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Original Research Article

A mixed method study on menopause-related quality of life and health-seeking behavior in urban Telangana, India

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ABSTRACT

Background: Perimenopause is the body's natural transition to menopause, signaling the end of the reproductive years. Changes in a woman's menstrual cycle, vasomotor changes, psychological changes, and vaginal health and sexuality are all symptoms of menopause. This study's objectives are to describe perimenopausal women's quality of life, and enumerate the health-seeking behavior, and determine the prevalence of various perimenopausal symptoms.
Methods: A Cross-sectional study was conducted in the urban settlements of Telangana in 2022. Using an online questionnaire, data was collected from 200 participants, who were identified by convenient sampling followed by snowball sampling. For data collection, a questionnaire was developed from focus group discussions along with standardized MEN-QOL questionnaire.
Results: Common perimenopausal symptoms observed were hair loss (47%), fatigue (48%) and body/joint pain (46%). (54%) participants approached family doctor, 40.5% prefer private healthcare facilities, 39.5% prefer modern medicine. Mean total MEN-QOL score is 3.13±0.37.QOL is low in the physical domain (mean=3.93). Age has a statistically significant relationship with all three domains of MEN- QOL ($p<0.05$).
Conclusions: Hair loss, fatigue, and body/joint pains are prevalent perimenopausal symptoms. Physical domain has poor QOL. Most participants approached family doctors, visits private healthcare facilities and prefers modern medicine.

Keywords: Kruskal Wallis, Quality of life, Menopause, Perimenopause

INTRODUCTION

Menopause is a natural occurrence in women. Perimenopause or 'around menopause', refers to when the body naturally transitions to menopause, signaling the end of the reproductive years (also called the menopausal transition). Changes in menstrual period; Vasomotor changes; psychological changes; vaginal health and sexuality; and, if proper treatment and care are not taken, it may lead to a woman suffering from chronic diseases due to a decrease in hormones.[1] In India, a sizable proportion of women reach menopause prematurely.[2]

Menopause is associated with a decrease in QOL (quality of life) due to the high prevalence of menopausal symptoms.[3-5] Reduced quality of life, compromises the productivity of women's work/life. Indian women are very conservative, and there are many myths and perceptions about health, particularly menopausal symptoms. As a result, it is critical to comprehend women's health-seeking behavior during menopause. There are no national health programs on women's health beyond reproductive age; even the RMNCH+A program only includes women until reproductive age; therefore, research on perimenopausal symptoms and health-seeking behavior in response to these symptoms is critical in providing basic data for any program/policy design.[6] With these factors at the forefront, the present study aims to describe the quality of life and enumerate health-seeking behaviors related to menopause among perimenopausal women aged 35 to 55 years to get

a better understanding of the condition. The study also tried to determine the prevalence of common perimenopausal symptoms.

METHODS

Study design and setting

A mixed-methods cross-sectional study was conducted in an urban setting in the state of Telangana. Regions included -Ranga Reddy, Hyderabad, Hanmakonda, Warangal, Nalgonda, and Vikarabad from March to November, 2022.

Study population

'Average age of menopause of an Indian woman is 46.2 years, which is much less than their Western counterparts (51 years)'.[7] The present study included women aged 35 to 55 years of age who belong to Ranga Reddy, Hyderabad, Hanmakonda, Warangal, Nalgonda, and Vikarabad regions of Telangana, India. Women who have undergone hysterectomy/oophorectomy, natural menopause (with 12 consecutive months without a menstrual period), pelvic radiation therapy for cancer, or hormonal therapy (excluding the thyroid hormone) were excluded from the study.

Sampling technique

Non-probability sampling was done with phase-1 convenient sampling to identify the regions, followed by phase-2 and phase 3 of snowball sampling to identify the study participants.

Sample size

A minimum required sample size was calculated to be 190, taking into consideration the reported prevalence's of vasomotor, psycho-social, physical, and sexual symptoms by using OPEN EPI with the formula: with 95% Confidence Interval.[8] A total of 400 questionnaires were sent out, and 369 were received back. After running the responses through the inclusion and exclusion criteria, and removing incomplete data forms, a total of 200 participant data forms were included for the present study.

Data collection methods

Mixed methods were used for data collection, with phase one of exploratory qualitative research followed by quantitative evaluation. Data was collected using a semi-structured, pre-tested and validated questionnaire with four sections namely, sociodemographic details, common peri-menopausal symptoms, health-seeking behavior (derived from an exploratory focused group discussion) and quality of life (QoL), based on the commonly used MEN-QOL questionnaire (Figure 1).[9] On the questionnaire, menopausal symptoms were graded on a scale of 0 to 6, with 1 representing symptoms that disturbed the least and 8 denoting symptoms that worried the most. The conversion score was then analyzed (a high mean score means poor QOL and a Low mean score means Good QOL).

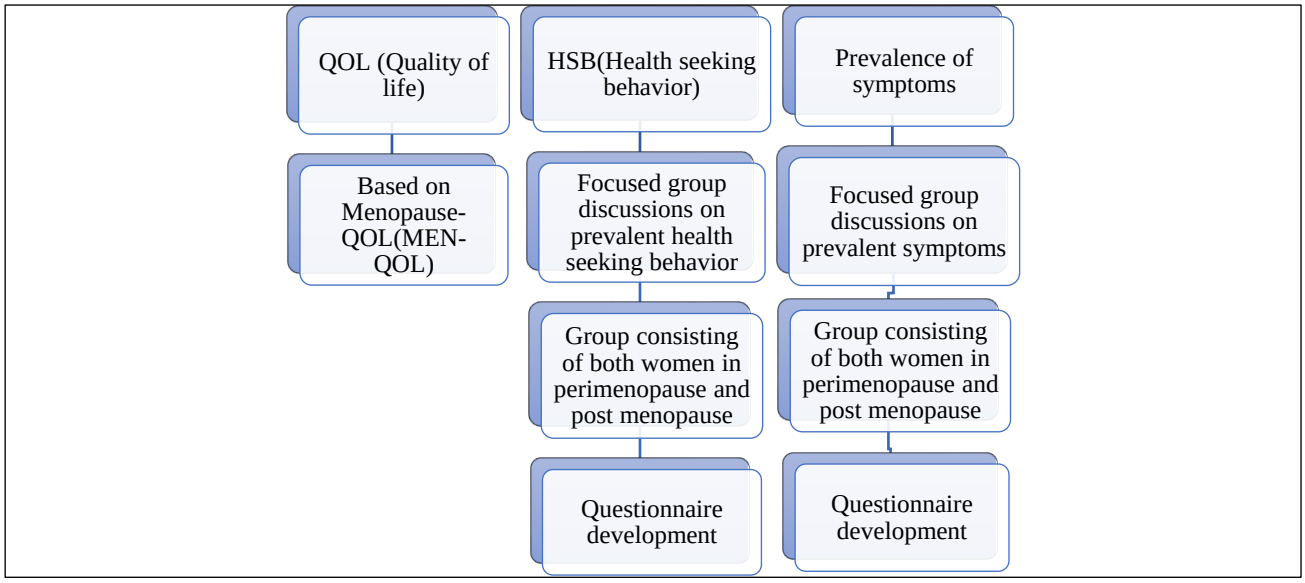

Figure 1: Data collection methods.

Data analysis

The collected data was entered into MS-EXCEL (Windows 11,22H2 Version) and saved in a password-protected file. 'MS EXCEL' and the statistical software STATA Version-14 were used for the analysis. Qualitative variables were expressed in percentages and quantitative variables were expressed as Mean (SD). An association test was done using the Kruskal Wallis H test to see if there are statistically significant differences between two or

more groups of an independent variable. Statistical significance was defined as a p-value less than 0.05. Thematic coding is used to analyze qualitative data manually and themes-sub themes were identified and reported [for detailed description refer Supplementary Table 1).

RESULTS

Socio-demographic factors (SDF) and co-morbidities

Mean age of the participants is 44.12. 62 (31%) of participants are in the age group of 35-40,191 (95.5%) were Hindus, 101 (50.5%) education status is >graduation, 120 (60%) are employed, 78 (39%) annual income is below 2 lakhs/rupees, 196 (98%) were currently married (Table 1).

About 96 (48%) are not suffering with any co-morbidities, 17.5% (35) are suffering with hypothyroid, 28 (14%) are suffering with hypertension, 22 (11%) are suffering with diabetes, 20 (10%) are suffering with gastrointestinal problems, 12 (6%) said that they are suffering with other illnesses.

Quality of life (QOL) and prevalence of peri menopausal symptoms

Four domains make up quality of life vasomotor; psychosocial; social; physical, sexual. Vasomotor domain symptoms have low mean scores (mean=2.57) while physical domain symptoms have high mean scores (mean=3.93), thus depicting physical domain's QOL low compared to the other three. MENQOL's mean overall score is 3.13±0.37 (Figure 2). Highly prevalent perimenopausal symptoms were hair loss, weakness/fatigue, body/joint pains and furthermore prevalent perimenopausal symptoms were depicted in (Figure 3).

Table 1: Distribution of sociodemographic factors of participants along with summary statistics (Mean, SD), statistical test analysis (Kruskal Wallis) of SDF vs QOL.

Variable		Frequency (%)	QOL-Mean scores ±SD				
			Vaso--motor	Psycho--social	Physical	Sexual	Total
Age (years)	35-40	62 (31)	1.70±1.51	2.90±2.08	3.55±1.88	2.01±1.70	3.01±1.59
	41-45	55 (27.5)	1.87± 1.49	2.70±1.71	3.68±1.48	2.76±2.36	3.12±1.29
	46-50	53 (26.5)	3.49±2.35	3.35±2.05	4.33±1.70	3.70±2.49	3.92±1.54
	51-55	30 (15)	3.98±2.81	3.53±2.01	4.49±1.82	4.01±2.57	4.14±1.70
P value			0.0001	0.1865	0.0276	0.0001	0.0006
Religion	Hindu	191 (95.5)	2.57±2.16	3.03±1.97	3.92±1.75	2.98±2.37	3.44±1.57
	Muslim	5 (2.5)	3.67±3.65	4.11±2.13	4.96±1.88	2.20±2.68	4.33±1.84
	Christian	4 (2)	1.00±0	3.07±2.24	3.48±1.71	3.25±1.91	3.05±1.61
P value			0.2414	0.4581	0.5233	0.5294	0.4814
Socioeconomic status	*Low SES	78 (39)	2.46±2.13	3.15±2.19	3.88±1.74	2.73±2.34	3.41±1.68
	*Middle SES	58 (29)	2.34±2.02	2.85±1.86	3.63±1.67	2.64±2.41	3.18±1.45
	*High SES	64 (32)	2.90± 2.39	3.14±1.82	4.27±1.81	3.54±2.28	3.75±1.53
P value			0.4144	0.6533	0.1575	0.0154	0.1687
Educational status	<Graduate	58 (29)	3.07±2.52	2.88± 2.12	3.77±1.93	2.56±2.28	3.35±1.82
	Graduate	41 (20.5)	2.50±2.07	3.45±2.11	4.26±1.73	3.01±2.43	3.72±1.57
	>Graduate	101 (50.5)	2.30±1.99	3.00±1.83	3.89±1.65	3.18±2.38	3.41±1.43
P value			0.1703	0.2789	0.3149	0.2358	0.3512
Occupation	Housewife	69 (34.5)	2.79±2.28	3.17±2.02	3.88±1.74	2.51±2.25	3.44±1.64
	Self employed	11 (5.5)	2.55±1.92	4.06±1.65	4.82±1.75	3.79±2.59	4.25±1.48
	Employed	120 (60)	2.44± 2.16	2.90±1.96	3.88±1.75	3.15±2.38	3.39±1.54
P value			0.5866	0.0564	0.1824	0.0686	0.1813
Marital status	Currently married	196 (98)	2.56±2.19	3.07±1.98	3.94±1.75	2.95±2.37	3.46±1.57
	Currently unmarried	4 (2)	2.67±2.21	2.71±2.36	3.53±2.10	3.83±2.15	3.25±2.09
P value			0.8183	0.6388	0.6499	0.2943	0.7767

SES means Socio Economic Status; *Low SES-Annual Income <2 lakhs/rupees, *Middle SES-Annual Income 5 to 10 lakhs/rupees, *High SES-Annual Income >10 lakhs/rupees; (P<0.05 is considered as statistically significant

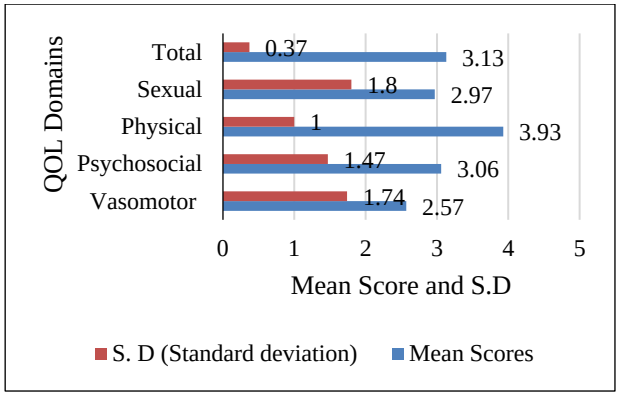

Figure 2: Mean scores and SD of menopausal related quality of life in four domains.

Health seeking behavior towards menopause

About 98 (49%) of participants approached gynecologists for remedies, others approached friends, physician/family practitioner, google/internet/social media, dieticians, other medical/para-medical people. Some participants felt that menopause is Normal and does not require special medical attention, some doesn't approach anyone and some approach others for assistance.108 (54%) visits family doctor often, 81 (40.5%) visits private health facility often over govt health facility 8 (4%), Others visited the health facility only during insurance/work -check-ups and some participants visit other health facilities.

About 79 (39.5%) preferred modern medicine/allopathy treatment, 69 (34.5%) preferred home/traditional remedies, 57 (28.5%) preferred homoeopathy treatment, 52 (26.0%) preferred yoga/naturopathy, other participants preferred Ayurveda, Siddha, Unani, other treatments. 49.5% (99) felt that they didn't face any barriers in seeking the healthcare, 32.5% (65) felt fear of over-medication/unnecessary medication is a barrier for seeking healthcare, other barriers include money, fear of investigations(invasive)/lab tests, availability/time/ absentee, waiting time in hospitals, communication, male doctors/unknown doctors and others.

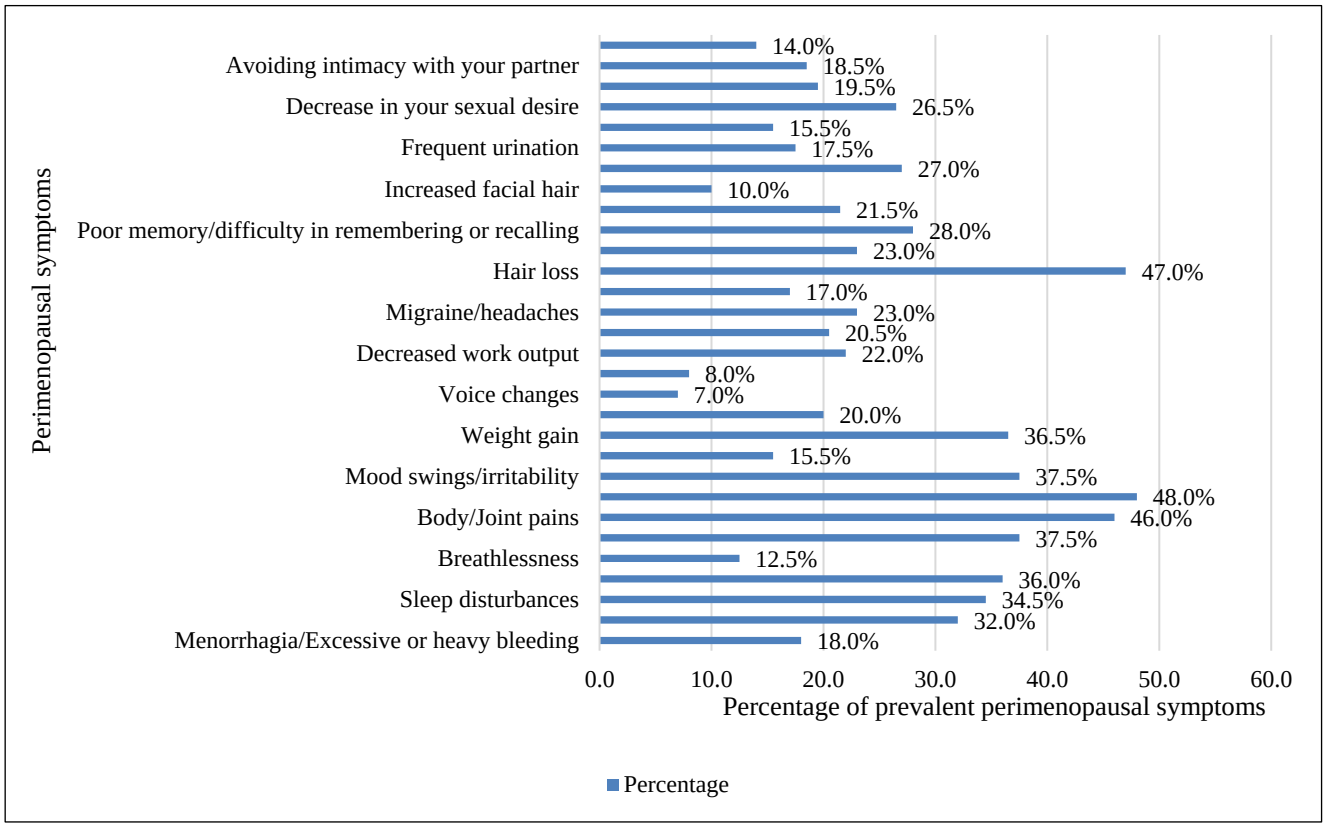

Figure 3: Distribution of prevalent perimenopausal symptoms.

Kruskal Wallis test analysis SDF Vs QOL along with summary statistics

51-55 years age group are having high mean scores, whereas 35-40 years age group are having low mean scores. High SES women are having high mean scores i.e., whereas middle SES women are having low means scores. Muslim women are having high mean scores, whereas Christian women are having low mean scores (Table 1).

Graduated women are having high mean scores, whereas women who's are <graduated are having low mean scores. Women who are self-employed are having high mean scores whereas women who are employed are having low mean scores. Women who are currently married are having

high mean scores, whereas women who are currently unmarried are having low mean scores (Table 1).

Age is statistically significant and related to all the three domains (vasomotor-p=0.0001, physical- p=0.0276, sexual- p=0.0001) except psychosocial domain. And also, SES and sexual domains are statistically significant and are related to each other (p=0.0154). Age and All domains together (total) are statistically significant and are related to each other (p=0.0006) (Table 1).

Kruskal Wallis test analysis prevalence of menopausal Vs QOL symptoms along with summary statistics

Symptoms experienced are having high mean scores in physical domain (3.93±1.75), whereas low mean scores are observed in vasomotor domain (2.57±2.19). Prevalence of menopausal symptoms (or symptoms experienced) and QOL are not statistically significant and are not related to each other (i.e., p value =0.0737, is not <0.05).

Qualitative data analysis (focus group discussion)

Done in 2 groups;1st group consists of 8 perimenopausal women,2nd group consists of 7 post-menopausal women. Following questions were asked to both the groups of participants [for detailed description refer Supplementary Table 1).

What are the common symptoms seen in menopause?

Menorrhagia, irregular cycles, body/joint pains, hot flushes etc. were some of the common symptoms faced.

‘Before and After menopause hot flushes were there with shivering weekly once or twice.’

‘Menstruation twice in a month (happened for 2 months) in the gap of 15 days.’

Why do these menopause problems occur? What are your thoughts about it?

Participants think, not able to manage work life balance, lack of physical and mental activities like walking, yoga, meditation etc. were some of the reasons for the occurrence of menopausal problems.

‘Not able to manage or balance the life between family and work due to which these problems are occurring and because of age the problems are occurring.’

‘Lacking in doing whatever relaxation things like exercise because of that the problems are getting increased’.

What do you think should be done to avoid these menopausal problems?

Doing yoga, meditation, exercise, developing hobbies, taking personal time etc. can avoid the menopausal problems

‘Relaxation by developing hobbies, hobby should be developed to divert the psychological depression.’

‘Personal time, so that we can decrease the problems.’

Who will you approach for remedies?

Participants approach gynecologist, google/internet/social media etc. for remedies.

‘It depends on the severity, if the severity is more, we will go to the gynecologist.’

‘Mobile phone or forwarded messages related to any health problem or Google.’

Which healthcare facility do you often visit?

Healthcare facility often visited were private, insurance/work-check-ups etc.

‘Generally, we will go to private hospitals only.’

‘Private through preventive health checkup.’

Are you able to get access to the healthcare?

All the participants said they can access the healthcare (i.e., Yes)

‘Yes, we are able to get access we are having coverage.’

What type of medical treatment do you prefer?

Modern medicine/Allopathy, home remedies/traditional, Homeopathy etc. were some of the medical treatments preferred.

‘Home remedies/traditional first then next homoeopathy and then last allopathy.’

‘I'm taking homoeopathy, home remedies, at severe stages allopathy.’

When do you seek the help of a physician generally?

Some participants seek the physician help not immediately, for some it depends on the severity of the problem etc.

‘We'll take more time and then we will understand the problem we'll try to solve it, afterwards we think about whether going to physician or not.’

'Not immediately but if it is too much then, I have to consult a doctor- gynecologist'.

What are the barriers in seeking the health care?

Some of the barriers faced were Fear of over-medication/unnecessary medication, some said No barriers, etc.

'There is nothing like barriers.'

'Due to fear of overmedicalization we won't go to healthcare.'

Do you have any hesitations in consulting a doctor for menopause related issues? What are those?

Hesitations faced were Fear of lab/Invasive tests, some said No hesitations faced etc.

'No and anyway we will go to the lady doctor only (gynecologist) so there is no problem or any hesitation.'

'Undergoing lab/invasive tests like for example pap smear or whatever tests, so due to fear of those tests generally I hesitate to consult a doctor".

DISCUSSION

The study aim was to describe the quality of life among perimenopausal women of age 35-55 years, enumerate the health seeking behavior related to menopausal symptoms and determine the prevalence of symptoms. The participants were recruited in the study by convenient sampling followed by snowball sampling. Out of 369 people responded, 200 met the inclusion criteria and included in the study.

31% of the 200 participants were 35 to 40 years old, 95.5% were Hindus, 50.5% had graduated, 60% were employed, 39% earned less than 2 lakh/rupees per year, and 98% were married. In this study out of 200 participants, 48% had no comorbidities. The average MENQOL score is 3.13±0.37. Quality of life is Poor in physical domain (mean=3.93) compared to other three domains, where as in the study conducted in medical college Puducherry among perimenopausal women, "vasomotor domain were significantly more bothered or having Poor QOL".[3] Similarly a study conducted in Hamadan city stated that "vasomotor symptoms had the highest score (low QOL), and sexual symptoms had the lowest score (high QOL) rather than other dimensions".[10]

86% of total 200 participants were presented with menopausal symptoms. The highly prevalent perimenopausal symptoms were hair loss 47.0%, weight gain 36.5%, mood swings/irritability 37.5%, weakness/fatigue 48.0%, body/joint pains 46.0%, backpain 37.5%, muscle cramps 36.0%. As menopause is very subjective to women, across the globe different countries experience different range of intensity of symptoms. On that note "Musculoskeletal aches and fatigue were particularly experienced menopausal symptoms in Malaysian women".[11] Similarly a study conducted among Chinese menopausal women stated that "15.7% of participants reported experiencing menopausal symptoms and most prevalent menopausal symptoms were insomnia (44.7%), fatigue (40.4%), and mood swings (37.2%)".[12]

Various approaches were observed in the participants Health seeking behavior towards menopausal problems i.e., maximum number of participants were approaching family doctor (54%), 49% are approaching gynecologists, 22.5% are not approaching anyone for the remedies, 13% said that menopause is normal, it does not require special medical attention.

Many people were able to obtain healthcare services, where as a study conducted in China among middle aged Shanghai women stated that the "perimenopausal women had the highest symptom level, but only a small percentage of the participants sought healthcare".[13] This study revealed that 40.5% visiting private healthcare facilities, just 4% visiting government health facilities, 34.5% preferring home/traditional remedies/treatment, 28.5% preferring homeopathy, and 26.0% preferring yoga/naturopathy. 39.5% opt for allopathic medicine, contrarily study conducted among Nigerian menopausal women stated that "In spite of the available health facilities in these communities, the utilization of the services of patent drug dealers is still very high but the traditional healers were poorly utilized".[14]

Depending on the seriousness of the issue, some people claim they contact a doctor or seek medical help and some others claimed that they don't seek the help of the physician until they've had regular health examinations. On the other side a study conducted in Aligarh among menopausal women ,where women in urban area stated that "doctor should be consulted for the menopausal conditions".[15] 49.5% of respondents did not identified access to healthcare for menopause-related concerns as a barrier, while 32.5% indicated worry about overmedication/unnecessary medication as a barrier.

Focus group discussions revealed various people's perspectives on the reasons for these menopausal symptoms occurrence. Hormonal imbalances, problems juggling work and family responsibilities, stress imbalances, bad eating habits, unforeseen physical changes, and outdated traditions are a few examples, also being unable to look for oneself because of poor communication, lack of time for personal care, lack of mental and physical exercises like walking, yoga and meditation and exhaustion from work. Additionally, participants themselves expressed some of the techniques to prevent various menopausal issues, they were yoga, meditation, exercise, diets, rest, hobbies, personal time and open communication. Contrarily along with life style

changes, a study conducted among Turkish menopausal women also suggested some menopausal coping mechanisms they are: "necessary trainings on menopause to women and their families, overview healthy life style behaviors such as diet, exercise, smoking; stress, personal, health and social issues affecting middle-aged women, appropriate counselling."[16]

Most women stated that they have no hesitations about consulting a doctor for menopause-related issues. Still, some people expressed hesitations about consulting a male doctor/unknown doctor and fear of lab/invasive tests.

The 51-55 age group has poor QOL (mean=4.14), but the 35-40 age group has good QOL (mean=3.01). High-income women (mean=3.75), Muslim women (mean=4.33), graduated women (mean=3.72), self-employed women (mean=4.25), and married women (mean=3.46) have poor QOL.

With the exception of the psychosocial domain, age has a statistically significant relationship with all three QOL domains (vasomotor-p=0.0001, physical-p=0.0276, sexual-p=0.0001). Additionally, the SES and sexual domains are statistically significant and related (p=0.0154). Prevalence of menopausal symptoms and QOL are not statistically significant and do not relate to each other (i.e., p value is not <0.005),where as a study conducted in Bangalore south stated that "age, education, socioeconomic status, and active lifestyle factors were significantly related to an increase in frequency, intensity of menopausal symptoms, and poor physical, psychological, vasomotor, and sexual health-related QOL among women in the post reproductive period."[8]

This study findings suggest that symptoms have a minor negative impact on perimenopausal women's quality of life.

Limitations of this study were the results cannot be generalized as the study used non-probability sampling. Under coverage bias is possible due to the potential of excluding some population units from the sample. Because sample units are frequently chosen for their accessibility, sampling bias is common. While the researcher's choice of sample members can be subjective, it also raises the risk of researcher bias. And there may also be biases due to the cross-sectional study.

CONCLUSION

The most prevalent menopausal symptoms observed in the study were hair loss, weight gain, mood swings/irritability, weakness/fatigue, body/joint pain, back pain, and muscle cramps. The physical domain's quality of life is poor. Age of women and menopause related quality of life are related to each other and statistically significant. Majority of the participants were approaching family doctor. Many people are often visiting private healthcare facility than government healthcare facility. Modern medicine is preferred over traditional medicine. And also, many didn't face any barriers for seeking the healthcare for menopause related problems. Stress management (work-life balance), regular exercise, adequate nutrition, and personal care/time will enhance health and lessen menopausal symptoms.

During this period of transition in her life, a woman should prioritize her health and look for solutions to manage menopausal symptoms. This study may teach women the importance of treating typical menopausal symptoms early on.

Recommendations

Recommendations made for women experiencing menopausal symptoms are changing the lifestyles by engaging in regular exercise, yoga, meditation, and a nutritious diet. This approach can help with menopausal symptoms management. If the symptoms are severe, women should consult a doctor about hormonal therapy.

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REFERENCES

1. National Institute on Aging. What Is Menopause?. Available at: https://www.nia.nih.gov/health/what-menopause. Accessed 31 October 2022.
2. Meher T, Sahoo H. Premature menopause among women in India: Evidence from National Family Health Survey-IV. J Obstet Gynaecol Res. 2021;47(12):4426-39.
3. Poomalar GK, Arounassalame B. The quality of life during and after menopause among rural women. J Clin Diagn Res. 2013;7(1):135-9.
4. Szadowska-Szlachetka ZC, Stasiak E, Leziak A, Irzmańska-Hudziak A, Łuczyk M, Stanisławek A, et al. Intensity of menopausal symptoms and quality of life in climacteric women. Przegląd Menopauzalny Menopause Rev. 2019;18(4):217-21.
5. Yerra AK, Bala S, Yalamanchili RK, Bandaru RK, Mavoori A. Menopause-related quality of life among urban women of Hyderabad, India. J Life Health. 2021;12(2):161.
6. National Health Mission. Maternal Health. Available at: https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=822&lid=218. Accessed 23 May 2023.

7. Ahuja M. Age of menopause and determinants of menopause age: A PAN India survey by IMS. J Life Health. 2016;7(3):126.
8. Ganapathy T, Al Furaikh SS. Health-related quality of life among menopausal women. Arch Medi Health Sci. 2018;6(1):16-23.
9. Hilditch JR, Lewis J, Peter A, van Maris B, Ross A, Franssen E, et al. A menopause-specific quality of life questionnaire: development and psychometric properties. Maturitas. 1996;24(3):161-75.
10. Barati M, Akbari-heidari H, Samadi-yaghin E, Jenabi E, Jormand H, Kamyari N. The factors associated with the quality of life among postmenopausal women. BMC Women's Health. 2021;21(1):208.
11. Abdullah B, Moize B, Ismail BA, Zamri M, Mohd Nasir NF. Prevalence of menopausal symptoms, its effect to quality of life among Malaysian women and their treatment seeking behavior. Med J Malaysia. 2017;72(2):94-9.
12. Wang X, Wang L, Di J, Zhang X, Zhao G. Prevalence and risk factors for menopausal symptoms in middle-aged Chinese women: a community-based cross-sectional study. Menopause N Y N. 2021;28(11):1271-8.
13. Du L, Xu B, Huang C, Zhu L, He N. Menopausal symptoms and perimenopausal healthcare-seeking behavior in women aged 40–60 years: a community-based cross-sectional survey in Shanghai, China. Int J Environ Res Public Health. 2020;17(8):2640.
14. Dienye PO, Judah F, Ndukwu G. Frequency of symptoms and health seeking behaviors of menopausal women in an out-patient clinic in Port Harcourt, Nigeria. Glob J Health Sci. 2013;5(4):39-47.
15. Khan S, Shukla M, Priya N, Ansari M. Health seeking behavior among post-menopausal women: a knowledge, attitude and practices study. Int J Community Med Public Health. 2016;3(7):1777-82.
16. Ozcan H. Healthy life style behaviors and quality of life at menopause. Int J Caring Sci. 2019;12(1):492-500.

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Table 1: Supplementary

Themes	Statements
1.What are the common symptoms seen in menopause?	
Symptoms: Menorrhagia Irregular cycles No symptoms Sleep disturbances Muscle Cramps Breathlessness Backpain Body/Joint pains Weakness/fatigue Mood swings/irritability Hot flushes Weight gain Skin problems Voice changes Hearing problems Decreased work output Restriction in physical activity Migraine/headaches Intolerance to Extremes of temperature Hair loss	Irregularity in the periods No symptoms Eyes dullness and darkness under eyes, menstruation twice in a month (happened for 2 months) in the gap of 15 days Feeling of dragging/pulling in the legs Breathlessness Irregular periods, Backpain Leg pain observed during the mid-week of every month (since 2years) Intermittent spotting once in 15 days during that time so much of weakness Abdominal pain with joint aches Put on the weight during menopause that weight did not decrease even now after menopause Before and After menopause hot flushes were there with shivering weekly once or twice Anxiety levels increased post menopause compared to pre menopause Stress is present. Fatigue &stress Disturbed life post menopause easily getting fatigued, irritated, depressive, body paints & laziness Skin problems, joint pains Irritation and anger had increased My voice has become loud after menopause
2.Why do these menopause problems occur? What are your thoughts about it?	
Hormonal imbalances Not able to manage work life balance Stress imbalance Improper food habits Sudden transition in the body Old cultural rituals which were good for health but not followed now a days Improper communication Lack of physical and mental activities like walking, yoga, meditation etc Lack of time for personal care Lack of energy due to work Happy after attaining the menopause Aging	Hormonal imbalances Stress, Managing home and office Food habits Not able to manage or balance the life between family and work due to which these problems are occurring and because of age the problems are occurring. The problem is due to the sudden change in the body that can't be handled In olden days they used to sit three days aside during the menstruation now those things are not there so maybe because of that the problems are increasing Facing the stress has been difficult and countering the stress has been decreased my way Not communicating the problems also may increase the issue Lacking in doing whatever relaxation things like exercise because of that the problems are getting increased There is no time for taking the personal care so this problem is occurring. Post-menopausal, I'm happy; compared to pre menopause
3.What do you think should be done to avoid these menopausal problems?	
Yoga Meditation Exercise Diet Rest Hobbies Personal time Communicating the problems	Yoga, exercise, meditation for stress relief Diet Rest during periods Whatever we feel during periods, may get decreased by taking rest If we take rest the pains may get decreased. During periods by staying home those pains won't be there undoubtedly and it will be very much normal to us It depends on each individual for some people they'll have time, for some they won't have time to relax Relaxation by developing hobbies, hobby should be developed to divert the psychological depression Personal time, so that we can decrease the problems Sharing of our problems with others
4.Who will you approach for remedies?	
HSB (Health Seeking Behavior) Approach:	Friends only, because one opinion may help others It depends on the severity, if the severity is more, we will go to the gynecologist

Continued.

Themes	Statements
Friends Gynaecologist Physician/Family Practitioner Google/Internet/social media No-one Dieticians Normal, does not require special medical attention Other medical/para-medical people	We will anyway go to the check up for one year (regular checkup) so anyways we'll take the gynecologist opinion/consult her Doctors Mobile phone or forwarded messages related to any health problem or Google Interaction with the professionals like dietitians, gynecologists Mostly we'll avoid doctors or remedies for the problems
5.Which healthcare facility do you often visit?	
HSB-facility: Govt Private Family doctor Insurance/Work-check ups	We never go to government hospitals Generally, we will go to private hospitals only Family doctor Private through preventive health checkup
6.Are you able to get access to the healthcare?	
Yes	Yes, we are able to get access we are having coverage
7.What type of medical treatment do you prefer?	
HSB-medical: Modern medicine Home remedies/Traditional Homeopathy Ayurveda Siddha Unani Yoga/Naturopathy Others	Home remedies/Traditional first then next homoeopathy and then last allopathy Home remedies first then homoeopathy for several years I'm taking homoeopathy, home remedies, at severe stages allopathy
8.When do you seek the help of a physician generally?	
Not immediately Depends on the severity of the problem Regular health check-ups	We'll take more time and then we will understand the problem we'll try to solve it afterwards we think about whether going to physician or not Not immediately but if it is too much then, I have to consult a doctor gynecologist Regular health checkup we will take gynecologist consultation, but separately we won't go for physician as it is common
9.what are the barriers in seeking the health care?	
HSB- barriers: Money Fear of over-medication/unnecessary medication Fear of investigations(invasive) Availability/ Time/ Absentee Waiting time in hospitals Communication Male doctors/unknown doctors No barriers	There is nothing like barriers Due to fear of overmedicalization we won't go to healthcare I have seen my mother suffering with this menopause so I'm familiar with the symptoms and the age of occurrence of it
10.Do you have any hesitations in consulting a doctor for menopause related issues? What are those?	
No Male Doctor/Unknown Doctor Nothing much Fear of lab/Invasive tests	No and anyway we will go to the lady doctor only(gynecologist) so there is no problem or any hesitation I didn't suffer that much severity of symptoms, so there is no point that we consulted Doctor during my pre-menopausal stage, so there is nothing like hesitation Undergoing lab/invasive tests like for example pap smear or whatever tests, so due to fear of those tests generally I hesitate to consult a doctor My doctor is a family doctor known from 20 years there is no such hesitations in consulting him