Perimenopausal Healthcare Services Utilization Among Women Aged 40 to 60 Years in Guangzhou, China: Status, Determinants, and Insights from a Mixed-Methods Study

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Article

Perimenopausal Healthcare Services Utilization Among Women Aged 40 to 60 Years in Guangzhou, China: Status, Determinants, and Insights from a Mixed-Methods Study

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Abstract: Background: In China, the vast majority of perimenopausal healthcare (PMH) services are performed in a diversity of outpatient clinics, the implication is that women encounter more obstacles towards acquiring appropriate management of perimenopause, resulting in misdiagnosis or missed diagnosis and subsequent repeated visits. The initiation of PMH clinic in public hospitals is a new concept. This study aimed to assess PMH services utilization among women aged 40-60 years, and identify factors influencing it's uptake in Guangzhou, China. **Methods:** A convergent parallel mixed-method study was conducted combining quantitative and qualitative methods from February to October 2024. A total of 1136 women from Tianhe District, Guangzhou were included in the quantitative survey. Barriers and facilitators for PMH services utilization were analyzed based on Andersen's Behavioral Model of Health Services Use. Individual in-depth interviews with 16 stakeholders including perimenopausal women, their husbands, health providers, etc., were conducted to gain further insight into the services utilization behaviors. **Results:** The magnitude of PMH services utilization was 31.0% among women aged 40 to 60 year in Guangzhou, China. Factors associated with services utilization included registered residence (OR=3.158, 95%CI:2.014～3.957), distance (OR=2.841, 95%CI:1.784～3.259), decision-making autonomy (OR=0.361, 95%CI:0.128～0.813), stigma (OR=0.284, 95%CI:0.079～0.560), social support (OR=3.015,95%CI: 1.809～3.217) and severity of menopausal symptoms (OR=2.045, 95%CI:1.610～2.967 and OR=1.836, 95%CI:0.739～2.318, respectively). The qualitative study identified an overall low awareness of perimenopausal symptoms, perimenopause-related stigma in the public, and flawed health systems as significant barriers to services utilization. **Conclusions:** The utilization of PMH services among women aged 40 to 60 years remained suboptimal. Efforts should be made to raise public concerns about perimenopause. Improving services access and enhancing its uptake among disadvantaged sub-groups of women are critical for increasing the utilization of PMH services.

Keywords: perimenopause; healthcare; utilization; China

1. Introduction

Perimenopause is the transitional period when a woman develops biological and clinical features around menopause up to 1 year after the last menstrual period, which mostly occurs between 40 and 60 years of age and can last for 2-10 years[1]. Demographic estimates suggest that every year 25 million women experience menopause worldwide and the number of perimenopausal women is projected to reach 1.2 billion in 2030[2]. In China, there are approximately 167 million women in the perimenopausal phase according to a survey conducted by National Bureau of Statistics in 2020,

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accounting for 23% the total number of perimenopausal women worldwide[3]. During perimenopause, the fluctuations or decreases in sex hormones may lead to a series of ovarian hypofunction, autonomic nervous system dysfunction and neuropsychological symptoms, such as hot flashes, night sweats, fatigue, palpitation, insomnia, vaginal dryness, agitation, irritability, depression and cognitive disorders, which refers to perimenopausal syndrome (PMS)[1]. These somatic and psychological symptoms can exert a negative effect on women's quality of life, and even cause family disharmony and social problems.

To address the complaints related with perimenopause, perimenopausal healthcare (PMH) has been introduced to assist women to identify loss of ovarian follicular function leading to PMS, and help them develop strategies to alleviate these conditions. Standard PMH services in China includes PMS counselling; hormone therapy counselling and treatment regimen provision; psychological care; and community empowerment. Prior studies in China have indicated that although 73.8% of women reported PMS, less than a third of them would seek healthcare[4]. Employment, menstruation status and severity of menopausal symptoms have been identified as influencing factors of healthcare-seeking behaviour[4]. However, most of the participants recruited in these studies had mild symptoms which were likely to be perceived as acceptable phenomenon. How the specific context impacts the provision of PMH services and what measures are needed to address the barriers to PMH services among this population continuously attract researcher's interests.

In China, the majority of PMH services is performed in outpatient clinic of public hospitals, mostly internal medicine and gynecology clinics, the implication is that women encounter more obstacles towards acquiring appropriate management of perimenopause, resulting in misdiagnosis or missed diagnosis and subsequent repeated visits. Spinning off the PMH services into a clinic is a new concept. In 2015, Chinese government proposed a 5-item initiative for perimenopausal women to strengthen the popularization of perimenopausal knowledge and establish PMH clinic. Guangzhou, where this study was conducted, is one of the pilot cities where PMH services are provided in selected public hospitals to address perimenopausal women's specific concerns and needs. Multi-disciplinary treatment and non-judgemental attitude in service provision are developed to smooth out negative experiences and/or symptoms related with perimenopause. However, to date, there are very few studies investigating the extent to which PMH services are utilized in such settings. Moreover, factors associated with PMH services utilization are not well-understood. Understanding the potential facilitators and barriers is crucial for improving service access and enhancing perimenopausal care. This study aims to assess PMH services utilization among women aged 40 to 60 years, and identify the possible factors affecting its uptake based on Anderson's behavioral model in Guangzhou, China. Furthermore, detailed information of perceptions and experiences of service stakeholders was also explored via qualitative research method.

2. Materials and Methods

2.1. Study Setting

This study was carried out in Guangzhou, China. Guangzhou is the third largest metropolis in China with a population of more 16 million. Tianhe District, where this study was conducted, was the pilot site where PMH clinics were established in three public hospitals.

2.2. Study Design

A mixed method was used in this study, including both quantitative and qualitative research methods during the period of February to October 2024. Specifically, it employs a convergent parallel design, wherein quantitative and qualitative data were collected simultaneously and given equal weight in analysis and interpretation.

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2.3. Quantitative Study

2.3.1. Theoretical Framework

Quantitative research is guided by Andersen-Nyman model, which provided a systematic analysis of healthcare utilization behavior by integrating social and individual factors[5]. It consists of three core determinants: predisposing, enabling, and needing factors, which collectively shape the decisions to seek health services[6]. Based on literature review and expert opinions, potential factors associated with the utilization of PMH services were summarized and classified into three categories. (1) Predisposing variables, such as age, parity, registered residence, education, employment, marital status and income; (2) Enabling factors, such as husband/partner's education, living arrangement, health insurance, distance to PMH clinics, family function, social support, husbands'/partners' attitude toward receiving intervention, person who decides receiving intervention and stigma; (3) Needing factors, such as menopausal symptoms, anxiety, depression.

2.3.2. Participants

A cross-sectional survey was conducted in Tianhe District of Guangzhou during the period from February to October 2024. We recruited women (1) at an age between 40 and 60 years; (2) Chinese nationality; (3) providing informed consent. Participants were excluded from the study if they met any of the following exclusion criteria: (1) chronic diseases of the endocrine system; (2) serious psychiatric disorders or other unstable /serious comorbidity that required active treatment; (3) a history of oophorectomy or hysterectomy; (4) hormone replacement therapy within 3 months; (65) pregnant; (6) hearing impairment or cognitive dysfunction.

2.3.3. Sample Size

The sample size was determined assuming effect size of 0.50, α= 0.05 referring the study of Du et al[4]. To obtain reasonable estimates at 95% confidence level and 5% margin of error, considering a non-response rate of 20.0%, a total sample size of 1050 was needed. This study included 1143 women allowing detection of significant differences with a power of 0.88 calculated by Gpower software.

2.3.4. Sampling Procedure

Tianhe District has 21 sub-districts and each sub-district has several community residential committees (CRCs). Prior to the sampling procedure, we hosted a meeting with heads of CRCs, commissioners of sub-district women's federation and representatives from social work organizations on January 6th, 2024. We first introduced the aims and target population of the PMH services to the attendants. Then management of perimenopause was explained including screening for PMS, checkup, laboratory testing, treatment and follow-up visits. After addressing their questions, brochures detailing premenopause and PMH services were distributed to them, and they were encouraged to spread the information.

A combination of stratified sampling and quota sampling method were adopted to select participants. First, 10 sub-districts from Tianhe District were purposefully selected in view of demographic composition and distribution, urban and suburban areas, and industry distribution. From each of 10 sub-districts, 2 CRCs were randomly selected. The eighth sub-district, located in suburban Guangzhou, is clustered with electric vehicles industry. Considering the relatively low coverage of target population in the sampling frame, 4 CRCs were randomly selected. To sum up, 22 CRCs were involved. Each CRC had a registered list of residents with their names, addresses and contacts. We first sifted out women aged 40 to 60 years, then 52 women were randomly selected from each CRC using computer-generated random numbers. The procedure of randomization was conducted by an administrative person not involved in participant recruitment. Researchers were blinded in the process of recruitment.

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2.3.5. Data Collection

Eligible women were contacted by the investigators with the help from CRC staff. After explaining study protocol to all the women and obtaining their informal consents, participants were interviewed online, self-report anonymous questionnaires were distributed to them through an online survey platform ('SurveyStar' , Changsha Ranxing Science and Technology, Shanghai, China.). Once the questionnaire was completed and submitted, research assistants could collect the data using the computer version of 'SurveyStar' on the desktop computer or laptop. The data collection phase was completed with the help of 14 post-graduate students. Regular supervision and feedback were carried out daily by the principal researcher during the data collection period. All the completed questionnaires were checked for completeness and consistency.

2.3.6. Measures

Family function was assessed by the Family Care Index Survey, a self-evaluation scale for the subjective and quantitative evaluation of one's family functions[7]. It covers 5 domains: adaptation, partnership, growth, affection, and resolve. A total core of 7～10, 4～6 and 0～3 indicates good, moderate and severe family function respectively[7]. The validity of Chinese version has been confirmed[8]. Social support was measured by the Social Support Rating Scale, an instrument composed of 3 subscales (informational support,emotional support and household activity support) with a summary score which can be categorized into three levels (low, medium and high)[9]. The reliability and validity have been confirmed in a previous study[10]. The menopausal symptoms of the participants were evaluated by the modified Kupperman menopausal index (mKMI), a questionnaire widely used internationally, and its role in clinical practice is well established[11]. It includes 13 items concerning the following complaints: (1) sweating and hot flushes; (2) paresthesia; (3) insomnia; (4) nervousness; (5) melancholia; (6) vertigo; (7) fatigue; (8) arthralgia/ myalgia; (9) headache; (10) heart palpitation; (11) formication; (12) sexual complaints; (13) urinary tract infection. Each item was rated with a 4-point Likert scale: 0 (none), 1 (mild), 2 (moderate), and 3 (severe). Menopausal symptoms is considered no obvious if the total score is less than 6 points, mild symptoms if the total score is 7 to 15 points, moderate symptoms if the total score is 16 to 30 points, and severe symptoms if the total score is more than 30 points. The validity and reliability of Chinese version has been confirmed[12]. The symptoms of anxiety were gauged by the Self-Rating Anxiety Scale (SRS)[13]. This scale consists of 20 items measured on a 4-point Likert scale, ranging from 1 to 4 points. The standard total SRS score was the integer part of the total SRS score of 1.25 times. If the standard total SRS score was less than 50 points, the person was considered normal with respect to anxiety. The anxious symptoms were considered mild with a standard total score of 50 to 59 points, moderate with 60 to 69 points, and severe with 70 points or more. The Self-rating depression Scale (SDS) was chosen to assess the severity of depression[13]. This scale also contains 20 items with each item assigned to 4 grades (1 to 4 points). The calculation method for the standard total SDS score and the evaluation criteria for the severity of depression were the same as those for SRS.

2.3.7. Statistical Analysis

Statistical analysis was conducted with SPSS 24.0 software. The Chi- square test, Fisher's exact test (for categorical variables), t test, and the Wilcoxon rank sum test (for continuous variables) were used to assess the differences in predisposing variables, enabling variables and needing variables between women who utilized PMH services and those who did not. Multivariate regression analysis was used to identify factors that were significantly associated with healthcare-seeking behaviors. Odds Ratios (ORs) with 95% confidence intervals (95% CIs) were calculated to measure the strength of association. Estimates with *p*-values less than 0.05 were considered to indicate a statistically significant difference.

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2.4. Qualitative Study

2.4.1. Participants

A purposive sampling method was used to select participants for individual in-depth interviews. Service stakeholders eligible for participation in this study were defined as (1) perimenopausal women, as well as their husbands; (2) PMH services providers or managers directly involved in providing or managing PMH in the selected hospital; (3) policy makers at prefecture and county levels, including officials responsible for maternal healthcare services at the Health Commission. The sample size was determined based on the principle of information saturation. A total of 16 individuals were interviewed, comprising 6 perimenopausal women, 3 husbands of perimenopausal women, 3 service providers and 2 service managers from public hospitals, and 2 policy makers.

2.4.2. Data Collection

Before the interview, guides for different stakeholders were developed and piloted which covered three domains: knowledge and attitudes towards PMH services, views on relevant services provision quality, suggestions for enhancing existing PMH services. Potential respondents were contacted by the research assistant via telephone to arrange for an interview time and place. Semi-structured face-to-face interviews were used to explore individual experiences and perspectives in private interview rooms. All interviews were conducted in Mandarin Chinese, and each interview lasted between 30 and 60 minutes.

2.4.3. Data Analysis

All the interviews were conducted by trained qualitative researchers using audio recording, followed by verbatim transcription. The transcripts were analyzed using NVivo 12.0 computer software.

2.4.4. Ethics

Ethics approval was obtained from the Research Ethics Board of The Third Affiliated Hospital, Southern Medical University. All participants provided informed consent before being interviewed.

3. Results

3.1. Quantitative Results

3.1.1. Demographic Characteristics of Study Participants

Among 1143 women approached to participate, 1139 (99.7%) consented to participate in the survey. Among those who consented to participate in the survey, 1136 (99.7%) completed the interviews. Of the 1136 women who completed the interviews, 352 (31.0%) utilized PMH services.

The average age of women was 51 years old ranging from 45 to 58 years. A majority of the participants were married and employed. About a half of women (50.2%) reported college or higher education level. The highest proportion (39.8%) of households earned between 20000 and 29000 Chinese yuan per month, followed by those who earned 10000～19000 Chinese yuan (31.2%). Distribution by registered residence showed that more than half of the participants were internal migrants. (Table 1).

Table 1. Demographic characteristics of study participants.

Variables	Frequency	Percentage (%)
Age	51.4±6.7	
Marital status		
Married	1062	93.5
Widowed/ Never married	74	6.5

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Employment		
Yes	1011	89.0
No	125	11.0
Educational level		
Junior high school or less	264	23.2
Senior high school	301	27.3
College or more	571	50.2
Average monthly household income		
10000～19000 CNY	354	31.2
20000～29000 CNY	453	39.8
≥30000 CNY	329	29.0
Registered residence		
Guangzhou	512	45.1
Others	624	54.9

CNY: Chinese Yuan.

3.1.2. Variations in the Use of PMH Services by Background Characteristics

The proportion of PMH services utilization was significantly lower among internal migrant women (37.2%) than among local residents (62.8%). The proportion was also significantly greater among women who lived closer to the PMH clinic (80.7%) than among those who lived far away (19.3%). In addition, the proportion was significantly greater among women who made services utilization themselves (50.9%) than among those who made the decisions jointly with their partners (35.2%) or those whose partners solely made such decisions (13.9). Similarly, the proportion that used the services was also significantly higher among women who did not feel stigmatized (53.7%) than among those who had a feeling of stigma (46.3%). The proportion of services utilization was significantly higher among women with higher levels of social support (46.0%) than among women whose social support was medium (36.1%) or low (17.9%). With respect to menopausal symptoms, the severe group of mKMI (31.0%) and the moderate group of mKMI (29.0) were significantly more likely to use the services compared with the 'not obvious' group (13.0%). There were, however, no statistically significant variations in the proportions using the services by other factors considered. (Table 2).

Table 2. Association of three categorical variables and utilization of perimenopausal healthcare among women aged 40 to 60 years in Guangzhou, China.

Variables	Total[n (%)]	Perimenopausal healthcare service utilization[n (%)]		x^2/t	*P*
		No(n=784)	Yes(n=352)		
Predisposing factors					
Age (year)	51.4±6.7	49.6±7.1	50.2±9.3	12.058	0.116
Marital status				0.604	0.337
Married	1062(93.5)	735(93.8)	327(93.0)		
Widowed/ Never married	74(6.5)	49(6.2)	25(7.0)		
Employment				1.000	0.515
Yes	1011(89.0)	698(89.0)	313(88.9)		
No	125(11.0)	86(11.0)	39(11.1)		
Educational level				1.210	0.546
Junior high school or less	264(23.2)	175(22.3)	89（25.3）		
Senior high school	301(27.3)	211（26.9）	90（25.6）		
College or more	571(50.2)	398（50.8）	173（49.1）		
Average monthly household income				0.126	0.939
10000～19000 CNY	354(31.2)	242（30.9）	112（31.8）		
20000～29000 CNY	453(39.8)	313（39.9）	140（39.8）		
≥30000 CNY	329(29.0)	229（29.2）	100（28.4）		
Registered residence				0.000	0.000
Guangzhou	512(45.1)	291（37.1）	221（62.8）		
Others	624(54.9)	493（62.9）	131（37.2）		

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Parity				0.947	0.478
1	429（37.8）	297（37.9）	132（37.5）		
≥2	707（62.2）	487（62.1）	220（62.5）		
Enabling factors					
Husbands'/Partners' education				0.047	0.977
Junior high school or less	257（22.6）	176（22.5）	81（23.0）		
Senior high school	293（25.8）	203（25.9）	90（25.6））		
College or more	586（51.6）	405（51.6）	181（51.4）		
Living arrangement				0.053	0.974
Alone	296（26.1）	203（25.9）	93（26.5）		
With spouse/children/relatives	525（46.2）	364（46.4）	161（45.7）		
With co-workers/others	315（27.7）	217（27.7）	98（27.8）		
Health insurance				0.792	0.413
Yes	704（62.0）	488（62.2）	216（61.4）		
No	432（38.0）	296（37.8）	136（38.6）		
Time spent going to the nearest perimenopausal healthcare clinic				0.000	0.000
0-30 minutes	492（43.3）	208（26.5）	284（80.7）		
>30 minutes	644（56.7）	576（73.5）	68（19.3）		
Husbands'/partners' attitude toward receiving intervention				0.128	0.938
Support	383（33.7）	263（33.5）	120（34.2）		
Disagree	328（28.9）	225（28.7）	103（29.2）		
Uncertain	425（37.4）	296（37.8）	129（36.6）		
Person responsible for making healthcare utilization decision				61.590	0.000
Husband/partner	340（30.0）	291（37.1）	49（13.9）		
Women herself	465（40.9）	286（36.5）	179（50.9）		
Both	331（29.1）	207（26.4）	124（35.2）		
Self-stigma towards perimenopausal health problem				0.003	0.002
Yes	602（53.0）	439（56.0）	163（46.3）		
No	534（47.0）	345（44.0）	189（53.7）		
Family function				0.014	0.993
Good	399（35.1）	275（35.1）	124（35.2）		
Moderate	486（42.8）	335（42.7）	151（42.9）		
Severe	251（22.1）	174（22.2）	77（21.9）		
Social support					
Low	387（34.1）	324（41.3）	63（17.9）	151.3	0.000
Medium	480（42.2）	353（45.0）	127（36.1）		
High	269（23.7）	107（13.7）	162（46.0）		
Needing factors					
Menopausal symptoms				241.9	0.000
No obvious	201	155(19.7)	46(13.0)		
Mild	435	340(43.4)	95(27.0)		
Moderate	384	282(36.0)	102(29.0)		
Severe	116	7(0.90)	109(31.0)		
Anxiety				0.367	0.947
No obvious	128	89（11.4）	39（11.1）		
Mild	406	281（35.8）	125（35.5）		
Moderate	504	349（44.5）	155（44.0）		
Severe	98	65（8.3）	33（9.4）		
Depression				0.276	0.964
No obvious	203	141（18.0）	62（17.6）		
Mild	539	373（47.6）	166（47.2）		
Moderate	329	227（28.9）	102（29.0）		
Severe	65	43（5.5）	22（6.2）		

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3.1.3. Multivariate Analysis of Factors Associated with the Use of PMH Services

The logistic model analysis revealed that registered residence, distance, person responsible for making services utilization decisions, stigma, social support and menopausal symptoms were significantly associated with healthcare-seeking behaviors. Women with local residence were 3.2 times significantly more likely to use PMH services compared to internal migrants (OR=3.158, 95% CI: 2.014～3.957). Similarly, women who lived closer to the PMH clinic were about three times significantly more likely to utilize the services compared to those who lived far away (OR=2.841, 95%CI:1.784～3.259). Women whose husbands were the main decision-makers regarding services use were 64% significantly less likely to use PMH services compared to those who made such decisions themselves (OR= 0.361, 95% CI: 0.128～0.813). Women who had a feeling of stigma were 72% significantly less likely to use PMH services compared to those who did not feel stigmatized (OR=0.284, 95%CI: 0.079～0.560). In addition, women who reported high levels of social support were three times significantly less likely to use PMH services (OR=3.015, 95%CI: 1.809～3.217). The odds of PMH services utilization among women whose had severe and moderate menopausal symptoms were two times significantly higher than those with no obvious symptoms (OR=2.045, 95%CI:1.610～2.967 and OR=1.836, 95%CI: 0.739～2.318, respectively). (Table 3).

Table 3. Odds ratios from multivariate logistic regression examining factors associated with perimenopausal healthcare seeking in Guangzhou, China.

Covariates	*OR*	*SE*	*95%CI*	*P*
Registered residence				
Guangzhou	3.158	0.147	2.014～3.957	0.000
Others	—	—	—	—
Time spent going to the nearest perimenopausal healthcare clinic				
0-30 minutes	2.841	0.059	1.784～3.259	0.000
>30 minutes	—	—	—	—
Person responsible for making healthcare utilization decision				
Husband/partner	0.361	0.024	0.128～0.813	0.000
Both	0.715	0.008	0.248～1.253	0.089
Women herself	—	—	—	—
Self-stigma towards perimenopausal health problem				
Yes	0.284	0.016	0.079～0.560	0.000
No	—	—	—	—
Social support				
Low	—	—	—	—
Medium	1.036	0.157	0.491～1.636	0.081
High	3.015	0.624	1.809～3.217	0.000
Menopausal symptoms				
No obvious	—	—	—	—
Mild	0.825	0.316	0.415～1.023	0.078
Moderate	1.836	0.504	0.739～2.318	0.016
Severe	2.045	0.327	1.610～2.967	0.000

3.2. Qualitative Results

From February to October 2024, a total of 16 in-depth interviews were carried out with stakeholders. Three key themes emerged as important to the uptake of PMH services: low awareness of PMS and healthcare provision, perimenopausal-related stigma and imperfect maternal health care system.

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3.2.1. Low Awareness of PMS and Healthcare Provision

A lack of understanding or awareness in PMS was frequently noted by a majority of interviewees as a significant challenge to receiving adequate care and obtaining early diagnosis. Physiological changes of the climacteric period, and additionally overlapping systemic complaints related with middle age, in combination with changes of socio-economic position hindered active utilization of available services. Even when informed by primary care physicians, perimenopausal women often failed to recognize the importance of seeking intervention. As service providers and one perimenopausal woman commented:

"Some women may harbor misconceptions about perimenopausal conditions such as hot flushes, night sweats and fatigue, exhibiting reluctance to visit perimenopausal clinics, believing that such concerns are minor or manageable without the assistance of professionals. By the time they visit the hospital, their symptoms are often already quite severe." (Service provider-1)

"Many perimenopausal women are less inclined to go to a PMH clinic, believing that it is just another sleep problem that they can solve on their own" (Service provider-2)

"Sometimes women may not fully understand perimenopausal conditions such as cognitive disorders, or they may have some misconceptions ..... (48 years old, a menopause woman)

Furthermore, family members of perimenopausal women often failed to recognize the severity of perimenopausal conditions, which hampered women from utilizing healthcare services. For instance, one husband of a woman with PMS insisted that doctors appeared to overstate negative impacts of PMS. He emphasized the importance of doctors providing more advice on reproductive healthcare, yet he remained skeptical about perimenopausal assessments and treatments.

" If a normal person seeks counseling, it's possible for the doctor to suggest that you may have a disease, but as long as the perimenopausal woman is well taken care of, she won't have any issues. It's unnecessary to undergo a series of check-ups, lab tests and psychological assessment." (51 years old, husband of a perimenopausal woman)

3.2.2. Perimenopausal-Related Stigma

Perimenopausal-related stigma hindered women from seeking care at hospitals. The service managers noted that many women considered their perimenopause as a private matter and were hesitant to respond to sensitive inquiries. Some feared that seeking advice from medical professionals would be labeled as neurotic or psychiatric. Others expressed concerns that the records of their consultations might adversely impact their social relationships or career promotion. Moreover, traditional cultural beliefs and shame-oriented attitudes towards perimenopausal problems further diminish their willingness to seek medical assistance.

"She's feeling ashamed, like she's falling apart, everything is a mess. However, if she is advised to seek help at a PMH clinic, she feels that she is making a fuss and is worried that people will vilify her."(Service managers)

"If I went to a PMH clinic, people around me will think I am neurotic and caprice."(44 years old, a perimenopausal woman)

"Nowadays, perimenopause is derogatory in China, and individuals have a sense of shame about perimenopausal conditions."(Service provider)

3.2.3. Flawed Maternal Health Care Systems

Despite the acknowledgment of the importance of PMH services within public hospital settings, most of the service providers and policy makers perceived the need for more detailed clinical guidelines and a clear regulatory structure to accompany policy, to address concerns about assuring the quality of services. One woman expressed dissatisfaction during interventions, as the doctors failed to offer adequate advice for her, instead asking her to rely on traditional Chinese medicine to recover.

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"Providing services is a tough job. Most of health professionals come from a clinical background and lack multidisciplinary training. So finding the right people to deliver these services is a real challenge" (Service managers)

“Hospital service providers focus on clinical services. Now they have to provide individualized counselling, their interpersonal communication skill should be improved. They need training.” (Policy maker-1).

Service providers think PMH is a burden. First it will increase workload, and this kind of workload is not related to economic benefit. Second, China medical association came to develop the guideline, but they didn’t provide financial support (Policy maker-2).

"When I went to the PMH clinic of hospital, the doctor's words were not very appropriate, she said that I need to rely on myself to regulate my emotions". (46 years old, a perimenopausal woman)

4. Discussion

This study aimed to determine the proportion of women aged 40 to 60 years who utilized PMH services and possible barriers to its uptake in public hospitals piloting the PMH services delivery. To our knowledge, this is one of the very few studies to apply mixed method approach to examine the multifaceted factors influencing the utilization of PMH services.

The present study revealed that less than one-third of women aged 40 to 60 years utilized PMH services. Uptake of PMH services was comparatively higher than the 26.0% of a study conducted in Shanghai, one of the most developed cities in China[4]. This disparity could be due to public finance budget to ensure its systematic implementation and multidisciplinary treatment model in the study setting. First, concerning financial resources, the present case was supported by municipal financial budget. While in the case of Shanghai, PMH clinics were fully funded by the health facilities in contrast to the government, which received limited public finance and were therefore required to generate income through services provision. Second, the present model embraced multidisciplinary care approach with specialists from different sectors. Although the importance of an integrated management approach was emphasized by hospital managers, no detailed steps were issued to ensure the systematic implementation of PMH services in the above-mentioned case. Increased workloads resulting from in hospital referral and coordination between various sectors may hinder health professionals from providing quality services. Moreover, this kind of workload is not related to economic benefits. Because perimenopausal women often experience physiological and psychological changes including vasomotor, somatic, cognitive, urogenital and psychological changes which vary in terms of duration, prevalence and severity[14], a multidisciplinary approach encompassing the appropriate medical specialties plays an important role in improving health outcomes and reducing healthcare costs[15]. In this model, women are first seen by a gynecologist in a PMH clinic, where the consultation are recorded, then face-to-face multidisciplinary unit involving this gynecologist and other specialists is formed through a coordinator. At each visit, women are seen by several specialists, jointly sharing decision making. The well-defined structure, complete with designated roles and responsibilities for each team member, could enhance coordination and ensure every aspect of patient care is adequately addressed.

The findings of this study showed being a local resident was significantly more likely to use PMH services compared to their internal migrant counterparts. The perceived difficulties for migrants to access PMH services might be due to non-transferable health insurance and different welfare policies between provinces. Under-utilization among internal migrant women suggests efforts from national and provincial levels to integrate them into the welfare structures in their host cities.

As an enabling factor, distance was found to be a major factor influencing the women’s healthcare-seeking behavior which was consistent with previous studies. This may be attributed to busy work schedules. Another key finding of the paper was that women whose husbands were the main decision makers regarding the utilization of PMH services were significantly less likely to use

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the services compared to those who made such decisions themselves. Opposition by the husband could be due to limited knowledge of perimenopausal conditions or gendered power differences in decision-making processes that favor men. This raised the the importance of women empowerment in reproductive healthcare. We also found a significant association between stigma and the utilization of PMH services. This was consistent with findings in other qualitative studies assessing women's access to reproductive healthcare services including post-abortion care and infertility counselling[16]. Women experiencing stigmatized views on perimenopausal conditions may be misled by the perception that they are neurotic and making a fuss since most symptoms are not life-threatening. This view contributed to their delays in healthcare-seeking which may worsen the situation. Additionally, middle-aged women may be hesitant to be presented at PMH clinics lest it could hurt their job promotion. Efforts should be made to address attitudes and beliefs on perimenopausal condition as well as reinforce the role of healthcare services in helping women get through this period smoothly. Another key finding of this paper was that lack of social support was associated with lower rate of healthcare-seeking behaviour. This was similar to a study in Australia which concluded social support network encouraged positive help- seeking intentions and subsequent use of mental health services in older adults[17]. In theoretical models, healthcare-seeking behavior mediates the relationship between social support and health[18]. The hypothesis is that social support is health-promoting because it facilitates healthier behaviors in two major ways, either directly (e.g., practical support) or indirectly (e.g., social support impacts the meaning of life)[19].

Furthermore, the study demonstrated that severity of menopausal symptoms was also a major factor influencing the women's healthcare- seeking behavior. This result was similar to a review, in which women would not seek treatment unless they experienced multiple or severe symptoms in perimenopause[4]. Similar results were also found by other researchers which showed women with moderate and severe symptoms were more likely to visit hospitals compared to the women with mild or no symptoms[20]. Essentially, some complaints are strongly related to poor health outcomes, leading to high demand for therapeutic management. In this case multidisciplinary treatment approach was adopted which seemed to be an appealing choice for perimenopausal women. The finding suggests the importance of individualized treatment when planning and offering care for perimenopausal women.

The findings of the the qualitative study identified a lack of perimeopausal health awareness, perimenopause-related stigma in the public and flawed medical systems as some of the key barriers to services utilization. Consistent with prior studies, the results indicated that many women and their families failed to recognize PMS and there were misconceptions about these issues[1,14]. Moreover, social stigma towards perimenopause was raised as an important barrier contributing to low diagnosis and treatment rates for PMS. This suggests the need for social intervention to foster a supportive environment both within families and the broader community.

A few policy implications can be drawn from this study to improve the PMH services. First, low utilization rate of PMH services, especially among internal migrant women warrants increased attention from health authorities to improve effective use of PMH clinics and reduce the negative impacts of PMS. Systematic public education programs should be launched to improve their knowledge and awareness of perimenopause and reduce perimenopause-related stigma. Second, PMH services should improve its coverage and adopt a comprehensive and personalized package of health services. These should include enhanced convenience for perimenopausal women, further involvement of male partners in service delivery, a supportive policy and sufficient resource allocation at both institutional and individual levels. Third, it is important to reduce perimenopause-related stigma. Efforts to overcome such a barrier need to be made both at community level (e.g., social support) and individual level (e.g., women empowerment).

There are several limitations of this study. First, the generalizability of this study would be limited as we only conducted the study in Guangzhou, China. Second, report bias may exist in the questionnaire survey. Third, cultural diversity has a positive or negative effect on the perception of

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menopause, which in turn impacts health-seeking behaviors. Future research is encouraged to explore factors related with cultural platform and personality.

5. Conclusion

Uptake of PMH services still remained low in the study setting where the provision of the services in public hospitals was being piloted. In addition, immigrant, convenience, women with limited decision-making autonomy, stigma, social support and severity of menopausal symptoms were found to be important factors influencing services utilization. The findings suggested the need for policies and programs to not only strengthen the provision of the services but also promote uptake among disadvantaged sub-groups of women in the study setting.

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Abbreviations

PMH perimenopausal healthcare.

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