

Awareness and Knowledge of Women about HRT at Rawal Institute of Health Sciences and Prevalence of Osteoarthritis Symptoms

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Abstract

Objective: To determine the Awareness and Knowledge of Women about HRT and Prevalence of Symptoms of Osteoarthritis among Women visiting Rawal Institute Health Sciences.

Methodology: This was a descriptive cross-sectional study, carried out at gynae and OBS department Rawal Institute Health Sciences, from February 2022 to August 2022. Women aged between 40 and 70 years who had no history of Hormone Replacement Therapy (HRT) and demonstrated willingness to participate in the study were included. Following the collection of demographic information, a structured questionnaire was administered to assess participants' awareness and knowledge of HRT. Each correct option earned 2 points, an incorrect answer received 0 points, and a neutral response was awarded 1 point. Participants achieving 75% or more correct answers were deemed to possess satisfactory knowledge. Information on symptoms related to osteoarthritis was also recorded. Data analysis was conducted using SPSS version 26.

Results: The study encompassed a 100 sample of the pre- and post-menopausal women, with a majority (77%) falling within the 40-50 age range. Only 33% of the participants had heard about it, while more than 80% lacked knowledge regarding its advantages and complications. Post-menopausal women possess a higher risk of bone and joint pain, with an odds ratio 12 (95% CI: 0.002 to 0.156) and (p- 0.001). The mean awareness score for women aged 40-50 was 1.67, which increased to 2.27 for those aged 51-60 and substantially rose to 4.08 for those aged 61-70 (p-0.057). The F-value 15.495 and a p-value 0.0001 indicated that educated women exhibited significantly higher awareness compared to others. These findings underscore the influence of age and educational status on awareness levels.

Conclusion: As per the study conclusion, around 80% of women lacked knowledge about HRT and its benefits and complications. Post-menopausal women are at high risk of symptoms of osteoarthritis, emphasizing the urgent necessity for healthcare interventions and educational initiatives.

Keywords: Menopause, HRT, Awareness, Osteoarthritis Symptoms.

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Introduction

Menopause is a naturally occurring biological phase where women move from being able to reproduce to being unable to do so due to the decline in ovarian function.¹ According to the World Health Organization, menopause is characterized by the absence of menstrual periods for at least 12 consecutive months, which happens because the ovaries stop producing hormones permanently.^{1,2} It may occur between the ages of 40 and 59. The onset of menopause is

associated with significant physiological and psychological changes, with some women experiencing symptoms continuously for numerous years.³ In the forthcoming years, the growing global population is projected to result in an estimated 1.2 billion women worldwide experiencing menopause or post menopause by the year 2030.⁴ Predominant manifestations of menopause include vasomotor symptoms, disturbances in sleep, and vaginal dryness,⁴ type II diabetes mellitus, CVD and dyslipidemia. It is also acknowledged that

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there is a significant decrease in bone and muscle mass following menopause, leading to an elevated susceptibility to osteoporosis and sarcopenia in older age.⁵ The hormonal alterations induce bone deterioration by reducing bone formation and enhancing bone turnover.^{5,6} The occurrence and intensity of these symptoms and complications vary considerably among women and have a negative impact on women's quality of life, and self-esteem. HRT is recognized for its ability to alleviate various symptoms associated with menopause, including hot flashes, mood disorder, night sweats, dryness of vagina, and decreased libido.¹ Additionally, it can serve as a preventive measure against postmenopausal osteoporosis.¹ Estrogen insufficiency results in accelerated bone resorption, peaking during the initial 2–3 years following the onset of menopausal transition and may be prevented through the implementation of menopausal hormone therapy.⁷

But long-term HRT use continues to be a confusing problem for both medical professionals and women going through perimenopause and post menopause.⁸ Numerous studies have revealed an alarming trend in women's knowledge of and use of hormone replacement therapy (HRT), which seems to be quite low.^{9,10} Considering the possible benefits of HRT in managing menopausal symptoms and lowering related health risks, this is concerning. Moreover, this phenomenon is a result of other variables. First of all, women might not be as knowledgeable about menopause and its management options, including HRT.^{9,10} Many women might not be fully aware of the advantages and disadvantages of hormone replacement therapy, which could make them reluctant to use it as a therapeutic option. The actual usage of HRT is, however, much less common. Although many studies have been done on menopausal awareness, not enough is known about HRT and how it can be used to treat osteoarthritis symptoms.^{11,12} Furthermore, according to these studies, a significant proportion of women lacked sufficient awareness of HRT.^{11,12} Additionally, the actual utilization of HRT remains notably low among women, particularly at the local level. This research delves into the present scenario regarding knowledge pertaining to HRT usage and its relationship to the incidence of osteoarthritis. Such exploration may prove invaluable in fostering a deeper understanding of this detrimental health concern and in formulating effective management strategies aimed at enhancing the quality of life for postmenopausal women.

Methodology

The cross-sectional study was done at gynae and OBS department of Rawal Institute Health Sciences (RIHS). duration of study was six months from February 2022 to August 2022. The inclusion criteria comprised women aged between 40 and 70 years, experienced menopausal symptoms who had no history of Hormone Replacement Therapy (HRT) and demonstrated willingness to participate in the study. All the women below the age of 40 years, women currently using hormone replacement therapy (HRT) or who have used it in the past, women with a previous history of chronic diseases affecting osteoarthritis symptoms, such as rheumatoid arthritis and those who were unable to provide informed consent or participate in the study due to cognitive impairment were excluded from study. Random sampling technique was used. The sample size was calculated using the Open Epi, based on a 90% confidence interval, a 5% margin of error, using (42% knowledge regarding HRT)¹³. The Calculated study sample size was 98, and it was adjusted to 100. Study was conducted following the acquisition of informed consent from all participants subsequent to the comprehensive elucidation of the study's objectives and aims. Following the collection of demographic information, a structured questionnaire was administered to assess participants' awareness and knowledge of HRT.¹ Each correct option earned 2 points, an incorrect answer received 0 points, and a neutral response was awarded 1 point. Participants achieving 75% or more correct answers were deemed to possess satisfactory knowledge.⁷ Information on symptoms related to osteoarthritis was also recorded. Data analysis was conducted using SPSS version 26.

Results

The majority of the cases fell within the 40-50 range, comprising 77% of the total sample, followed by 11% in the 51-60 range and 12% in the 60-70 range. In terms of educational status, 79% had no formal education, 12% had formal education, and 9% had a higher level of education. 87% were married, 9% were unmarried, 2% were divorced, and 2% were widowed. 88%, women were pre-menopausal and 12% were post-menopausal. Out of all 33% women heard about HRT, while around more than 80% had no knowledge regarding its advantages and complications. Table I & II.

Table I: Demographic and clinical characteristics of women. (n=100)

Variables		Frequency	Percent
Age groups	40-50	77	77.0%
	51-60	11	11.0%
	61-70	12	12.0%
	Total	100	100.0%
Educational status	Formal Education	12	12.0%
	Higher	9	9.0%
	No Formal Education	79	79.0%
	Total	100	100.0%
Marital status	Divorced	2	2.0%
	Married	87	87.0%
	Unmarried	9	9.0%
	Widow	2	2.0%
Menopausal status	Total	100	100.0%
	Peri-Menopausal	88	88.0%
	Post-Menopausal	12	12.0%
Employment status	Employed	15	15.0%
	House wife	80	80.0%
	Retired	5	5.0%
	Total	100	100.0%

Table II: Knowledge regarding and HRT n=100

Variables		Frequency	%
It may restore hormones that are lost during the menopause	Agree	9	9.0
	Disagree	9	9.0
	Don't Know	82	82.0
It may lessen the chance of getting osteoporosis	Agree	4	4.0
	Disagree	5	5.0
	Don't Know	91	91.0
It may decrease nighttime sweats and hot flushes	Agree	6	6.0
	Disagree	3	3.0
	Don't Know	91	91.0
If you experience the symptoms of menopause, menopausal hormone treatment is a suitable alternative.	Agree	5	5.0
	Disagree	2	2.0
	Don't Know	93	93.0
For certain women Postmenopausal hormone therapy is beneficial.	Agree	6	6.0
	Disagree	4	4.0
	Don't Know	90	90.0
Menopausal hormone therapy has more benefits than complications.	Agree	2	2.0
	Disagree	2	2.0
	Don't Know	96	96.0
Breast cancer risk may rise as a result of it.	Agree	3	3.0
	Disagree	5	5.0
	Don't Know	92	92.0
It may make cervical cancer more likely	Agree	3	3.0
	Disagree	4	4.0
	Don't Know	93	93.0
It could end up in bleeding per vagina	Agree	7	7.0
	Disagree	2	2.0
	Don't Know	91	91.0
It has a lot of adverse effects and difficulties.	Agree	2	2.0
	Disagree	7	7.0
	Don't Know	91	91.0
Menopausal hormone treatment has numerous disadvantages than benefits	Agree	6	6.0
	Disagree	3	3.0
	Don't Know	88	88.0
Hormone therapy for menopause should not be used.	Agree	5	5.0
	Disagree	8	8.0
	Don't Know	84	84.0

Among post-menopausal individuals, 1.0% reported no symptoms of bone and joint pain, while 11.0% reported experiencing these symptoms. Conversely, for pre-menopausal individuals, 73.0% reported no symptoms, and 15.0% reported experiencing bone and joint pain. The odds ratio for bone and joint pain in post-menopausal compared to pre-menopausal women had higher risk, with an odds ratio (95% CI: 0.002 to 0.156), with a p-value of 0.001. Table III

For women aged 40-50, the mean awareness score was 1.67, In the 51-60 age group, the mean awareness score increases to 2.27 and for women aged 61-70, the mean awareness score substantially increases to 4.08. The F-value is 2.727, and p-value is 0.057, suggesting a marginally significant difference in awareness scores among the age groups. Table IV

For educated women, the mean awareness score is notably higher at 5.84. The F-value 15.495 and p-value of 0.0001, suggested that the educated women exhibited significantly higher awareness compared to others. Table V

Discussion

Hormone Replacement Therapy is advised for the management of climacteric peri- and postmenopausal symptoms.¹⁴ Nevertheless, the utilization rate of HRT in Pakistan significantly lower in contrast to the Western nations. Consequently, the current study was undertaken to investigate the awareness and adoption of hormone replacement therapy among women visiting Rawal Institute Health Sciences. In this study the majority of the cases, accounting for 77% of the total sample, were found with an age range of 40-50 age, followed by 11% were aged 50 to 60 years old and 12% were between age range of 60 to 70 range. Regarding educational status, 79% women were illiterate, 12% had formal education, and 9% had a higher level of education. In aligns to this study Malik HS et al¹⁵ reported that the overall mean age of their study participants was 47.4±3.3 years and most of the women 60.8%, were illiterate and 75.5% poor seriocometrically. In the comparison of this study Krzyżanowska M et al¹⁶ reported that the mean age of the female participants was 44.14 ± 2.51 years and inconsistently they found 47.4% women had a high degree of educational level. Furthermore, 75.4% were engaged in occupational activities, and 38.6% reported having a moderate to high income level.¹⁶ However Shazia and Un Nissa Q et al¹⁰ also found mean age of menopausal women 56.58 ± 7.73 years and higher illiteracy rate 89%. The higher

Table III: Descriptive statistics and risk estimates of menopausal status bone and joint pain (n=971)

Variables		Symptoms of bone and joint pains			Total	OR	95% CI		p-value
		No	Yes				Lower	Upper	
Menopausal status	Post-Menopausal	1	11	12	.019	.002	.156	0.001	
	Pre-Menopausal	73	15	88					
		1.0%	11.0%	12.0%					
		73.0%	15.0%	88.0%					
Total		74	26	100					
		74.0%	26.0%	100.0%					

Table IV: Average awareness score according to age of the women. (n=100)

	N	Mean	SD	95% Confidence Interval for Mean		F-value	p-value
				Lower Bound	Upper Bound		
40-50	77	1.67	3.12	.965	2.384	2.727	0.057
51-60	11	2.27	3.90	-.348	4.893		
61-70	12	4.08	4.01	1.535	6.631		
Total	100	2.03	3.38	1.358	2.701		

Table V: Average awareness score according to educational status of women. (n=100)

	N	Mean	SD	95% Confidence Interval for Mean		F-value	p-value
				Lower Bound	Upper Bound		
Educated	13	5.84	3.78	1.049	3.5604	15.495	0.0001
Formal education	10	3.70	3.46	1.095	1.2208		
Illiterate	77	1.16	2.75	.3145	.5425		
Total	100	2.03	3.38	.3382	1.3588		

illiteracy rate among post-menopausal women could be attributed to historical neglect and limited resources allocated to female education. In past decades, there was often less emphasis on educating girls, with societal norms prioritizing male education. This resulted in a lack of educational opportunities for girls and women, especially in rural areas where resources were inadequate.

In this study 88% women were classified as pre-menopausal while 12% were considered post-menopausal. Furthermore, a total of 33% of the women had knowledge about Hormone Replacement Therapy (HRT), whereas over 80% lacked awareness regarding its benefits and potential complications. Consistently Hamid S et al¹² reported that a considerable proportion of women 73%, demonstrated a lack of sufficient understanding regarding Hormone Replacement Therapy. In the study by Zhu Y et al¹⁷ reported that the 19.2% of the participants, Menopausal Hormone Therapy (MHT) was perceived to improve the menopausal symptoms, while the majority lacked understanding regarding the advantages and disadvantages of MHT. Finally, they indicated that the knowledge possessed by healthcare professionals was not comprehensive, underscoring the necessity for further education on MHT to facilitate the distribution of accurate information among the general population.¹⁷ In aligns to this series Albaqami HA et al¹ observed that

only 16.4% knowledge, while most of the women 83.6% found with poor knowledge regarding HRT. According to Nasim et al⁴ a total of 43.8% were not aware of hormone replacement therapy used for treating postmenopausal syndrome. The unawareness rate was lower compared to this study, possibly because most women in their study were well-educated.

In this study 11.0% post-menopausal individuals had symptoms of bone and joint pain, while for pre-menopausal individuals, 73.0% reported no symptoms, and 15.0% reported experiencing bone and joint pain. The odds ratio for bone and joint pain in post-menopausal compared to pre-menopausal women had higher risk, with an odds ratio (95% CI: 0.002 to 0.156), with a p-value of 0.001. In the comparison of this study Niaz T et al¹⁸ concluded that the women who undergo early menopause face a heightened risk of developing low bone mineral density, a condition referred to as osteoporosis. Menopausal individuals, especially women, are at greater risk of fragility fractures and injuries from falls because of weakened bone strength.¹⁸ In contrast to this study Ali HS et al¹⁹ demonstrated that the symptoms most commonly reported were pain in the joints and muscles, with a prevalence of 79.9%. Inconsistently Bhatia M et al²⁰ stated higher occurrence rate of symptoms related to osteoporosis was 62.75%, compared to this study. Above studies have indicated an elevated prevalence of osteoporosis, potentially

attributed to the increased representation of postmenopausal women in their research cohorts. Furthermore, analysis of this study revealed a p-value of 0.057, indicating a marginally significant difference in awareness scores among the age groups. Additionally, educated women showed a notably higher mean awareness score of 5.84, with a p-value of 0.0001, suggesting a significant difference in awareness compared to others. Consistently Hamid S et al¹² demonstrated that the relationship between knowledge level and educational attainment was found to be statistically significant ($p=0.003$). Specifically, women with a high level of education exhibited satisfactory knowledge regarding HRT.¹² More S et al²¹ also stated that the education is an essential tool that should not be overlooked, with health education being important in enhancing understanding of menopause and hormone replacement therapy among postmenopausal individuals. Given the findings that osteoporosis symptoms are prevalent among postmenopausal women and illiteracy significantly influenced the knowledge regarding hormone replacement therapy (HRT) and its uses. It is important to implement targeted counseling programs for women approaching menopause. Educating women about menopause, its related symptoms, and the potential benefits of HRT can help prevent prolonged adverse health outcomes and improve quality of life during the postmenopausal stage. By providing comprehensive information and support, healthcare providers can empower women to make informed decisions about managing their menopausal transition and reducing the risk of osteoporosis-related complications.

Conclusion

According to the study conclusion, around 80% of women lacked knowledge about Hormone Replacement Therapy (HRT) and its benefits and complications. Age and education significantly influenced awareness levels. Postmenopausal osteoporosis, being a silent disease, is highly prevalent among these women, emphasizing the critical necessity for healthcare interventions and educational initiatives. These efforts should focus on addressing and potentially mitigating these risks, particularly among premenopausal women approaching menopausal status.

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