A SURVEY ON KNOWLEDGE AND ATTITUDE REGARDING HORMONE REPLACEMENT THERAPY AMONG PREMENOPAUSAL WOMEN IN AND AROUND SULUR COMMUNITY

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ABSTRACT

Hormone Replacement Therapy (HRT) is used to replace declining ovarian hormones during menopause and to manage estrogen deficiency–related symptoms and complications. Although HRT has been used for more than six decades to relieve menopausal symptoms and prevent conditions such as osteoporosis and cardiovascular diseases, its safety became controversial following the Women's Health Initiative study in 2002, which reported increased risks of breast cancer, cardiovascular disease, and stroke in certain populations. A cross-sectional community-based survey was conducted among 101 participants to assess knowledge and attitudes toward HRT. The results showed that 61% of participants were aware of HRT, and 80% correctly identified its role in managing menopausal symptoms. However, knowledge gaps persisted, as only 24% recognized estrogen as the primary hormone replaced, while 44% expressed concern regarding potential side effects. Additionally, 61% perceived menopause as a natural process not requiring medical treatment, highlighting the need for improved awareness and education regarding HRT.

KEYWORDS

Hormone Replacement Therapy, Menopause, Estrogen and Progesterone, Vasomotor Symptoms (Hot Flashes), Osteoporosis, Women's Health Initiative (WHI), Patient Awareness and Attitude, Community-Based Survey, Perimenopause and Postmenopause.

HORMONE REPLACEMENT THERAPY:

1. INTRODUCTION

1.1 DEFENITION:

Hormone Replacement Therapy (HRT) is the administration of synthetic or natural female hormones to compensate for the loss or absence of natural hormones produced in the woman's body. HRT is also known as estrogen replacement therapy (ERT), since the first drugs used in the 1960s for female hormone replacement were estrogen compounds. **(1)**

Hormone therapy for the treatment of estrogen deficiency during menopause has been in Common use for more than 60 years. The long-term use of hormone therapy was believed to Prevent the atherosclerosis, osteoporosis, and increased mortality rates observed post- Menopausal transition. Since 1983, a number of observational studies have shown that the use of hormone therapy was associated with a significant reduction in total mortality rates Compared with nonusers, even after adjusting for confounding variables. The evidence available at that time supported the routine use of hormone therapy to promote longevity in Postmenopausal women. The publication of the Women's Health Initiative (WHI) in 2002 Appeared to challenge these assumptions. For women of mean age 63 years, estrogen-progestin Therapy was associated with a 13% increased risk for composite outcomes, termed the global Index, compared with placebo, without an increase in mortality. In the confusion that followed the publication of this study, it became possible to make mistaken assumptions: that hormone Therapy had similar effects in younger and older women, and that the global index was Associated with an increased risk of death. In 2004, a meta-analysis of randomized trials demonstrated that hormone therapy resulted in a 40% reduction in total mortality in trials of younger women, but not in older women.11 Following the WHI trial, this mortality reduction was found to be "implausible" and "difficult to reconcile." In 2006, a further meta-analysis of randomized trials reported a 32% reduction in coronary heart disease events in younger women. It was not until 2007 that age-specific mortality results from both sides of the WHI trial became available, demonstrating a 30% mortality reduction in women aged under 60 years. A recent cost-effectiveness analysis has demonstrated that hormone therapy administered to younger postmenopausal women for 5-30 years leads to a small increase in life expectancy and a substantial increase in quality-adjusted life-years. **(2)**

HRT is a treatment strategy utilized to control moderate to severe vasomotor symptoms That women commonly experience during the menopausal transition and early postmenopausal Period. Vasomotor symptoms include hot flashes, flushing, and diaphoresis that can occur During the day or at night. HRT is not indicated for the prevention of cardiovascular disease, Cancer, stroke, dementia, or other chronic conditions. To control vasomotor symptoms Associated with menopause, traditional HRT consists of an

estrogen component to replace Hormones produced by the human ovary and progesterone in women with an intact uterus. **(3)**

Hormone replacement therapy (HRT) replaces women with decreased ovarian hormones During the natural menopausal transition to alleviate symptoms, particularly hot flashes and Night sweats. Traditional HRT consists of a combination of estrogen and progesterone to Replace ovarian hormones. HRT, which is FDA-approved, is used to treat severe vasomotor Symptoms of menopause and prevent osteoporosis.

HRT is commonly administered as a short-term treatment of menopausal symptoms During perimenopause. The possible symptoms of menopause are:

- Hot flashes – Vasomotor symptoms
- Vulvovaginal atrophy – Atrophic vaginitis and dryness
- Dyspareunia – Painful sexual intercourse due to vaginal atrophy and lack of lubrication
- Bone loss – Decreased bone mineral density, which can eventually lead to osteopenia,
- Osteoporosis, and fractures
- Decreased sexual desire
- Defeminization – diminished feminine fat distribution and accelerated skin aging
- Sleep disturbances and joint pain.

1.1 MENOPAUSE:

A World Health Organization (WHO) Scientific Group on Research in the Menopause met in 1980 and published recommendations in 1981.

The 1994 WHO Scientific Group on Research in the Menopause elaborated on the relationship between different time periods surrounding the menopause, retained most of the definitions used in the 1980 report, and published the following statement in 1996:

1. The term natural menopause is defined as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity. Natural menopause is recognized to have occurred after 12 consecutive months of amenorrhea for which there is no other obvious pathological or physiological cause. Menopause occurs with the final menstrual period (FMP), which is known with certainty only in retrospect a year or more after the event. An adequate independent biological marker for the event does not exist.

2. The term perimenopause should include the period immediately prior to the menopause (When the endocrinological, biological and clinical features of approaching menopause/commence) and the first year after menopause. The term ‘‘climacteric’’ should be abandoned to avoid confusion.

3. The term menopausal transition should be reserved for that period of time before the FMP when variability in the menstrual cycle usually increases.

4. The term premenopause is often used ambiguously either to refer to the 1 or 2 years Immediately before the menopause or to refer to the whole of the reproductive period Prior to the menopause. The Group recommended that the term be used consistently in the latter sense to encompass the entire reproductive period up to the FMP. **(4)**

1.3 IMPACT ON QUALITY OF LIFE:

Health-related quality of life

The health-related quality of life (HRQoL) was assessed using the SF-8, a multi-purpose, Generic HRQoL measure consisting of 8 questions, designed to be an abbreviated version of the longer SF-36 questionnaire. Women who have experienced menopausal symptoms have Impaired HRQoL compared to women who have not experienced menopausal symptoms. Compared with women who have not experienced menopausal symptoms, women who have experienced Menopausal symptoms had been found to have about 2-point differences in the mental and Physical component summaries of the SF-8. The findings also indicate that depression and Anxiety are two symptoms with largest effects on mental HRQoL, and joint stiffness and heart Palpitations are two symptoms with largest effects on physical HRQoL. There is a humanistic and economic burden for women who reported experiencing menopausal symptoms. **(9)**

1.4 TYPES OF HRT:

There are many estrogen and progesterone preparations that can be used to treat menopausal vasomotor symptoms. The medications can be taken orally, or through topical creams, injections, sprays, patches, gels, subdermal pellets, and vaginal rings. The dosage forms depend on the route of administration. Moreover, the dose of the medication should be tailored to the lowest effective dose. Every route of administration has its own advantages and disadvantages. **(3)**

There are 2 main types of HRT;

a) Combined HRT (oestrogen and progestogen) – for women who still have their womb
b) Oestrogen-only HRT – for women who have had their womb removed in a Hysterectomy

There are several ways that oestrogen can be taken, including:

a. Tablets – which can be taken by mouth
b. A patch that you stick on your skin

c. Oestrogen gel – which is applied to the skin and absorbed
d. Oestrogen spray – which is applied to the forearm **(10)**

1.5 BENEFITS OF HRT:

- **General**

HRT is the most effective treatment for hot flashes and urogenital atrophy. Other menopause-related issues, such as joint and muscle pain, mood swings, sleep problems, and sexual dysfunction (including lowered libido) may also improve with HRT.

- **Postmenopausal osteoporosis**

HRT helps prevent bone loss that comes with menopause and reduces the risk of osteoporosis-related fractures, including vertebral and hip fractures, even in women who are not at high risk.

- **Cardiovascular disease**

Cardiovascular disease is the main cause of illness and death in postmenopausal women. HRT can help improve the cardiovascular risk profile.

- **Other benefits**

Systemic HRT, especially local estrogen, can fix estrogen deficiency issues in the urogenital tract and support vaginal health. HRT also helps connective tissue, skin, joints, and intervertebral disks. Using combined CEE and MPA for over 4 years may lower the risk of colon cancer. **(11)**

1.6 RISKS AND CONCERNS:

- **Breast cancer risk:**

Breast cancer risk remains a major concern and often the main barrier to using and accepting HRT among women. Nearly all cohort studies and the WHI have shown an increased risk of breast cancer with HRT use. **(12)**

- **VTE risks:**

Women taking HRT, particularly those with a history of venous thromboembolism, face a higher risk of this condition. The WHI trial findings also indicate an increased risk with HRT in healthy postmenopausal women. **(13)**

- **Endometrial cancer:**

A systematic review of 28 studies in 2016 confirmed an increased risk of endometrial cancer with the use of unopposed estrogen, even when used for less than five years. This risk can last for over 10 years. The review looked at different combined hormone therapy formulations and found that continuous combined estrogen-progestogen therapy might offer some protection**. (14)**

- **Other risks**

Data from an observational study and randomized double-blinded placebo-controlled trials show that hormone replacement therapy (HRT) can double the risk of gallbladder disease. Gallbladder and biliary tract disease were secondary outcomes in these trials. The studies did not control for other factors such as history of cardiovascular disease and dietary habits that might affect the risk of gallbladder disease. **(13)**

1.7 CURRENT RECOMMENDATIONS AND GUIDELINES:

1) "The 2022 Hormone Therapy Position Statement of The North American Menopause Society" (NAMS) updates "The 2017 Hormone Therapy Position Statement of The North American Menopause Society" and highlights future research needs.

- Hormone therapy remains the most effective treatment for vasomotor symptoms (VMS) and the genitourinary syndrome of menopause. It has been shown to prevent bone loss and fractures.
- The risks of hormone therapy vary based on type, dose, duration of use, route of administration, timing of initiation, and whether a progestogen is included.
- Treatment should be tailored to each individual using the best available evidence to maximize benefits and lower risks. Periodic re-evaluation of the benefits and risks of continuing therapy is important. **(15)**

2) The American College of Obstetricians and Gynecologists (ACOG) has provided recommendations for treating vasomotor and vaginal symptoms related to menopause. **(16)**

- Systemic estrogen hormone therapy (HT), with or without progestin, is the most effective treatment for menopause-related vasomotor symptoms. Evidence from multiple studies supports this effectiveness.
- Oral and transdermal options, such as patches, gels, or sprays, can be used alone or in combination with progestin. These methods have been shown to reduce vasomotor symptoms.
- Low- and ultra-low-dose estrogen may help improve vasomotor symptoms in some women and generally have a better profile for side effects compared to standard doses. **(16)**

3) International Menopause Society on the principles of HRT in the peri- and postmenopausal periods. Throughout the Recommendations, the term HRT will refer to therapies that include estrogens, progestogens, combined therapies, androgens, and tibolone. The IMS understands that there are geographical differences in medical care priorities, disease prevalence, and the views of the public, medical community, and health authorities regarding menopause management. These factors, along with variations in product availability and licensing, can affect HRT. **(11)**

1.8 UTILISATION AND CURRENT PRACTICE OF HRT

In India, studies show that fewer than 10% of women use hormone replacement therapy (HRT). Most women prefer non-hormonal methods like lifestyle changes, calcium and vitamin D supplements, or alternative treatments. Limited awareness, cultural beliefs, poor counseling, and fear of side effects are significant obstacles to using HRT.

Current clinical practice focuses on personalized care. HRT is mainly recommended for women with moderate to severe menopausal symptoms. The guidance is to use the lowest effective dose for the shortest time, with a growing preference for low-dose and transdermal forms. HRT is seen as most helpful when started within 10 years of menopause onset or before age 60.

2. AIM:

To determine the existing knowledge level and attitudes towards Hormone Replacement Therapy (HRT) among premenopausal women in the community to determine the existing knowledge gaps and possible future barriers to therapy.

3. OBJECTIVES:

- To determine the existing knowledge level among premenopausal women regarding the indications, benefits, and risks associated with HRT.
- To determine the perceptions of these women towards the use of HRT for the management of menopausal symptoms.
- To determine the relationship between socio-demographic variables (age, educational level) and the participant's knowledge and attitudes.
- To determine the source from which the women have information regarding HRT.
- To determine the factors or fears that might act as a deterrent to the use of HRT in the future.

4. METHODOLOGY

a) STUDY SITE:

Community based study

b) STUDY POPULATION:

100 participants were participated in this study

c) STUDY DESIGN:

A descriptive cross – sectional survey-based study

d) STUDY MATERIAL:

Self–Structured questionnaire

e) INCLUSION CRITERIA:

- Women aged 18 years or above.
- Women who have attained menarche and are biologically female.
- Women who are willing to participate and provide informed consent.
- Women who are able to understand the questionnaire.

f) EXCLUSION CRITERIA:

- Women with severe mental illness and cognitive impairment
- Individual below the age of 18.
- Women who have undergone surgical menopause due to malignancy.
- Women who are critically ill at the time of data collection.

g) DATA COLLECTION:

Data was collected using a structured and pre-validated questionnaire administered to premenopausal women using Google Forms. The questionnaire tested demographic variables, knowledge, and attitude towards HRT. The link to the questionnaire was shared online after obtaining consent. The data was collected anonymously and analyzed statistically.

h) DATA ANALYSIS:

The data collected was coded and analyzed using Microsoft Excel and SPSS. Descriptive analysis such as frequency and percentage was employed to analyze demographic variables, knowledge, and

attitude. Inferential statistics such as ANOVA is used to test the relationship between demographic variables and knowledge and attitude scores. A p-value of <0.05 was used as significance levels.

5. RESULT & DISCUSSION

A total of 101 participants were included in the present cross-sectional study, giving the response rate of 100%.

The objective of the study was to evaluate the "A SURVEY ON KNOWLEDGE ATTITUDE AND PRACTICE REGARDING HORMONE REPLACEMENT THERAPY AMONG PREMENOPAUSAL WOMEN IN AND AROUND SULUR COMMUNITY". The study included 101 women based on the inclusion criteria, and the knowledge attitude of the women was evaluated through questionnaires.

Table 1 revealed the Socio-demographic characteristics of participants. The study included **101 participants,** and the majority **(78%)** belonged to the **18-25** years age group. The participants aged **26-35** years accounted for **12%**, and **10%** belonged to the **36-50** years age group, which revealed that the majority of the participants belonged to the young adult group.

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

DEMOGRAPHIC DETAILS	CATEGORY	NUMBER OF PARTICIPANTS	PERCENTAGE OF PARTICIPANTS
AGE GROUP	18-25	79	78%
	26-35	12	12%
	36-50	10	10%
EDUCATIONAL STATUS	COLLEGE (STUDYING/COMPLETED)	85	84%
	OTHERS	16	16%

OCCUPATIONAL STATUS	HOUSEWIFE	10	15%
	TEACHING	4	5%
	MANAGER	5	5%
	OTHERS	52	75%

MARITAL STATUS	MARRIED	82	81%
	UNMARRIED	19	19%
MENOPAUSAL STATUS	PRE	72	71%
	PERI	17	17%
	POST	12	12%

With respect to educational status, **84%** were **college students** or college graduates, and only **16%** belonged to **other categories**, which revealed that the majority of the participants belonged to the educated group.

With respect to occupation, **75%** belonged to the **other** category, and the remaining **15%** included **housewives, 5%** included **managers**, and **5%** included **teaching** professionals.

With respect to marital status, the majority (81%) were married, and 19% were unmarried.

With respect to menopausal status, the majority **(71%)** were **pre-menopausal**, and **17%** were **peri-menopausal**, and **12%** were **post-menopausal** women.

TABLE 2: HAVE YOU EVER HEARD ABOUT HORMONE REPLACEMENT THERAPY (HRT)?

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	YES	62	61%
2.	NO	39	39%

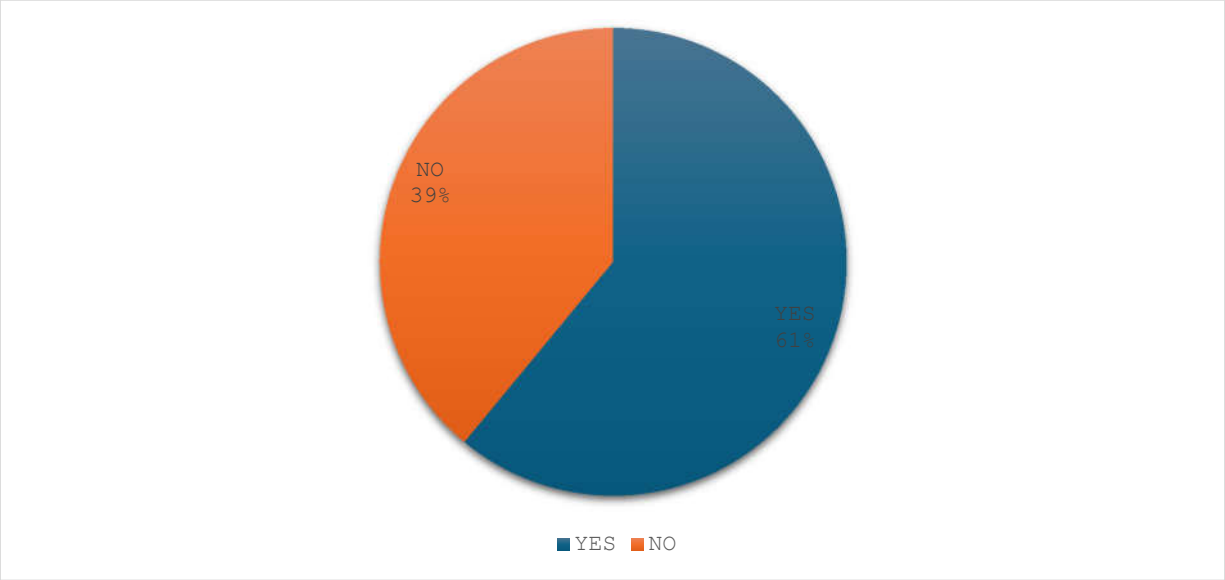

FIGURE NO.1: AWARENESS REGARDING HRT

Moving on to the first knowledge-based question, HAVE YOU EVER HEARD ABOUT HORMONE REPLACEMENT THERAPY (HRT)?

- 62 participants (61.4%) responded “Yes”, while
- 39 participants (38.6%) responded “No”.

TABLE 3: HRT IS MAINLY USED TO MANAGE MENOPAUSAL SYMPTOMS

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	TRUE	81	80%
2.	FALSE	20	20%

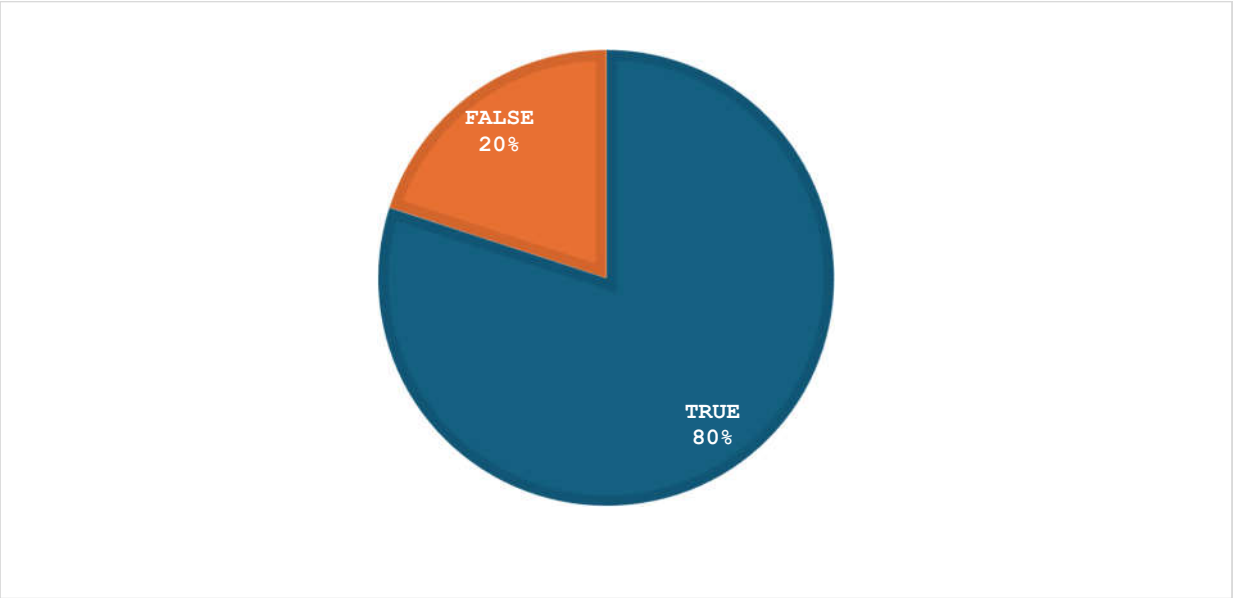

FIGURE NO.2: KNOWLEDGE REGARDING SYMPTOMS RELIEVED BY HRT

For the second question, HRT IS MAINLY USED TO MANAGE MENOPAUSAL SYMPTOMS

- 80% of participants answered correctly (True), while
- 20% responded incorrectly (False).

TABLE 4: WHICH HORMONE IS PRIMARILY REPLACED IN HRT?

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	ESTROGEN	24	24%
2.	PROGESTERONE	10	10%
3.	BOTH	44	43%
4.	DON'T KNOW	23	23%

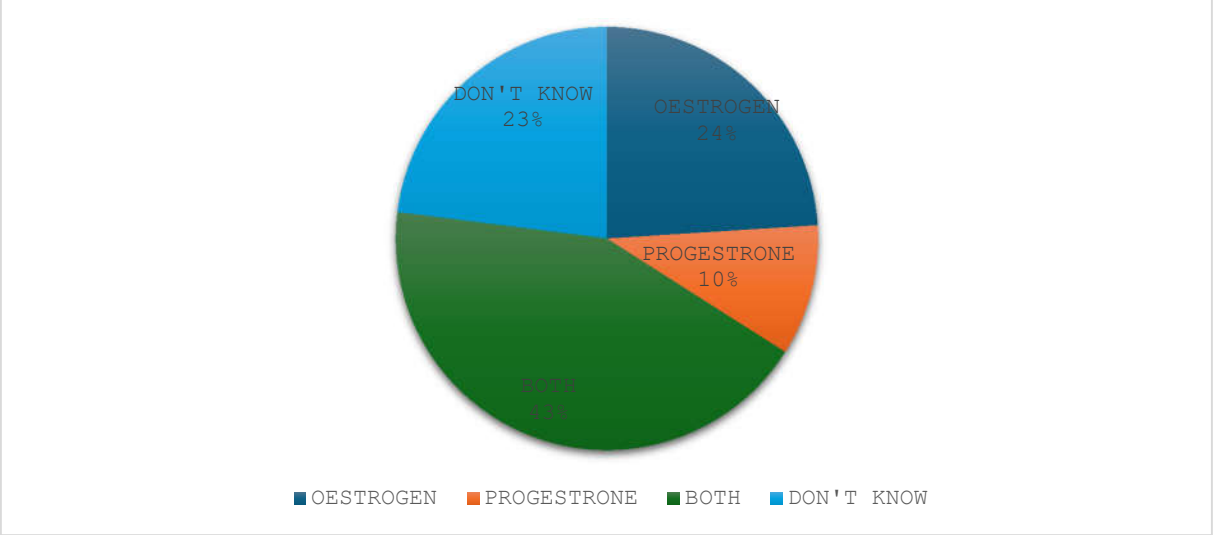

FIGURE NO. 3: KNOWLEDGE REGARDING THE PRIMARY HORMONE REPLACED IN HRT

For the question, WHICH HORMONE IS PRIMARILY REPLACED IN HRT?

- 43% of participants answered 'Both oestrogen and progesterone',
- 24% selected oestrogen,
- 10% selected progesterone, and
- 23% reported that they did not know.

TABLE 5: WHICH OF THE FOLLOWING SYMPTOMS CAN BE RELIEVED BY HRT?

S.NO	SYMPTOMS	NO. OF SAMPLE	PERCENTAGE
1.	HOT FLASH	4	4%
2.	MOOD SWINGS	22	22%
3.	VAGINAL DRYNESS	9	9%
4.	ALL THE ABOVE	66	65%

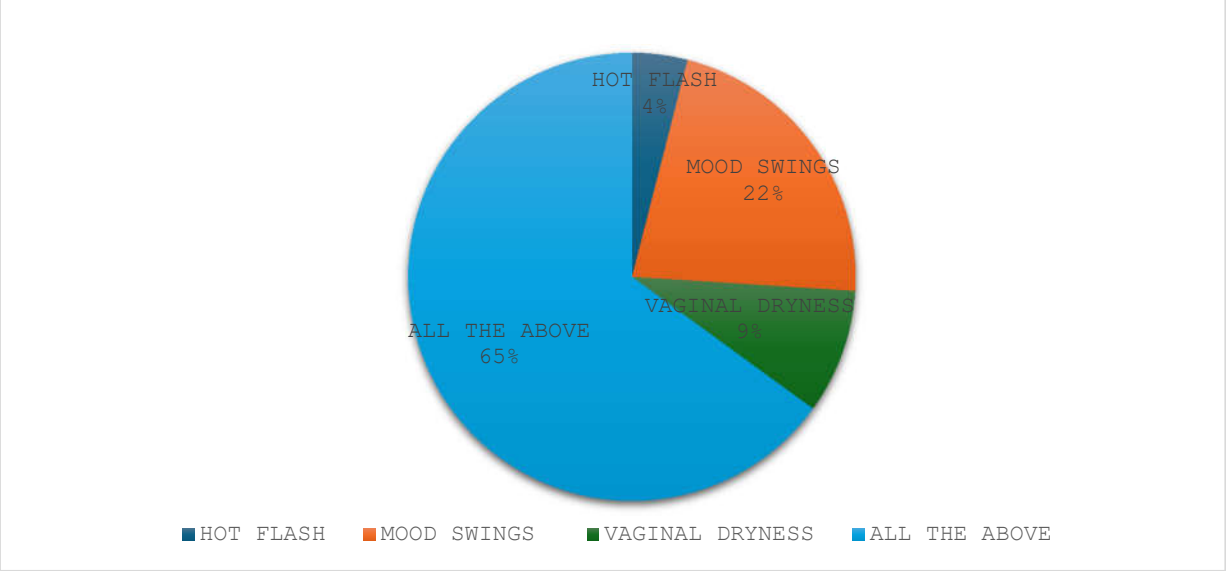

FIGURE NO.4: AWARENESS REGARDING PRIMARY USE OF HRT

For the question, WHICH OF THE FOLLOWING SYMPTOMS CAN BE RELIEVED BY HRT?

- 65% of participants selected 'All of the above', while
- 22% chose mood swings,
- 9% selected vaginal dryness, and
- 4% selected hot flashes.

TABLE 6: HRT IS RECOMMENDED FOR EVERY POST MENOPAUSAL WOMEN

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	TRUE	57	56%
2.	FALSE	44	44%

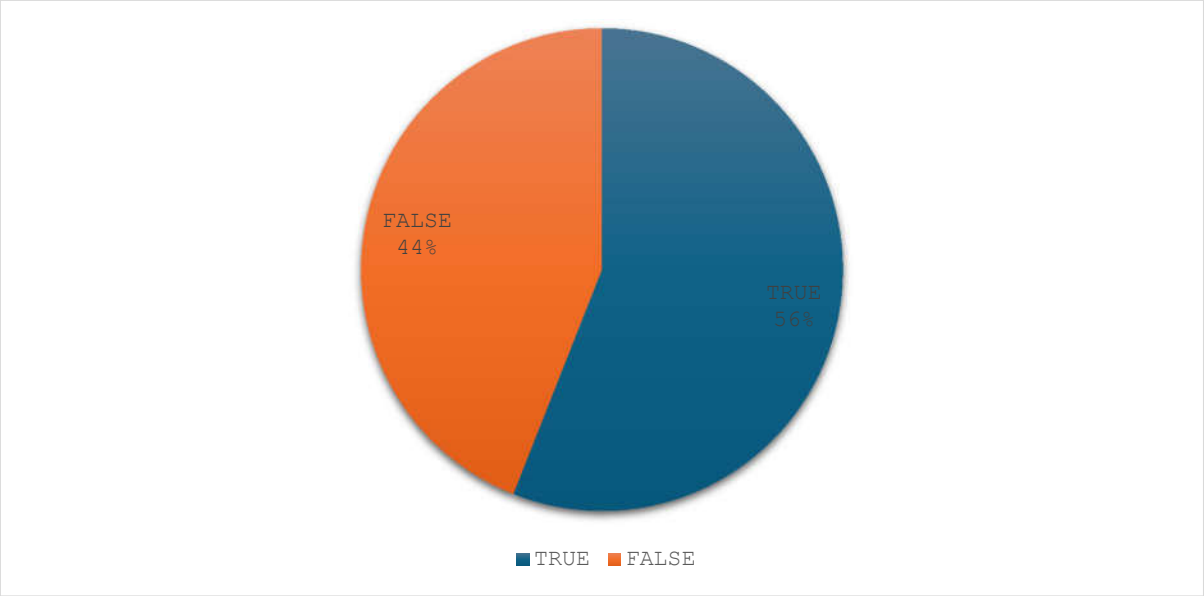

FIGURE NO.5: PERCEPTION REGARDING RECOMMENDATION OF HRT FOR POSTMENOPAUSAL WOMEN

For the question, **HRT IS RECOMMENDED FOR EVERY POST MENOPAUSAL WOMEN?**

- 56% of participants responded 'True', while
- 44% responded 'False.'

TABLE 7: ATTITUDE TOWARD MENOPAUSE AS A NATURAL PROCESS

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	STRONGLY AGREE	26	26%
2.	AGREE	35	35%
3.	NEUTRAL	27	26%
4.	DISAGREE	13	13%

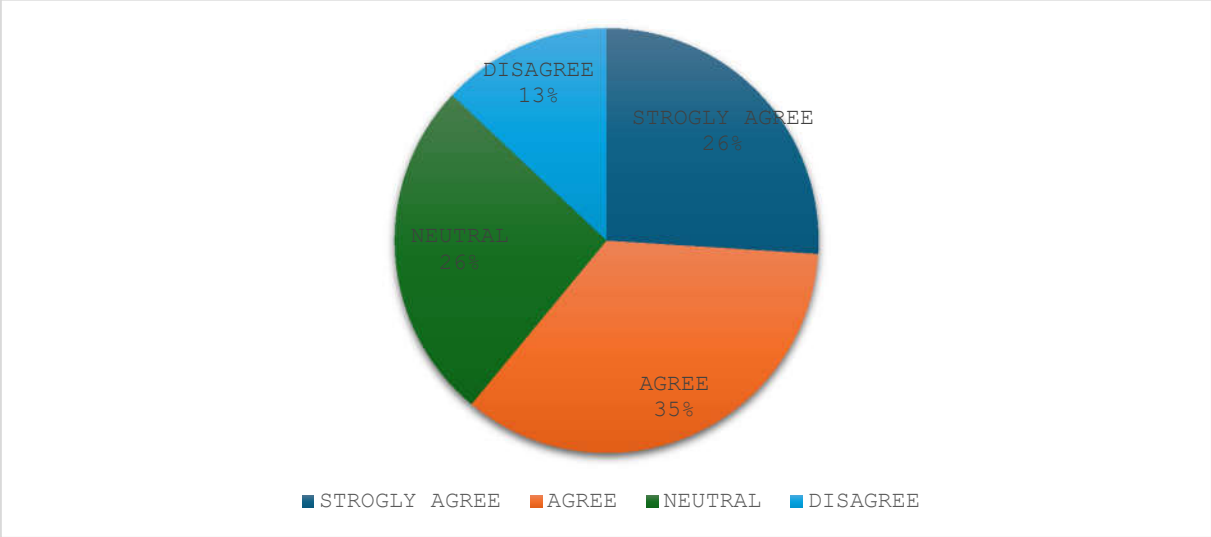

FIGURE NO.6: ATTITUDE TOWARD MENOPAUSE AS A NATURAL PROCESS

For the statement, I BELIEVE MENOPAUSE IS A NATURAL PROCESS THAT DOES NOT REQUIRE MEDICAL PROCESS

- 26% of participants strongly agreed,
- 35% agreed,
- 26% were neutral, and
- 13% disagreed.

TABLE 8: ATTITUDE TOWARD EFFECTIVENES OF HRT

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	STRONGLY AGREE	21	21%
2.	AGREE	51	50%
3.	NEUTRAL	27	27%
4.	DISAGREE	2	2%

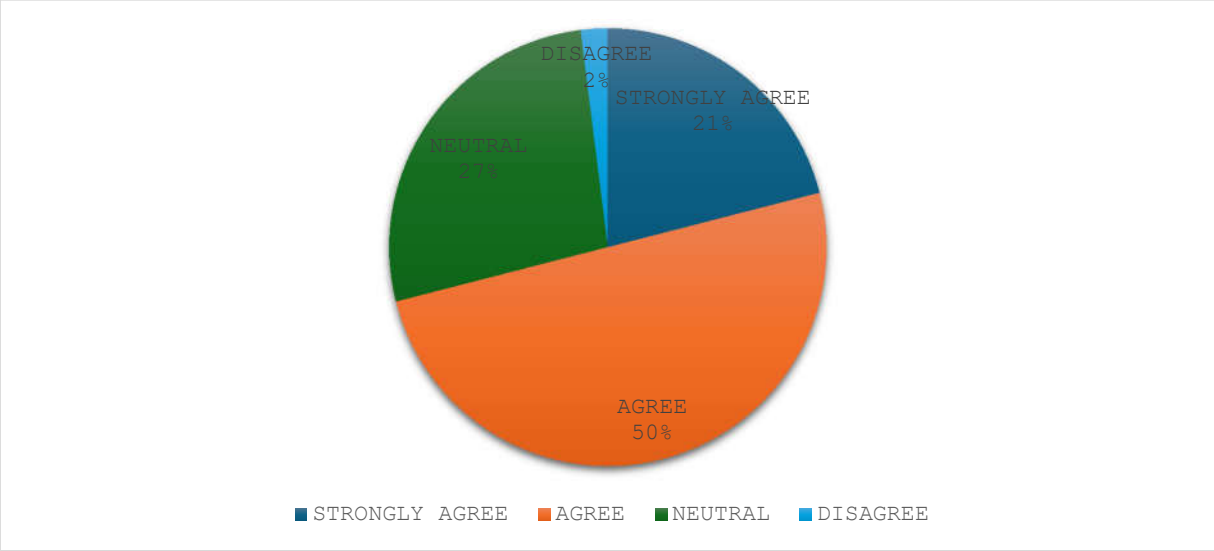

FIGURE NO.7: ATTITUDE TOWARD EFFECTIVENES OF HRT

For the statement, HRT IS AN EFFECTIVE METHOD FOR MANAGING MENOPAUSAL SYMPTOMS

- 21% of participants strongly agreed,
- 50% agreed,
- 27% were neutral, and
- 2% disagree

TABLE 9: CONCERN ABOUT SIDE EFFECTS OF HRT

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	STRONGLY AGREE	11	11%
2.	AGREE	44	44%
3.	NEUTRAL	41	41%
4.	DISAGREE	4	4%

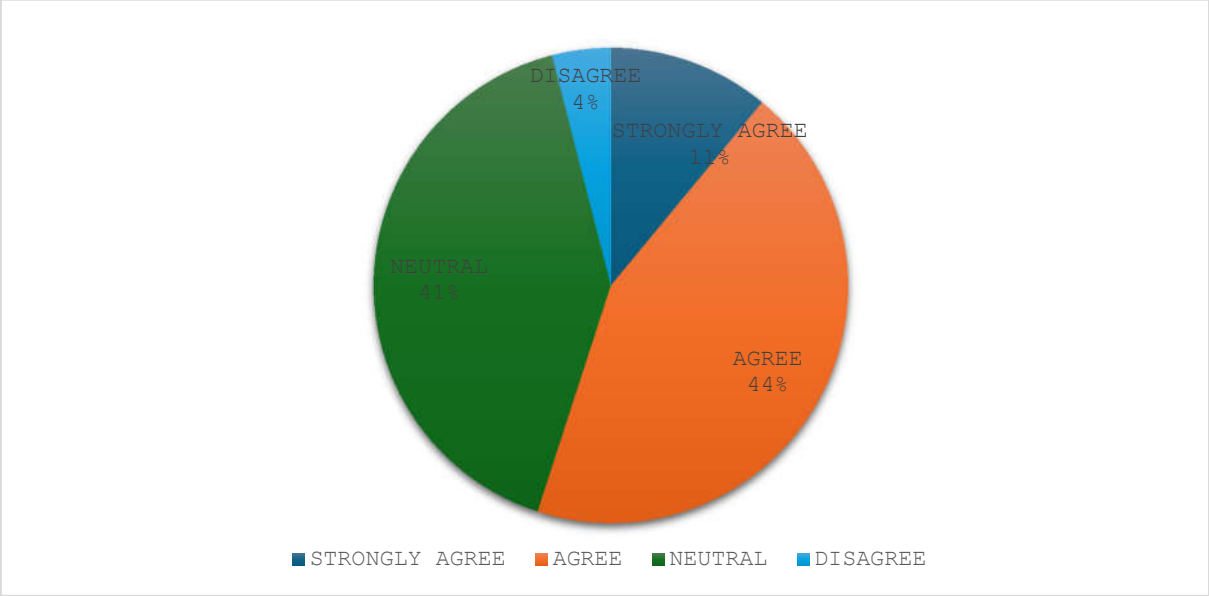

FIGURE NO.8: CONCERN ABOUT SIDE EFFECTS OF HRT

For the statement, I WORRIED ABOUT THE POSSIBLE SIDE EFFECTS OF HRT

- 11% of participants strongly agreed,
- 44% agreed,
- 41% were neutral, and
- 4% disagreed

TABLE 10: NEED FOR AWARNESS PROGRAMS ON HRT

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	STRONGLY AGREE	31	30%
2.	AGREE	39	39%
3.	NEUTRAL	27	27%
4.	DISAGREE	4	4%

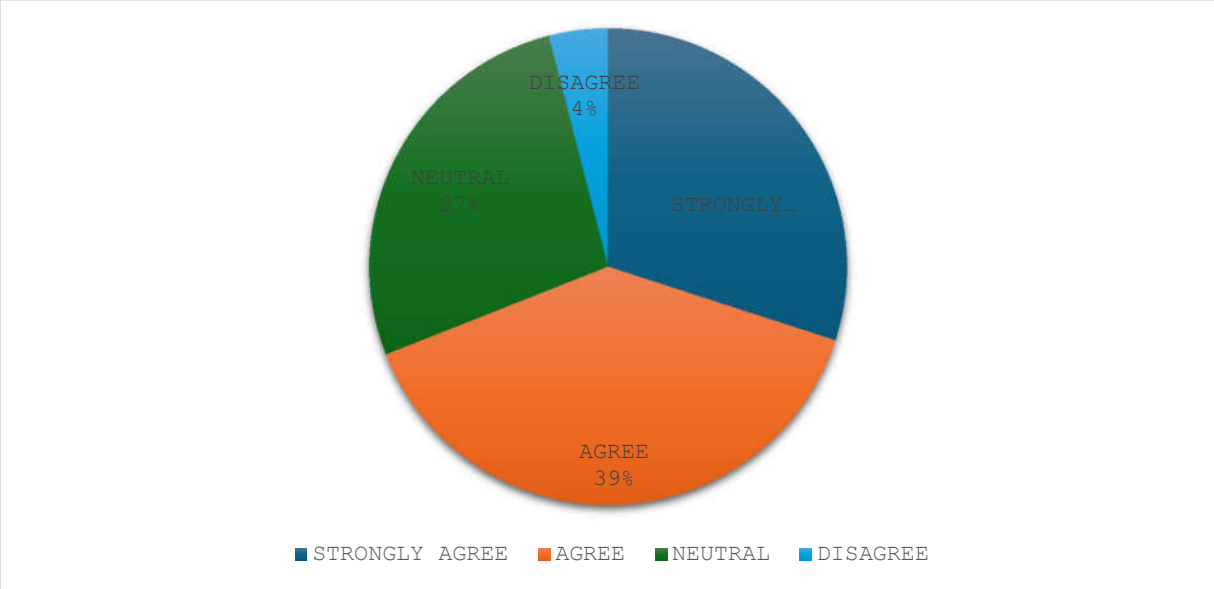

FIGURE NO.9: NEED FOR AWARNESS PROGRAMS ON HRT

For the statement, I BELIEVE MORE AWARNESS PROGRAMS ON HRT SHOULD BE CONDUCTED

- 30% of participants strongly agreed,
- 39% agreed,
- 27% were neutral, and
- 4% disagreed.

TABLE 11: OPENNESS TO DISCUSSING HRT WITH HEALTHCARE PROVIDERS

S.NO	RESPONSE OPTION	NO. OF SAMPLE	PERCENTAGE
1.	STRONGLY AGREE	28	28%
2.	AGREE	37	36%
3.	NEUTRAL	26	26%
4.	DISAGREE	10	10%

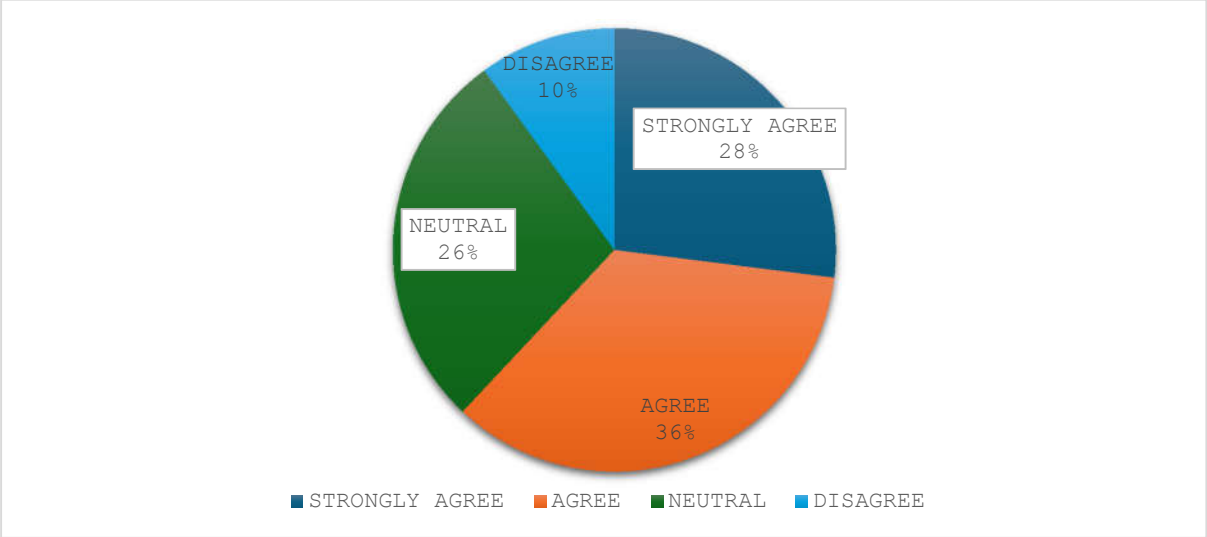

FIGURE NO.10: OPENNESS TO DISCUSSING HRT WITH HEALTHCARE PROVIDERS

For the statement, I AM OPEN TO DISCUSS MENOPAUSE AND HRT WITH HEALTHCARE PROVIDERS

- 28% of participants strongly agreed,
- 36% agreed,
- 26% were neutral, and
- 10% disagreed

OVERALL KNOWLEDGE AND ATTITUDE CATEGORY

The current study used ANOVA to examine the knowledge scores as continuous variables. Apart from this, the participants were grouped into good (>7), moderate (5-6), and poor (<5) knowledge categories for descriptive purposes. This method allowed for both statistical analysis and descriptive analysis of the overall knowledge levels.

TABLE 12: OVERALL KNOWLEDGE CATEGORY

S.NO	CATEGORY	NO. OF SAMPLE	PERCENTAGE
1.	GOOD	40	39.6
2.	MODERATE	35	34.7
3.	POOR	26	25.7

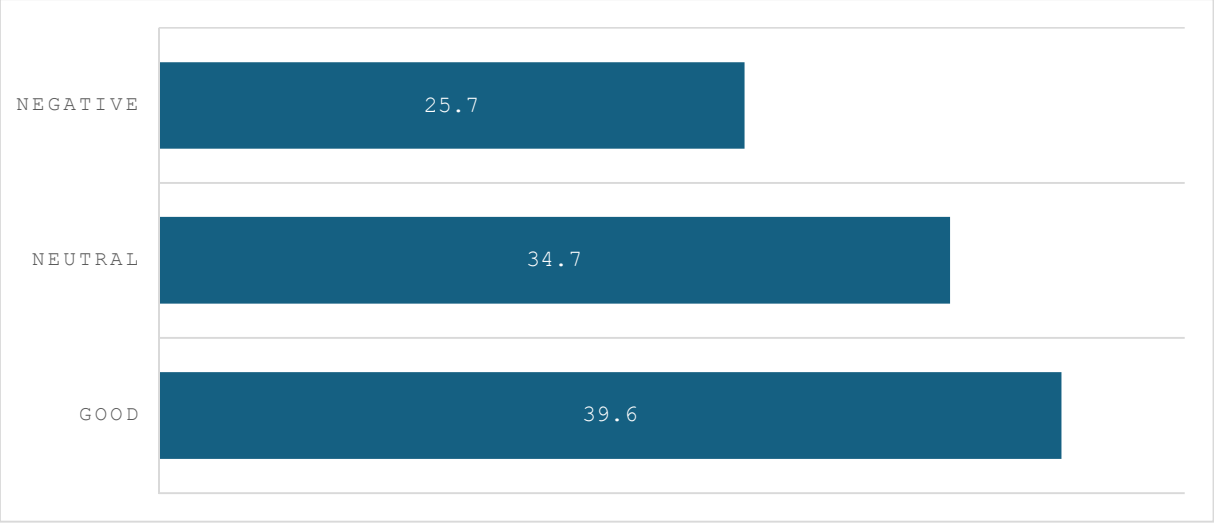

FIGURE NO.11: OVERALL KNOWLEDGE CATEGORY

The knowledge test showed that out of 101 participants, 40 (39.6%) had good knowledge, 35 (34.7%) had moderate knowledge, and 26 (25.7%) had poor knowledge about Hormone Replacement Therapy. This shows that although a fair proportion of participants had good knowledge, a substantial number still had only moderate and poor knowledge about HRT, which is a cause for concern regarding the existing gaps in awareness.

Analysis of knowledge levels according to age groups showed that there are considerable differences in knowledge levels among different age groups. In the age group of 18-25 years, a substantial number of participants had good knowledge (35 participants), and only 16 participants had poor knowledge.

Participants belonging to the 26-35 years age group had a mixed response, with fewer participants having good knowledge and a substantial number having moderate and poor knowledge.

However, in the 36-50 years age group, only 2 participants showed good knowledge, and 6 participants showed poor knowledge, which is an indication of low awareness in this age group. In general, the age group distribution indicates that awareness of HRT knowledge is age-dependent.

Analysis of the knowledge of HRT based on education level indicates that participants who are in or have completed college have shown a higher level of good and moderate knowledge of HRT, while participants with lower educational status have a higher level of poor knowledge.

TABLE 13: OVERALL ATTITUDE CATEGORY

Attitude toward HRT was also evaluated and categorized into positive, neutral, and negative attitude levels.

S.NO	CATEGORY	NO. OF SAMPLE	PERCENTAGE
1.	POSITIVE	24	23.8
2.	NEUTRAL	74	73.3
3.	NEGATIVE	3	2.9

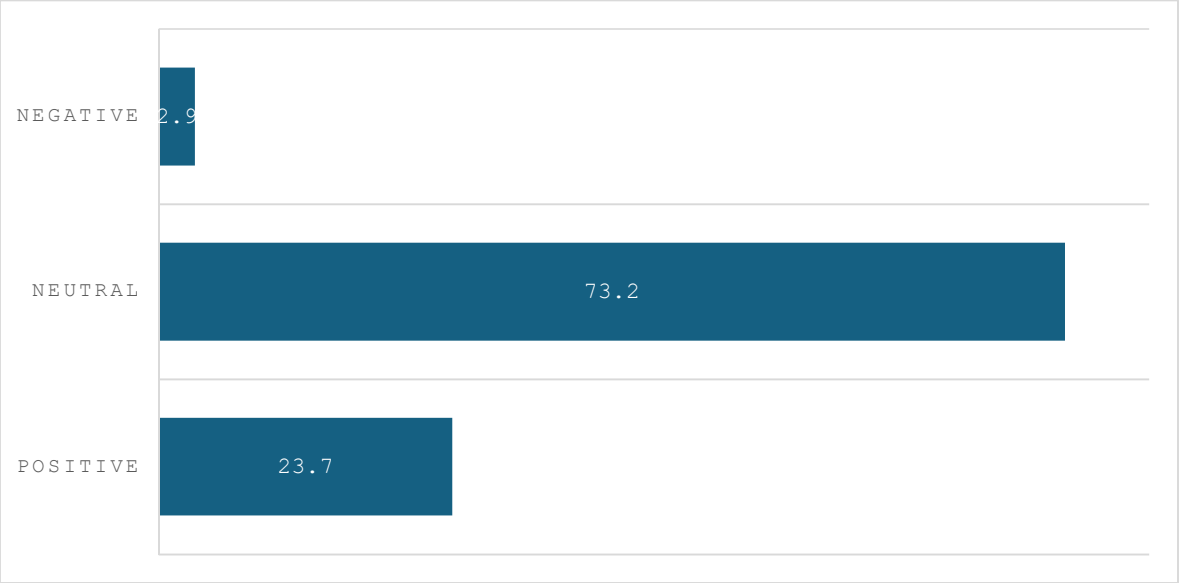

FIGURE NO.12: OVERALL ATTITUDE CATEGORY

Among the 101 participants, 24 (23.8%) had a positive attitude, 74 (73.3%) had a neutral attitude, and only 3 (3.0%) had a negative attitude towards HRT.

Analysis of the attitude towards HRT among the participants based on their age showed significant differences among the participants. Most of the participants belonging to different age groups had a neutral attitude towards HRT, while positive attitudes were less common, and negative attitudes were rare.

Analysis of the attitude towards HRT based on the education level of the participants is also done. Descriptive analysis showed that most of the participants belonging to different education groups had a neutral attitude towards HRT, while positive attitudes were less common, and negative attitudes were very rare.

ANOVA ANALYSIS (ASSOCIATION BETWEEN VARIABLES)

Statistical analysis was carried out using SPSS. One-way ANOVA was performed to assess the association between demographic variables and knowledge and attitude scores.

TABLE 14: ANOVA Showing association between Age and Knowledge

ANOVA

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	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	45.951	2	22.976	5.565	.005
Within Groups	404.584	98	4.128		
Total	450.535	100			

One-way ANOVA test was used to compare the average knowledge scores of different age groups (18-25, 26-35, and 36-50 years).

The calculated F value (5.56) is greater than the F table value (3.08) at 0.05 significance levels. The result showed that there is a significant difference in knowledge scores among different age groups (p=0.005). Since the p-value is less than 0.05, the null hypothesis is rejected. This shows that age is an important factor for the knowledge level of the participants, and the younger ones have relatively better knowledge.

TABLE 15: ANOVA Showing association between Education and Knowledge

ANOVA

KN

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30.744	1	30.744	7.250	.008
Within Groups	419.790	99	4.240		
Total	450.535	100			

One-way ANOVA test was used to compare the average knowledge scores of different educational groups.

The calculated F value (7.21) was higher than the F table value (3.93) at the level of significance 0.05. It was found that the knowledge scores were significantly different among the various age groups

(p=0.008). As the p-value is less than 0.05, the null hypothesis is rejected. This indicates that Education has a significant effect on the knowledge level of the participants.

TABLE 16: ANOVA Showing association between Age and Attitude

ANOVA

AT SCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	24.066	2	12.033	1.101	.337
Within Groups	1071.102	98	10.930		
Total	1095.168	100			

One-way ANOVA test was used to compare the mean attitude scores of different age groups.

The calculated F value is 1.10, which is less than the F table value of 3.08 at 0.05 significance levels. The result revealed that there was no significant difference in attitude scores among different age groups (p=0.337). Since the p-value is greater than 0.05, the null hypothesis was accepted. This suggests that age does not have a significant effect on the attitude of the participants.

The results emphasize that even though the levels of knowledge vary across different age groups, the attitude towards HRT is more or less the same. This supports the need for overall educational and counseling programs to be implemented to enhance perceptions and confidence about HRT among women belonging to all age groups, and not focusing on a particular age group.

TABLE 17: ANOVA Showing association between Education and Attitude

ANOVA

AT

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20.061	1	20.061	1.786	.185
Within Groups	1112.176	99	11.234		
Total	1132.238	100			

One-way ANOVA test was performed to compare the average attitude scores of different age groups.

The calculated F value (1.78) is less than the F table value (3.93) at 0.05 significance levels. The result revealed that there is no significant difference in attitude scores among different age groups (p=0.185). Since the p-value is greater than 0.05, the null hypothesis was accepted. This implies that education has no significant effect on the attitude of the participants.

The above results emphasize that educational background is an important factor in improving knowledge but may not be sufficient to affect attitudes. Specialized counseling and awareness programs may be needed to transform improved knowledge into positive attitudes.

The results of this study suggest that while basic awareness about HRT is present, there is a lack of in-depth knowledge and misconceptions that affect attitudes. This suggests the need for age-specific counseling and educational programs, especially for women nearing menopause, to address their concerns, dispel misconceptions, and encourage informed decision-making about HRT under medical guidance.

Knowledge improvement through specialized awareness programs may have a positive effect on attitudes towards HRT and enable women to make informed decisions about menopausal health management.

6. CONCLUSION

The current study evaluated the knowledge and attitude towards Hormone Replacement Therapy (HRT) among postmenopausal women. The results showed that the knowledge about HRT was moderate, with a substantial number of participants having misconceptions about the universal recommendation and risks associated with HRT. Although a substantial number of participants agreed that more awareness programs should be organized, a smaller number of participants demonstrated adequate confidence in explaining HRT to healthcare professionals. The knowledge level was substantially different based on age and educational status, suggesting that demographic factors affect the understanding of HRT. However, attitude towards HRT was not significantly associated with age or education. This indicates that despite differences in knowledge levels among various groups, overall perceptions and receptiveness to HRT are quite similar. The current study emphasizes the importance of organized health education programs to improve overall understanding and acceptance of HRT among postmenopausal women. Increasing awareness may aid women in making informed choices about managing menopause.

7. LIMITATIONS

- The research was carried out with a comparatively small sample size (101 participants), which might affect the generalizability of the results.

- ❖ The research was carried out within a short time span, which restricted the sample size and the duration of data collection.
- ❖ The research is cross-sectional, and thus cause-and-effect relationships cannot be established.
- ❖ The research was carried out in a particular geographical location, and thus the generalizability of the results to other areas is restricted.

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