause and HRT (mean score 3.03, 2.96). A notable finding was their limited awareness of HRT's effectiveness in treating hot flashes (mean score 2.76), contrasting with a stronger belief in its cosmetic benefits, (mean score 3.15). Attitudes toward menopause and HRT were also neutral. The primary factor influencing HRT use was physician's recommendations. While approximately half of the women discussed the surgical induction of menopause and the need for HRT, only 47.8% were prescribed HRT.
Conclusion: Majority of women have fair knowledge on menopause and HRT. Women are not fully familiar with the uses of HRT. The neutral responses across the KAP points the need for educational intervention for fostering a more informed and empowered patient population.

Key words: hormonal replacement therapy (HRT), surgical menopause

Introduction

Menopause is a phase in every woman's life that is inevitable. The World Health Organization defines natural menopause as deemed to have occurred with cessation of menstruation for 12 consecutive months.[1] The average age of menopause among Filipino women is said to be 48 years old.[2] As a woman enters the menopause state, ovarian hormone production gradually ceases and the nature of relationships between hormones, body size, ethnicity, metabolic status and cardiovascular diseases symptoms risk differ.

Surgical menopause is defined as bilateral salpingo-oophorectomy (with or without concurrent hysterectomy) prior to menopause. These patients, either, through bilateral oophorectomy for benign causes or risk-reducing bilateral salpingo-oophorectomy (RRSO) in women with BRCA mutation, experience abrupt reduction in circulating

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ovarian hormones. These ovarian hormones become more substantially reduced during surgical menopause, as compared to natural menopause. The abrupt cessation of ovarian function before age 45 is said to be associated with higher risk for cardiovascular diseases and other symptoms involving musculoskeletal, neurocognitive, psychiatric and urogenital changes.[3,4,5] Stuursma et al. reported on the severity and duration of menopausal symptoms after RRSO, and they noted that 69% or 137 out of 199 women who had undergone RRSO before age 52, reported moderate or severe symptoms with mean of 7.9 years after oophorectomy, which included psychological, urogenital and/or somato-vegetative symptoms.[6]

This study will provide valuable insights into the knowledge, attitudes, and practices of women who underwent surgical menopause, particularly regarding menopause and the use of hormone replacement therapy (HRT). It aimed to generate data that can enhance awareness on key aspects of menopausal health and well-being. Additionally, the study will characterize the symptomatology associated with abrupt menopause and help improve awareness among patients who may require menopause-inducing surgery, ultimately shaping their outlook and behavior toward the use of HRT after surgery.

Objectives of the Study

General Objective

The primary objective of this study was to evaluate the knowledge, attitude and practices of surgically menopause women on menopause and hormonal replacement therapy.

Specific Objective

1. To measure the level of knowledge of women who underwent menopause-inducing surgery on its associated causes and symptoms, systemic effects (neurological, psychological, cardiovascular, metabolic effect, genitourinary), health risks and hormonal replacement therapy.
2. To know the attitude of women on surgically-induced menopause and hormonal replacement therapy
3. To determine the current practices and behaviors adapted by women to manage menopause symptoms, including hormonal replacement therapy.

Methods

Research Design

This study utilized a cross-sectional descriptive study design using KAP questionnaire involving surgically menopause women to determine their baseline knowledge, attitude and practices regarding menopause and hormonal replacement therapy.

Study Population

Study participants included in the study were patients who underwent bilateral oophorectomy, total abdominal hysterectomy with bilateral salpingo-oophorectomy or risk-reducing oophorectomies from July 2019 to June 2024 at a tertiary hospital in Manila.

Inclusion criteria:

- Filipino
- Surgical menopause (bilateral oophorectomy, total abdominal hysterectomy with bilateral salpingo-oophorectomy or risk-reducing oophorectomies)
- Surgery done prior to natural menopause at the time of surgery

Sampling Methodology and Sample Size

The researcher utilized a purposive sampling design to select the study participants. A minimum of 89 respondents were required in this study based on the 13% proportion of women who knew about hormonal replacement therapy as a treatment option for menopause.[7] This computation also accounts for a 5% level of significance and 7% desired half-width of the confidence interval. The study achieved a total of 92 participants who were qualified based on the inclusion criteria.

Data Collection

After securing the approval from Committee on Research and the institution's Ethics Board, an interview-based questionnaire was constructed, translated to Filipino language and was subjected to content validation by an expert panel. The content validity review was conducted by five experts in medical field. The experts' feedback defined important insights into the relevance and comprehensibility of the questions posed. A 4-point Likert scale was used to rate item relevance and clarity, while comment sections were available for expert opinions regarding comprehensiveness. Items with a Content Validity Index (CVI) of 0.78 and above were included in the final questionnaire.

This constructed questionnaire was then piloted among a small group of 20 females with the diagnosis of interest to validate the questionnaire. Corrections to the questionnaire was done to ensure that the data collected was appropriate to the objectives of the study. The primary investigator obtained consent from the attending physician and resident-in-charge to contact private and social service patients, respectively. After securing consent and stating the purpose of the study, the primary investigator proceeded with the face-to-face interview, telephone call or zoom meeting and answered the data collection sheet. The consent form was filled up through hard copy signature or google forms. The interview was limited to a maximum of 20 minutes. Each data was anonymized using a code. The information collected were tallied. At the end of each interview, the researcher compiled the responses through Microsoft Word version 16 and Microsoft Excel version 16 and were used for further data analysis.

The following sociodemographic data were recorded in a data collection form:

- Age
- Age of menarche and menstrual profile
- Age of surgical menopause
- Marital status
- Level of education
- Family history (ovarian, gynecologic, breast, colorectal cancer)
- Co-morbidities (hypertension, diabetes mellitus, obesity, breast cancer)
- Lifestyle and behavioral factors (smoking, alcohol, physical activity)

Statistical Analysis

Descriptive statistics was used to summarize the demographic and clinical characteristics of the patients. Frequency and proportion was used for categorical variables, median and inter quartile range for non-normally distributed continuous variables, and mean and SD for normally distributed continuous variables. Chi- square tests for various relationships between knowledge, attitudes, and factors influencing decisions about menopause and HRT. Null hypotheses were rejected at 0.05 α-level of significance. SPSS (Statistical Package for the Social Sciences) was used for data analysis. The KAP of the participants was classified based on the responses obtained from each KAP section in the questionnaire. A score of 0- 5 were assigned via Likert scale on each question. The data were analyzed using Pearson product-moment correlation.

Results and Discussion

The study included 92 women who underwent surgical menopause at a tertiary hospital in Manila from July 2019 to June 2024. Table 1 presents a detailed breakdown of various demographic and health-related characteristics of the respondents.

Majority of women (42.4%) experienced surgical menopause between the ages of 46-50, with another significant portion (40.2%) having the surgery between 41-45 years of age. A smaller group (17.4%) started surgical menopause after the age of 50 which is beyond the average age of menopause among Filipinos. This group of women who experienced menopause in later life, may potentially face menopausal symptoms due to age-related factors besides the abrupt cessation of hormones induced by surgery. Menarche occurred predominantly between 12-14 years old in 54 (58.7%) participants with 38 (41.3%) occurring between the ages of 9 and 11. Menstrual cycle length and regularity, however, were not included in this study.

The distribution of marital status was also diverse: 26 (28.3%) respondents were married, 24

Table 1. Demographic characteristics of the respondents (N=92).

No.	Variable	Items	Frequency (No. of Respondents)	Percentage (%)
1	Age	<40	0	0.0%
		41-43	7	7.6%
		44-46	19	20.7%
		47-49	27	29.3%
		>50	39	42.4%
2	Age of Menarche	9-11	38	41.3%
		12-14	54	58.7%
		15-17	0	0.0%
		>18	0	0.0%
3	Age of Surgical Menopause	<35	0	0.0%
		36-40	0	0.0%
		41-45	37	40.2%
		46-50	39	42.4%
		>50	16	17.4%
4	Years since Surgical Menopause	<1 year	26	28.3%
		1-2	19	20.7%
		3-4	21	22.8%
		>5 years	26	28.3%
5	Marital Status	Married	26	28.3%
		Separated	19	20.7%
		Single	24	26.1%
		Widowed	23	25.0%
6	Family Health Status	None	24	26.1%
		Breast Cancer	14	15.2%
		Colon Cancer	9	9.8%
		Myoma and/or Ovarian Mass	2	2.2%
		Ovarian Cancer	12	13.0%
		Other Non- Gynecologic Cancer	12	13.0%
		Other Gynecologic Cancer	19	20.7%
7	Level of Education	None	0	0.0%
		Elementary Level	7	7.5%
		High School Level	45	48.9%
		College Level	40	43.0%
		Post-Graduate	0	0.0%
8	Comorbidties	None	25	27.2%
		Breast Cancer	1	1.1%
		Colorectal Cancer	0	0.0%
		Diabetes Mellitus	29	23.8%
		Hypertension	44	36.1%
		PCOS	5	4.1%
		Thyroid Disease	5	4.1%
9	Lifestyle and Behavioral Factors	None	25	27.2%
		Alcohol	16	17.4%
		Physical Activity	26	28.2%
		Sexual Activity	21	22.8%

(26.1%) were single, 23 (25.0%) were widowed, and 19 (20.7%) were separated. This varied marital status suggests differing levels of social and emotional support among participants, which may influence their coping mechanisms during the menopausal phase.

In terms of education, 43% of the respondents reached college level and 48.9% reached high school level. This level of education likely contributes to the women's understanding of menopause and hormonal replacement therapy, as they may have greater access to information and resources.

Family health history showed that 24 (26.1%) respondents reported no significant history of cancer, while a considerable portion of participants reported a family history of various cancers: 14 (15.2%) reported breast cancer, 12 (13%) reported ovarian cancer, and 19 (20.7%) reported other gynecologic cancers. These findings highlight the importance of genetic predisposition in understanding the participants' health risks, as women with a family history of cancer may have different health concerns and approaches to managing menopause.

Comorbidity data revealed that a significant number of participants had hypertension (36.1%) and diabetes mellitus (23.8%), two common conditions that often accompany aging. The presence of these chronic conditions may complicate the management of menopause symptoms, as they can contribute to additional health risks. Among 92 respondents, 25 (27.2%) respondents have no co-morbid conditions. As for lifestyle factors, Table 1 shows a variety of behaviors: 25 (27.2%) respondents reported no alcohol consumption, physical activity, or smoking, while 16 (17.4%) respondents consumed alcohol, and 8 (8.7%) smoked. Only 26 (28.2%) respondents engaged in some sort of physical activity.

In summary, Table 1 provides a comprehensive overview of the demographic and health characteristics of surgically menopausal women. It highlights the diversity in age, health status, comorbidities, and lifestyle behaviors among the study population. These findings will be instrumental for Manila Doctors Hospital in developing tailored programs for the menopause clinic, with a focus on enhancing patient education, supporting women's health, and addressing the specific needs of surgically menopausal women.

Surgical Menopause Profile

Table 2 presents a comprehensive overview of various symptoms reported by surgically menopause women, highlighting the frequency and timing of the onset of these symptoms.

Table 2. Surgical menopause profile of respondents (n=92)

Items	Frequency (No. of Respondents)	Percentage (%)
I experience BP elevation after surgical menopause.	**46**	**50.0%**
(If Yes) When did the symptoms started?		
Less than 3 months	6	13.0%
4-6 months	3	6.5%
7-9 months	7	15.2%
10-12 months	2	4.3%
More than 12 months	28	60.9%
I experience hot flashes and night sweats.	**56**	**60.9%**
(If Yes) When did the symptoms started?		
Less than 3 months	6	10.9%
4-6 months	3	5.5%
7-9 months	3	5.5%
10-12 months	6	10.9%
More than 12 months	37	67.3%
I experience bone or joint pains.	**42**	**45.7%**
(If Yes) When did the symptoms started?		
Less than 3 months	2	5.3%
4-6 months	3	7.9%
7-9 months	3	7.9%
10-12 months	1	2.6%
More than 12 months	29	76.3%
I experience depressive mood.	**40**	**43.5%**
(If Yes) When did the symptoms started?		
Less than 3 months	0	0.0%
4-6 months	2	5.7%
7-9 months	4	11.4%
10-12 months	4	11.4%
More than 12 months	25	71.4%
I experience restlessness and/or nervousness.	**43**	**46.7%**
(If Yes) When did the symptoms started?		
Less than 3 months	0	0.0%
4-6 months	3	8.6%
7-9 months	3	8.6%
10-12 months	4	11.4%
More than 12 months	25	71.4%

I experience being forgetful.	**41**	**44.6%**
(If Yes) When did the symptoms started?		
Less than 3 months	5	13.5%
4-6 months	2	5.4%
7-9 months	3	8.1%
10-12 months	2	5.4%
More than 12 months	25	67.6%
I experience skin wrinkling.	**36**	**39.1%**
(If Yes) When did the symptoms started?		
Less than 3 months	3	8.6%
4-6 months	3	8.6%
7-9 months	3	8.6%
10-12 months	5	14.3%
More than 12 months	21	60.0%
I experience vaginal dryness.	**51**	**55.4%**
(If Yes) When did the symptoms started?		
Less than 3 months	0	0.0%
4-6 months	7	14.3%
7-9 months	5	10.2%
10-12 months	5	10.2%
More than 12 months	32	65.3%
I experience pain or discomfort during sexual encounter.	**46**	**50.0%**
(If Yes) When did the symptoms started?		
Less than 3 months	2	4.5%
4-6 months	11	25.0%
7-9 months	5	11.4%
10-12 months	7	15.9%
More than 12 months	19	43.2%
I experience lack of sexual interest.	**42**	**45.7%**
(If Yes) When did the symptoms started?		
Less than 3 months	5	12.8%
4-6 months	2	5.1%
7-9 months	2	5.1%
10-12 months	3	7.7%
More than 12 months	27	69.2%

Hot flashes and night sweats were the most common symptoms noted in 56 (60.9%) respondents. This was followed by vaginal dryness in 51 (55.4%) respondents, pain or discomfort during sexual encounter in 46 (50%) participants and blood pressure (BP) elevation in 46 (50%) participants. The least reported symptom was skin wrinkling in 36 (39.1%) participants. A striking pattern emerged based in these data: for nearly all symptoms including BP elevation (60.9%), hot flashes (67.3%), bone/joint pain (76.3%), depressive mood (71.4%), restlessness/nervousness (71.4%), forgetfulness (67.6%), skin wrinkling (60.0%), vaginal dryness (65.3) and lack of sexual interest (69.2), the majority of women experienced these symptoms more than 12 months after their surgical procedures. Only a small percentage reported symptoms within the first three months This delayed onset underscores the need for comprehensive, long-term care and support for surgically menopausal women. Addressing both physical and psychological symptoms through ongoing monitoring, education, and treatment options will be critical in helping women manage their post-surgical menopause experience. This finding is supported by the study of Stuursma et al which reported moderate or severe menopause symptoms 7.9 years after oophorectomy.[4]

Knowledge on Menopause and HRT

Table 3 presents the respondents' knowledge about menopause and HRT, with each item showing a neutral understanding of the various menopause-related symptoms and conditions.

The highest mean score was for the statement "Menopause causes hot flashes and night sweats," with a mean of 3.2717, coinciding with the most common reported symptom. In contrast, the lowest mean score was for the statement "Menopause causes skin wrinkling," with a mean of 2.7065.

A study by Tariq et al.[8] found that many women have an inconsistent understanding of menopause, often due to a lack of comprehensive education and misinformation. In their research, they discovered that while women were generally familiar with common menopause symptoms like hot flashes, fewer had a solid grasp of the more complex and long-term effects, such as the increased risk of osteoporosis or cardiovascular disease. This aligns with the findings presented in this study. While more familiar symptoms, like vaginal dryness, had a slightly higher mean score, less obvious consequences, such as skin wrinkling and sexual problems, were less understood, showing a gap in knowledge.

The respondents' knowledge of hormonal replacement therapy (HRT) had an overall neutral understanding (overall mean = 2.96). The highest perceived benefit of HRT was its ability to "help

Table 3. Knowledge on menopause and HRT among surgically menopause women (N=92)

Items	Mean	Std. Deviation	Meaning
Natural menopause is considered as having no menses for 12 months.	2.9348	1.60907	*Neutral*
Women who had removal of both ovaries are the same as being menopause.	3.0217	1.58965	*Neutral*
Menopause is associated with cardiovascular disease or stroke.	3.1087	1.59296	*Neutral*
Menopause causes hot flushes and night sweats.	**3.2717**	**1.61792**	***Neutra l***
Menopause causes irritability.	3.0326	1.55804	*Neutral*
Menopause causes osteoporosis.	3.1304	1.57045	*Neutral*
Menopause causes depression.	3.0109	1.50088	*Neutral*
Menopause causes anxiety and nervousness.	3.1413	1.50151	*Neutral*
Menopause may cause dementia.	3.0978	1.48294	*Neutral*
Menopause causes skin wrinkling.	**2.7065**	**1.53019**	***Neutra l***
Menopause causes vaginal dryness.	3.2065	1.52300	*Neutral*
Menopause causes bladder problems.	2.9891	1.66076	*Neutral*
Menopause causes sexual problems.	2.7935	1.47162	*Neutral*
Overall	**3.03**	**0.43**	**Neutral**
Are you aware of HRT	2.7935	1.57967	*Neutral*
HRT prevents development of osteoporosis	2.9783	1.60342	*Neutral*
HRT improves the mood	3.0435	1.62341	*Neutral*
HRT improves hot flashes	**2.7609**	**1.61972**	***Neutra l***
HRT improves energy level	3.1087	1.58604	*Neutral*
HRT improves memory	2.9891	1.53705	*Neutral*
HRT protects from heart disease	2.9022	1.59711	*Neutral*
HRT improves vaginal dryness	2.9565	1.58227	*Neutral*
HRT helps you look younger	**3.1413**	**1.61437**	***Neutra l***
Overall	**2.96**	**0.54**	**Neutra l**

Legend: 1.00 – 1.50 = Strongly Disagree; 1.51 – 2.50 = Disagree; 2.51 – 3.50 = Neutral; 3.51 – 4.50 = Agree; 4.51 – 5 = Strongly Agree

you look younger" (mean = 3.14), suggesting focus on cosmetic benefits. Conversely, the lowest mean score was for "HRT improves hot flashes," (mean = 2.76), indicating that respondents have a relatively lower level of awareness or confidence in HRT's effectiveness for managing hot flashes, a primary menopausal symptom. Hot flashes is one of the most widely recognized menopausal symptoms, so this result may suggest that while some women are familiar with the potential benefits of HRT, there seem to be a significant gap: women are less confident regarding HRT's effectiveness for a primary menopausal symptom, while more women are aware of HRT's "cosmetic benefits". Due to media portrayal, women often disproportionately focus on perceived risks and underestimate the significant benefits of HRT for bothersome menopausal symptoms, bone health, and even potential positive effects when started during the "window of opportunity".[9]

This neutral perception toward HRT is reflected in the 2017 publication of the North American Menopause Society (NAMS) which stated that many women's understanding of HRT is incomplete,

often driven by outdated or generalized information, and lacking the nuanced scientific context that has emerged since the initial WHI reports. NAMS acknowledges that many women (and even some healthcare providers) still harbor significant fear and misconceptions about HRT, primarily stemming from the initial, widely publicized, and often oversimplified negative results of the WHI trial. This has led to an underutilization of a therapy that could significantly improve their quality of life.[9]
It also highlighted that much of the information women receive about HRT is either oversimplified or not sufficiently explained, which can lead to misconceptions or a lack of confidence in the therapy.[9]

Attitude Towards Menopause and HRT

Table 4 shows that respondents hold a neutral overall attitude towards menopause (overall mean = 2.99).

The respondents indicated a relatively higher awareness of menopause symptoms prior to surgery (mean = 3.30). The neutral score on the statement "Menopause is loss of value in society" (mean = 2.68) indicates a less negative social perception. The overall neutral attitude reflects a balanced understanding of menopause, with an acknowledgment of its challenges but without seeing it as a significant societal or personal problem. This neutral perception may point to a growing acceptance of menopause as a natural and inevitable part of life, but also a recognition that it comes with both physical and emotional challenges.

This neutral attitude aligns with findings by Al Swayied et al.[10], who noted that many women experience menopause with a range of attitudes, from acceptance to resistance. This study noted that, while some women viewed menopause as a natural and inevitable life stage, others struggled with the physical and psychological changes it brought. The researchers emphasized that menopausal women are often influenced by their social environments, personal health, and cultural attitudes.[10] Women who felt supported by their families and communities were more likely to have a positive outlook, while those without adequate support networks were more likely to experience menopause as a negative,

Table 4. Attitude towards menopause and HRT among surgically menopause women (n=92)

Items	Mean	Std. Deviation	Meaning
I am aware of symptoms of menopause before the operation	**3.3043**	**1.56007**	***Neutral***
Surgical menopause is not a problem	3.0000	1.61722	*Neutral*
Menopause is perceived as loss of youth	3.0652	1.48845	*Neutral*
Menopause is perceived as loss of physical beauty	2.9239	1.71761	*Neutral*
Menopause affects general health and well-being	2.8913	1.58604	*Neutral*
Surgical menopause is the same as natural menopause	3.0761	1.57755	*Neutral*
Menopause is loss of value in society	2.6848	1.51134	*Neutral*
Overall	**2.99**	**0.69**	**Neutral**
HRT is a good solution, if you have symptoms	3.1413	1.52331	*Neutral*
HRT is appropriate for all surgically menopause women	3.2283	1.57664	*Neutral*
HRT needs to be avoided	2.8478	1.53304	*Neutral*
HRT is good for preventing age-related health problems	3.0978	1.65124	*Neutral*
HRT has many complications and side effects	**3.3370**	**1.49928**	***Neutral***
Natural approaches are better than HRT	3.0543	1.61289	*Neutral*
Overall	**3.12**	**0.69**	**Neutral**

Legend: 1.00 – 1.50 = Strongly Disagree; 1.51 – 2.50 = Disagree; 2.51 – 3.50 = Nutral; 3.51 – 4.50 = Agree; 4.51 – 5 = Strongly Agree

disruptive life phase. Their study also highlighted that educational initiatives can shift attitudes towards menopause, helping women embrace it as a normal life transition rather than a loss of vitality or beauty.

The respondents also hold a neutral overall attitude towards HRT use (overall mean = 3.12). The highest mean score (mean 3.34) was for the statement "HRT has many complications and side effects," indicating that, on average, respondents are aware of and are concerned about the potential risks of HRT. The lowest mean (mean = 2.85) was for the statement "HRT needs to be avoided". While still within the neutral range, this lower score suggests that despite concerns about side effects, respondents do not strongly believe that HRT should be completely avoided, indicating a potential openness or ambivalence rather than outright rejection. A study by Bhatta et al highlights that women are ambivalent about using HRT due to concerns over its side effects and potential risks, particularly regarding its potential link to cancer or heart disease.[11] It also emphasizes that women need more information and guidance to make informed decisions about whether to pursue HRT as a treatment option. The study stressed the importance of ensuring that women have access to balanced, reliable information to guide them in making the best choice for their health and well-being.

Influence and Practices on HRT use

Table 5 highlights the factors that influence the decision to use HRT, with the overall neutral mean of 3.04.

The highest means were for the factors "Physicians recommend it" (mean = 3.07) and "Presence of medical conditions," (mean = 3.08), which suggest that medical advice and personal health conditions play a moderate role in influencing the decision to use HRT. The lowest mean score of 2.9891 was for "Would not cause cancer," reflecting some concerns about the safety of HRT, particularly regarding its potential link to cancer. This suggests that while medical recommendations and personal health circumstances are significant considerations, safety concerns still play a notable role in shaping the women's decisions. As stated in NAMS, while many women seek HRT to relieve bothersome menopausal symptoms, concerns about its potential risks, especially the risk of breast cancer, can make them hesitant to pursue it. Therefore, women need personalized advice that considers their unique medical history, symptoms, and the potential long-term effects of HRT, ensuring that decisions are made with both benefit and risk in mind.[9]

Table 6 outlines the reported practices of respondents concerning their surgical menopause.

Majority of the respondents (54.3%), discussed with their OB-GYN that the surgery would induce menopause and 51.1% discussed the need for HRT after surgery. This suggests that many women are aware of the inevitable hormonal changes post-surgery, and this awareness may help them mentally prepare for the transition. Similarly, 52.2% of respondents consulted for the menopausal symptoms they experienced, and 51.1% of respondents had undergone physical examinations or diagnostics

Table 5. Factors that influence decision to use HRT among surgically menopause women (N=92).

Items	Mean	Std. Deviation	Meaning
Physicians recommends it	**3.0652**	**.86195**	***Neutral***
Effective to relieve menopausal symptoms	2.9783	.86416	*Neutral*
Would not cause cancer	2.9891	.83198	*Neutral*
Would require frequent check-ups	**3.0761**	**.80156**	***Neutral***
Friends or relatives take it without problems	3.0435	.85051	*Neutral*
Concerns for cost	3.0435	.78325	*Neutral*
Presence of medical conditions	**3.0761**	**.75932**	***Neutral***
Overall	**3.04**	**0.35**	**Neutral**

Legend: 1.00 – 1.50 = Strongly Disagree; 1.51 – 2.50 = Disagree; 2.51 – 3.50 = Neutral; 3.51 – 4.50 = Agree; 4.51 – 5 = Strongly Agree

post-surgery. Only 47.8% were prescribed HRT, suggesting that even when women are aware of menopause and its symptoms, they may not always be given the opportunity to use HRT, which could be due to either medical judgment or the patient's decision. Additionally, 44.6% of women were prescribed other medications to manage menopausal symptoms, indicating that non-hormonal treatments were often recommended. When asked if they would take HRT if prescribed, 50% expressed willingness to take it, which reflects a neutral stance, as respondents seem open to using HRT but may have reservations, possibly due to concerns about its long-term effects or side effects.

These findings highlight that there is a notable discrepancy between HRT awareness and its actual prescription or uptake. The gap may stem from variations in patient-provider communication as supported by Lu et al. (2023), clear, comprehensive patient education and open communication with health care providers are crucial to address misconceptions and empower women to make informed decisions about HRT and other management options.[12]

Table 7 presents the results of the Chi-square tests for various relationships between knowledge, attitudes, and factors influencing decisions about HRT.

Table 6. Practices on surgical menopause of the respondents.

Items	Frequency (No. of Respondents)	Percentage (%)
Did you discuss with your OBGYN that the surgery will induce menopause?	50	54.3%
Did you discuss with your OBGYN that you need to take HRT after operation?	47	51.1%
Did you consult for the menopausal symptoms you experience	48	52.2%
Have you undergone any physical examination or diagnostics after menopause	47	51.1%
Were you prescribed with HRT?	44	47.8%
Were you prescribed with other medications for menopausal symptoms?	41	44.6%
If you will be prescribed with HRT, will you take it?	46	50.0%

Table 7. Chi-square test results for the relationships between the knowledge, attitude and practices towards menopause and HRT use.

Variable 1	Variable 2	Value	df	Asymptotic Significance (2- sided) *p-values*	Meaning
Knowledge on Menopause	Knowledge on HRT	469.284	460	0.372	Not Significant
	Attitude Towards Menopause	478.277	483	0.552	Not Significant
	Attitude Towards HRT use	396.913	391	0.407	Not Significant
	Factors that influence decision to use HRT	336.618	299	0.066	Not Significant
Knowledge on HRT	**Attitude Towards Menopause**	**483.344**	**420**	**0.018**	**Significant**
	Attitude Towards HRT use	**392.061**	**340**	**0.027**	**Significant**
	Factors that influence decision to use HRT	245.169	260	0.737	Not Significant
Attitude Towards Menopa use	Attitude Towards HRT use	377.359	357	0.220	Not Significant
	Factors that influence decision to use HRT	231.859	273	0.966	Not Significant
Attitude Towards HRT use	Factors that influence decision to use HRT	179.120	221	0.982	Not Significant

*Note: Analysis is significant at the *0.05 level (2-tailed)*

The p-values for most comparisons are above the significance threshold of 0.05, indicating that the relationships between variables such as "Knowledge on Menopause" and "Knowledge on HRT," or "Attitude Towards Menopause" and "Attitude Towards HRT use," were not statistically significant. These findings suggest that knowledge about menopause and HRT, as well as attitudes toward HRT, are not strongly correlated in this cohort of respondents. However, two comparisons did yield significant results: "Knowledge on HRT" and "Attitude Towards Menopause," with a p-value of 0.018, and "Attitude Towards HRT use" and "Knowledge on HRT," with a p-value of 0.027. These significant results suggest that women who have more knowledge about HRT tend to have more positive attitudes toward both menopause and the use of HRT. In other words, increasing knowledge about HRT might positively influence attitudes toward managing menopause and considering HRT as a treatment option.

The findings highlight that there is some relationship between knowledge and attitude, but it is not strong enough to apply to all variables tested in the study. This claim is supported by research from Wang et al.[13], which emphasizes the significant role that knowledge plays in shaping attitudes toward menopause and HRT. The study found that women who had greater knowledge about menopause and HRT were more likely to have positive attitudes toward using HRT, especially when they understood its potential benefits, like alleviating hot flashes and preventing osteoporosis. However, authors also noted that women who lacked knowledge of these treatments tend to hold more negative or ambivalent views toward HRT. This aligns with the findings in Table 7, where significant associations between knowledge and attitude suggest that enhancing women's knowledge about HRT could improve their attitudes toward both menopause and the use of HRT. Authors further stated that a more informed population of women could lead to better healthcare decisions, as women would be more confident in choosing HRT or other treatments that align with their health goals. This research underscores the importance of providing accurate, comprehensive, and balanced information to women, so they can make better-informed decisions regarding menopause management and the role of HRT.

Table 8 shows the results of the Spearman correlation analysis, which examines the relationship between various factors, such as knowledge of menopause, knowledge of HRT, and attitudes toward menopause and HRT use.

Table 8. Spearman correlation analysis variable 1 variable 2 value meaning sig. (2-tailed) meaning.

Variable 1	Variable 2	Value	Meaning	Sig. (2-tailed)	Meaning
Knowledge on Menopause	Knowledge on HRT	0.053	Negligible Correlation	0.614	Not Significant
	Attitude Towards Menopause	0.079	Negligible Correlation	0.454	Not Significant
	Attitude Towards HRT use	0.137	Negligible Correlation	0.194	Not Significant
	Factors that influence decision to use HRT	0.174	Negligible Correlation	0.097	Not Significant
Knowledge on HRT	Attitude Towards Menopause	-0.024	Negligible Correlation	0.819	Not Significant
	Attitude Towards HRT use	0.092	Negligible Correlation	0.385	Not Significant
	Factors that influence decision to use HRT	0.056	Negligible Correlation	0.596	Not Significant
Attitude Towards Menopause	Attitude Towards HRT use	-0.089	Negligible Correlation	0.398	Not Significant
	Factors that influence decision to use HRT	0.076	Negligible Correlation	0.474	Not Significant
Attitude Towards HRT use	Factors that influence decision to use HRT	0.008	Negligible Correlation	0.940	Not Significant

The correlation coefficients across all comparisons were very low, ranging from - 0.089 to 0.174, and all p-values were above the 0.05 significance threshold, indicating that none of the correlations were statistically significant. This suggests that there is little to no relationship between variables such as knowledge on menopause and knowledge on HRT, or between attitudes toward menopause and attitudes toward HRT use. In other words, the study found negligible correlations, meaning that having more knowledge about menopause does not necessarily translate into more knowledge about HRT, and similarly, attitudes toward one issue did not strongly correlate with attitudes toward the other. These findings suggest that factors influencing knowledge and attitudes toward menopause and HRT are more complex than a simple correlation, and may involve other variables not captured in this analysis.

This lack of significant correlation is consistent with the findings of Verdonk et al.[14] (2022), who noted that knowledge about menopause and attitudes toward HRT are often influenced by separate and distinct factors. The study found that women's understanding of menopause and their attitudes toward HRT were shaped by different sources of information, such as healthcare providers, personal experiences, media, and cultural beliefs. They argued that a woman's general knowledge of menopause does not always correlate with her attitudes toward treatments like HRT because other factors, such as personal health history, family influence, and societal pressures, play a more prominent role in shaping their views. This is reflected in the negligible correlations in Table 8, where knowledge and attitudes toward menopause and HRT do not appear to be strongly connected. This suggests that improving knowledge about menopause and HRT alone may not be sufficient to change attitudes or behaviors, and that a more holistic approach is necessary, one that also addresses cultural, social, and psychological factors to effectively influence both knowledge and attitudes toward menopause and its management.

Conclusion

The study reveals that surgically menopausal women possess a neutral understanding of both menopause and HRT, with notable gaps in knowledge regarding the long-term effects of menopause and the full benefits and risks associated with HRT. While the majority of women reported experiencing common menopause symptoms - such as hot flashes, joint pain, and vaginal dryness - these were often delayed, with many women reporting their onset more than a year after surgery. This delayed onset highlights the need for ongoing monitoring and management, as these long-term symptoms can significantly impact women's quality of life. Attitudes toward menopause were generally neutral, with women acknowledging the physical and emotional challenges of this transition but not viewing it as a significant loss of societal value or personal worth. Similarly, attitudes toward HRT were also neutral, with women recognizing its potential benefits for symptom relief but harboring concerns about its risks and long-term side effects, such as the potential link to cancer or cardiovascular issues.

Although many women were aware of menopause and its associated symptoms, the study also uncovered a gap between knowledge and practice, particularly regarding the prescription of HRT. While a significant number of women discussed their symptoms and the potential need for HRT with their healthcare providers, only a portion were actually prescribed HRT, suggesting that patient-provider communication and decision-making processes may need to be improved. This finding emphasizes the importance of providing comprehensive education about menopause and HRT, addressing any misconceptions, and ensuring that healthcare providers proactively offer treatment options based on each individual's health needs and concerns. The neutral responses across the KAP aspects of this study point to the potential for targeted interventions to bridge these gaps, fostering a more informed and empowered patient population.

Recommendations

Based on the findings of this study, several actionable steps can be taken to improve the care and support for surgically menopausal women. These include the following:

1. Enhance educational and awareness Initiatives: Educational programs should focus on increasing awareness of the full spectrum of menopause symptoms, including the long-term health risks like

osteoporosis and cardiovascular disease. Women should also be educated about HRT, including both its benefits and potential risks, to enable more informed decision-making. These programs should include accessible resources, workshops, or digital platforms to reach a broader audience.

2. Strengthen communication with healthcare providers: Encourage more open and thorough discussions between patients and their OB-GYNs regarding menopause symptoms and the need for HRT. Healthcare providers should be proactive in offering HRT when appropriate, discussing its benefits and risks clearly, and ensuring that patients feel comfortable asking questions. This could help bridge the gap between knowledge and prescription.
3. Offer long-term support and monitoring: Since many symptoms appeared more than a year after surgery, healthcare providers should implement regular check-ups to monitor symptoms like bone density, mental health, and sexual health. Providing long-term care that addresses evolving symptoms will improve quality of life and help manage menopause's long- term effects.
4. Future research: Based on the finding of a "neutral understanding" in this KAP study among surgically menopausal women on HRT suggests significant gaps in their knowledge, pointing to several avenues for future research. Qualitative studies, like focus groups, are crucial to uncover why this neutrality exists, distinguishing between lack of information, confusion, or conflicting advice. Further research may also investigate the doctors' KAP on menopause and HRT use, especially the gynecologists to be able to assess and effectively improve these concepts for health information and practice. It is also recommended to investigate women's information sources, assessing their perceived trustworthiness and accuracy to understand what shapes their views. Concurrently, development and evaluation of targeted educational interventions, such as digital platforms or workshops, to effectively improve women's knowledge and influence their attitudes and practices regarding HRT. Applying health belief model as core framework may give further analysis such as barriers and benefits perceived by women or understanding the factors influencing HRT uptake.

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