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Original Research Article

Impact of health education on women's knowledge, attitude and practice regarding menopause in Karnataka

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ABSTRACT

Background: Menopause represents an important change in a woman's life, frequently accompanied by various physical, emotional, and social alterations. In spite of its effects, numerous women, especially those in rural regions, do not have sufficient understanding and assistance. This study aimed to evaluate the impact of a health education program on knowledge, attitude, and practice (KAP) regarding menopause among women in Karnataka.

Method: A total of 340 women aged between 35 and 65 years were selected to participate in the study through systematic sampling methods. The study encompassed both pre-menopausal and post-menopausal women, while individuals who were unavailable or opted not to participate were excluded from the analysis. Initial data were collected regarding demographic information, health history, and reproductive status. Subsequently, an educational intervention was implemented, focusing on the symptoms of menopause, management techniques, and healthy lifestyle practices. The assessment of knowledge, attitudes, and practices (KAP) levels occurred before and after the intervention using structured interview schedule.

Results: At baseline, all participants exhibited inadequate knowledge regarding menopause. Following the intervention, only 7% retained a classification of poor knowledge, while 80% attained average knowledge and 13% achieved good knowledge. Positive attitudes increased from 22% to 74%, and negative attitudes declined from 78% to 26%. Instances of good practices improved from 7% to 36%, whereas instances of poor practices decreased from 93% to 64%. Notably, participation in yoga and meditation activities surged from 13% to 89%, alongside a significant enhancement in health-seeking behavior.

Conclusion: The health education program proved highly effective in enhancing KAP related to menopause. However, the initially low awareness emphasizes the need for sustained community-based educational initiatives and continued research to support women through menopausal transition.

Keywords: Menopause, Women, Health education, Knowledge, Attitude and practice

INTRODUCTION

Menopause is characterised by the permanent stop of menstrual cycles following the decline of ovarian follicular function, and it is a natural phase. This transition marks a crucial and multifaceted time in a woman's life, during which various unpredictable changes take place.^{1,2} As per India's 2011 census, it is estimated that the number of women aged 45 and older, which is currently 96 million, will rise to 401 million by 2026. With an average life expectancy of approximately 30 years following menopause, women in India may spend a considerable part of their lives in the postmenopausal phase.³

The signs of menopause can start anywhere from 2 to 8 years prior to the actual onset of menopause.^{4,5} Mental symptoms may include stress, mood fluctuations, panic episodes, depression, irritability, anxiety, disturbances in sleep, difficulties with concentration, feelings of being overwhelmed, fatigue, confusion, reduced decision-making skills, compromised motor coordination, memory issues, insomnia, poor focus, impatience, tension, and feelings of loneliness. Physical symptoms related to menopause may consist of hot flashes, cold sweats, dizziness, nausea, vomiting, breast tenderness, bloating, weight gain, skin and hair problems, eating disorders, swelling, inflammation, headaches, alterations in bowel habits, and decreased coordination.³ Additionally, women experiencing menopause might change their behaviors, such as shying away from social gatherings, lowering their work performance, and spending more time at home and in bed.⁴⁻⁶ They also have an increased risk of cervical cancer.⁷

Present national initiatives regarding reproductive health in India primarily target women aged 15 to 45, neglecting those beyond the reproductive age range. Menopausal women are frequently overlooked until their situations deteriorate. In numerous developing nations, menopause and its associated symptoms are viewed as a normal occurrence that does not necessitate medical intervention. There is a significant gap in understanding the health-related issues of menopause among women in these regions.⁷⁻⁹

Additionally, there is an absence of policies or health initiatives that specifically cater to the health requirements of older women, which could assist in reducing the difficulties faced post-menopause.^{10,11} As a result, raising awareness about the symptoms of menopause and how to manage them is essential for women experiencing this phase. Possessing a solid understanding and a positive outlook toward menopause is crucial for effectively addressing the challenges that arise with it. Given the complications associated with menopause and the scarcity of comprehensive research on this topic in India, this study seeks to investigate the knowledge and attitudes surrounding menopause as well as to assess the management approaches for menopausal symptoms among women.

METHODS

A quasi-experimental one-group pre-test post-test design was employed to evaluate the impact of a tailored health education program on menopause-related knowledge, attitude, and practice among women in Karnataka. A total of 340 women, aged between 35 and 65 years, who were in the pre- and perimenopausal stages, were selected for the study. The sample was drawn from 4 different villages in Karnataka, using a systematic random sampling technique, which ensured that every household had an equal chance of being selected. The exclusion criteria specified that women who were not willing to participate and were not present in the village during the data collection period were excluded from the study. This ensured that the sample was representative of the target population. The data collection process was conducted in two phases: pre-test and post-test. The pre-test (June 2024 to July 2024) was conducted to assess the participants' baseline knowledge, attitude, and practice regarding menopause. Following the pre-test, a comprehensive health education program was implemented to address menopause-related knowledge, attitudes, and practices.

The post-test (September 2024 to October 2024) was conducted seven days after the implementation of the health education program to assess the changes in knowledge, attitude, and practice among the participants. Data were collected using a structured and pre-validated questionnaire, which consisted of four sections: demographic information, a knowledge questionnaire, an attitude scale, and a practice questionnaire. The questionnaire was specifically developed for this study to ensure that it was relevant and effective in assessing the desired outcomes.

The data collection process was conducted face-to-face using the structured questionnaire, which ensured that the data were accurate and reliable. The study obtained ethical approval from the institution's ethics committee before the commencement of the study. Informed consent was obtained from the participants before data collection, which ensured that the participants were aware of the purpose and procedures of the study. The data were analyzed using Microsoft Excel, and the results were represented in terms of frequency and percentages. This approach provided a clear and concise representation of the data, which facilitated the interpretation of the results.

RESULTS

The study reveals that the majority of the participants (66%) are between 35-45 years old, with fewer participants in the older age brackets. A large proportion of the participants (81%) are married, with 17% being widows and very few being single or divorced. The majority of participants have low educational attainment, with 45% being illiterate and 27% having only primary education.

Only a small fraction has higher education qualifications. Most participants (78%) are housewives, with only 19% employed and 3% falling into other categories. A significant majority (90%) have no medical history, with small percentages having hypertension, bone health issues, or other conditions. Almost half of the participants (49%) have fewer than two children, with a significant number having 2 to 3 children (37%). A majority of the participants (76%) are sexually active (Table 1). The comparison of pre-test and post-test knowledge levels regarding menopause among women reveals, initially, all 340 women (100%) had poor knowledge levels. After the educational program, there was a significant improvement in knowledge: The number of women with poor knowledge decreased drastically from 340 (100%) to 23 (7%). The majority, 272 women (80%), achieved an average knowledge level. 45 women (13%) reached a good knowledge level (Table 2). The Table 3 reveals a significant increase in the understanding that menopause means the stoppage of menstruation. The percentage jumped from 18% to 91%, indicating successful educational interventions. Knowledge of the typical age range for menopause (45-55 years) improved dramatically from 43% to 96%. This means increased awareness of the

average age range for menopause. Knowledge of potential complications, especially bone-related issues, increased significantly from 26% to 75%. There is a significant increase in the understanding that physical exercise and medication can help manage menopausal symptoms, from 14% to 93%. This indicates successful education on effective management strategies. Table 4 depicts the percentage distribution of attitudes towards menopause before and after an educational intervention. Initially, only 22% of the female participants held a positive attitude toward menopause, a proportion which subsequently increased significantly to 74%. In contrast, at the outset, a substantial 78% of the women displayed a negative attitude, a figure that dropped significantly to 26% following the intervention. The information displayed in the Table 5 illustrates the proportion of women's practice levels regarding menopause before and after an educational intervention. Prior to the intervention, 93% of the women exhibited poor practice levels, which decreased to 64% following the intervention. Conversely, only 7% of the women demonstrated good practice levels before the intervention, which then rose to 36% after the educational session.

Table 1: Distribution of socio-demographic variables of the women in Karnataka (n=340).

Demographic variables		Frequency	%
Age (in years)	35-45	224	66
	45-55	71	21
	55-65	45	13
	Grand total	340	100
Marital status	Single	2	1
	Married	276	81
	Divorced	4	1
	Widow	58	17
	Grand total	340	100
Education status	Illiterate	154	45
	Primary	92	27
	Middle school	22	6
	High school	40	12
	PUC/ Diploma	22	6
	Graduate	6	2
	Postgraduate and above	4	1
	Grand total	340	100
Employment status	Housewife	266	78
	Employed	65	19
	Others	9	3
	Grand total	340	100
Medical history	None	306	90
	Hypertension	16	5
	Bone health issues	6	2
	Others	12	4
	Grand total	340	100
Have you undergone any surgeries	Yes	288	85
	No	52	15
	Grand total	340	100

Continued.

Demographic variables		Frequency	%
Number of children	Less than 2	167	49
	2-3	125	37
	More than 3	39	11
	No children	9	3
	Grand total	340	100
Sexually active	Yes	259	76
	No	81	24

Table 2: Comparison of Pre-test and post-test knowledge levels (specific area) regarding menopause among women in Karnataka (n=340).

S. no.	Knowledge level	Pre-test		Post-test	
		No.	%	No.	%
1	Poor	340	100	23	7
2	Average	0	0	272	80
3	Good	0	0	45	13
Total		340	340	100	340

Table 3: Comparison of Pre-test and post-test knowledge level (specific area) regarding menopause among women in Karnataka (n=340).

S. no.	Knowledge related to menopause	Pre-test		Post- Test		
		No	%	No	%	
1	Do you understand what menopause is?	Stoppage of menstruation	61	18	310	91
		Increased menstrual bleeding	4	1	3	1
		No menstrual bleeding	275	81	27	8
		Don't know		0		0
2	Do you know when women attain menopause	Above 60 years	13	4	1	0
		45- 55 years	145	43	327	96
		35-45 years	14	4	4	1
		Don't know	168	49	8	2
3	Do you know the physical menopausal symptoms?	Hot flushes and night sweats	4	1	324	95
		Palpitation	4	1	5	1
		Sexual dysfunction	332	98	4	1
		Don't know		0	7	2
4	Do you know the cause/reason for menopause	Hormone deficit	18	5	335	99
		Hereditary	5	1	0	0
		Infection	2	1	0	0
		Don't know	315	93	5	1
5	Do you know the physical menopausal symptoms?	Bitterness	45	13	9	3
		Mood swings & irritability	47	14	318	94
		Depression	4	1	11	3
		Don't know	244	72	2	1
6	Do you know the complications of menopause if not managed well?	Bone-related issues	87	26	256	75
		Cardiovascular diseases	10	3	64	19
		Cancer	3	1	17	5
		Don't know	240	71	3	1
7	How can you manage the menopausal symptoms?	Physical exercise & medication	49	14	315	93
		Doing homa and vrathas	5	1	2	1
		Not doing anything	8	2	10	3
		Don't know	278	82	13	4
8	Which type of diet should you take during menopause	Iron rich	36	11	18	5
		Calcium rich	24	7	312	92
		Protein rich	20	6	3	1
		Don't know	260	76	7	2

Continued.

S. no.	Knowledge related to menopause	Pre-test		Post- Test		
		No	%	No	%	
9	How can you manage the menopausal challenges?	Consul doctor	97	29	123	36
		Talk to family and friends,	9	3	196	58
		Keep it a secret	13	4	13	4
		Don't know	221	65	8	2

Table 4: Comparison of pre-test and post-test levels of Attitude regarding menopause among women in Karnataka (n=340).

S. no.	Attitude level	Pre-test		Post-test	
		No.	%	No.	%
1	Positive attitude	75	22	253	74
2	Negative attitude	265	78	87	26
Total		340	100	340	100

Table 5: Comparison of pre-test and post-test Practice levels regarding menopause among women in Karnataka (n=340).

S. no.	Practice level	Pre-test		Post-test	
		No.	%	No.	%
1	Poor	316	93	217	64
2	Good	24	7	124	36
Total		340	100	340	100

DISCUSSION

Knowledge enhancement

The significant increase in knowledge about menopause post-intervention, from 0% having average or good knowledge to 93%, underscores the effectiveness of the health education program. Initially, 100% of the participants exhibited poor knowledge, reflecting a substantial gap in awareness. Post-intervention, the majority achieved at least an average understanding, with 13% demonstrating good knowledge. This improvement is consistent with other studies indicating that targeted health education programs can substantially increase awareness and understanding of menopause. However, the initial 100% poor knowledge level also highlights the pervasive lack of information available to women in this community prior to the intervention, underscoring the need for ongoing education and outreach.^{5,6,10}

Attitudinal shifts

Attitudinal changes towards menopause were significant and positive. Pre-intervention, 78% of the participants had negative attitudes towards menopause, viewing it predominantly as a negative life event. This proportion decreased to 26% post-intervention, while positive attitudes increased from 22% to 74%, indicating a successful shift in societal perceptions. These findings suggest that improved knowledge directly influences attitudes, fostering a more positive and accepting view of menopause as a natural life stage rather than a medical or

social drawback. This aligns with existing research which posits that increased understanding of menopause can lead to more positive attitudes. However, the persistence of some negative attitudes post-intervention indicates that cultural and social beliefs around menopause are deeply ingrained and may require more sustained and multifaceted approaches to fully shift.^{7-9,11}

Changes in practices

There was a significant shift in practices related to menopause management. Initially, 93% of the women had poor practices concerning menopause management, which was reduced to 64% post-intervention. Conversely, good practices increased from 7% to 36%. This shift indicates that knowledge and attitudes significantly impact health-related behaviours. Notably, the increased practice of yoga and meditation (from 13% to 89%) and the willingness to consult physicians at menopause onset (from 6% to 84%) are particularly encouraging. These changes suggest that the health education program effectively promoted healthier lifestyle choices and proactive health-seeking behaviours. Such improvements are crucial, as properly managing menopausal symptoms can significantly enhance quality of life and reduce the risk of associated health issues.^{9,10} A critical outcome is a drastic increase in participants' willingness to seek medical advice (from 6% to 84%) post-intervention. This change indicates a shift towards more proactive health management, which can lead to early detection and management of menopause-related complications. Prior to the intervention, cultural

stigmas and a lack of knowledge likely contributed to the reluctance to seek medical advice.

The study employed a one-group pre-test post-test design without a control group. The post-test was conducted only seven days after the intervention, which may not adequately capture the long-term retention of the sustained changes in knowledge, attitude and practice. The study was conducted in only four villages in Karnataka. And findings may not be generalised to women of the other regions.

CONCLUSION

The study highlights the crucial role of health education programs in enhancing knowledge, attitudes, and practices regarding menopause among women. The intervention led to a substantial improvement, including increased and lifestyle modifications. The significant improvements post-intervention underscores the program's effectiveness. However, to achieve lasting and widespread impact, ongoing education, culturally tailored interventions, and long-term follow-up are essential. Addressing these areas can lead to improved health outcomes and quality of life for women navigating menopause.

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