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Original Research

Disparities in Clinical Management of Menopause Within China's Hierarchical Medical Framework

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Abstract

Background: This study aimed to investigate the differences in the current clinical practice of menopause in China's hierarchical medical system, with the goal of informing policy development and optimizing health promotion strategies for menopausal women in China. **Methods**: An epidemiological survey was conducted using an online questionnaire distributed through China's largest obstetrics and gynecology academic training platform between April and May 2020. **Results**: A total of 4458 questionnaires were collected, with 3853 meeting the criteria for analysis. Physicians' familiarity with menopausal syndrome varied significantly across hospital tiers ($\chi^2 = 69.24$, $p < 0.001$), with limited awareness in grade 3 hospitals (48.25%) and highest in community hospitals (69.47%). More than half (60.42%) had less than five years of clinical experience in menopause management ($\chi^2 = 26.75$, $p < 0.001$). The proportion of physicians who often or occasionally recommended hormone therapy (HT) was 84.12% in grade 3 hospitals, 79.20% in grade 2 hospitals, and 77.16% in community hospitals, while the proportion of physicians who never recommended HT was the lowest in grade 3 hospitals and the highest in community hospitals (7.58%). Use of traditional Chinese medicine (TCM) was also widespread, reported by 84.12% of grade 3, 79.38% of grade 2, and 67.58% of community hospitals. Chinese patent medicines were the most commonly recommended form of TCM. **Conclusions**: The understanding of menopause among Chinese physicians remains limited, an issue that is particularly pronounced among doctors in primary care institutions compared to those in higher-level hospitals. Both HT and TCM are widely utilized in clinical practice. Doctors from community hospitals require further education and training in menopausal management.

Keywords: menopause; hierarchical medical system; gynecological endocrinology; menopausal hormone therapy; traditional Chinese medicine

1. Introduction

Female menopause represents a critical transitional phase characterized by the progressive decline and eventual cessation of ovarian function. Clinically, this period encompasses peri-menopause (the time surrounding final menstruation) and post-menopause. During this transition, women frequently experience a constellation of physiological and psychological symptoms, including but not limited to menstrual irregularities, vasomotor symptoms (hot flashes and night sweats), cardiovascular manifestations (palpitations), and mood disturbances [1,2]. Epidemiological data from China reveal significant variations in the prevalence of symptoms: insomnia (37.2%), musculoskeletal pain (35.7%), and dizziness (31.5%) emerge as the most frequently reported complaints. Notably, classic vasomotor symptoms such as hot flashes exhibit a lower prevalence (17.5%) compared to Western populations, potentially reflecting ethnic or cultural differences in symptom reporting or experience [3].

Hormone therapy (HT) remains the gold-standard intervention for the management of vasomotor symptoms and genitourinary syndrome of menopause. In addition to its central role in symptom control, HT has well-established efficacy in the prevention of bone loss and reduction of fracture risk [4]. Despite robust clinical evidence supporting its favorable benefit-risk profile for most healthy women during early menopause, HT utilization rates have shown a persistent decline globally since the publication of the Women's Health Initiative (WHI) study results in 2002 [5]. In China, menopausal management incorporates a unique dual approach combining Western medicine with Traditional Chinese Medicine (TCM). TCM has been widely integrated into clinical practice, with multiple randomized controlled trials demonstrating both efficacy and safety in alleviating various climacteric symptoms [6–8].

The hierarchical medical system has become essential in many developed countries. Since 2009, China has promoted the hierarchical medical system to realize rational allocation of medical resources. The hierarchical medical system in China refers to the grading system for hospitals according to severity of illness and difficulty of treatment. Community hospitals (grade 1 hospitals) are com-

munity hospitals responsible for providing basic health care in communities. Grade 2 hospitals are for a medium-sized city or district, handle more complex cases and provide specialized outpatient services. Grade 3 hospitals are general hospitals providing specialist health services, medical education, and scientific research [9].

In the practice of diagnosis and treatment of climacteric syndrome, the hierarchical medical system provides convenience for Chinese women to receive medical services. In order to investigate the differences in the clinical practice of menopause in the hierarchical medical system in China, so as to provide more targeted training and help for doctors from different levels of medical institutions, we conducted relevant research through online questionnaires.

2. Materials and Methods

2.1 Research Design

Using a network survey pattern, online questionnaire forms were distributed on China's largest academic training platform for obstetrics and gynecology from April and May 2020. Doctors who completed the questionnaire were provided with free access to training videos on obstetrics and gynecology to encourage participation.

The content of the questionnaire focused primarily on evaluating the mastery level and routine diagnosis and treatment of climacteric syndrome. The questionnaire content was also adjusted according to the characteristics of particular discipline settings to ensure that it conformed to actual situations in Chinese medical institutions. The content and design of the questionnaire were discussed and revised by an expert group, verified by small-scale obstetricians and gynecologists, and subsequently published on the network platform.

2.2 Respondents

Chinese obstetricians and gynecologists from 28 different provinces and cities participated in the survey. The inclusion criteria were as follows: clinicians who specialized in obstetrics and gynecology or reproduction. The exclusion criteria were as follows: clinicians who did not specialize in obstetrics and gynecology; returned questionnaire forms in which basic information was incomplete; the content in the submitted questionnaire form was incomplete; there were obvious logical errors in the submitted questionnaire form; and the content in different sections was contradictory.

2.3 Survey Content

2.3.1 Formulation of the Questionnaire

The content of the questionnaire focused primarily on evaluating mastery level and routine diagnosis and treatment of climacteric syndrome. The questionnaire was developed by four reproductive endocrinologists from the obstetrics and gynecology fields. The designed questionnaire was initially completed by 30 obstetricians and gynecologists. After confirming that no omissions were present, the questionnaire was distributed online.

2.3.2 Questionnaire Content

Basic demographic data were collected and primarily included age, gender, hospital level, years of professional employment, department, and study major.

The survey of knowledge mastery of menopausal syndrome mainly includes the mastery of self-awareness, the basic knowledge of menopausal syndrome, and the knowledge of hormone therapy. The investigation of the clinical practice of menopausal syndrome mainly includes patients' attitudes towards menopausal syndrome, the acceptance and worries of hormone therapy, and the application of TCM. The investigation of hormone therapy mainly includes indications, contraindications, specific medication regimens and commonly used drugs, patients' attitude, doctors' attitude in clinical practice. The investigation of the application of traditional Chinese medicine mainly includes commonly used drugs, perceptual understanding of drug efficacy, etc.

2.4 Statistical Methods

Data were statistically analyzed using the IBM SPSS Statistics (29.0.1.0; IBM Corp., Armonk, NY, USA). Categorical data are presented as "n" (%). The univariate analysis was conducted using a two-tailed chi-square (χ^2) test, the inspection level was set as $\alpha = 0.05$, $p < 0.05$ was considered statistically significant, and $p < 0.001$ was considered highly statistically significant.

3. Results

3.1 Basic Information

A total of 4458 questionnaire forms were collected, of which 3853 met the inclusion criteria and were included in the analysis. The primary reasons for forms being excluded were because they had been completed by non-gynecologists and obstetricians, e.g., administrators, teachers, nurses, health doctors, and ultrasound doctors. Additionally, questionnaire forms in which the respondents selected the only option for the answers to all questions were eliminated. Among the respondents who returned valid questionnaire forms, 2207 (57.28%) were doctors from grade 2 hospitals, who accounted for the highest proportion, followed by 1171 (30.39%) doctors from grade 3 hospitals, and 475 (12.33%) doctors from community hospitals, who represented the smallest group. The age group with the lowest number of participants was 18–25 years old, and the age group with the largest number of participants was 36–45 years old. The majority of doctors had more than 20 clinical working years. Nearly half of the doctors were obstetric-gynecological physicians, while the least represented job title was reproductive/gynecological endocrinologist (Table 1).

Table 1. Demographic data (n, [%]).

		Number	Community	Grade 2	Grade 3
Total number		3853	475 (12.33)	2207 (57.28)	1171 (30.39)
Gender	Female	3752 (97.38)	473 (99.58)	2158 (97.78)	1121 (95.73)
	Male	101 (2.62)	2 (0.42)	49 (2.22)	50 (4.27)
Age (years old)	18–25	34 (0.88)	4 (0.84)	25 (1.13)	5 (0.43)
	26–35	723 (18.76)	68 (14.31)	387 (17.54)	268 (22.89)
	36–45	1607 (41.71)	221 (46.53)	920 (41.69)	466 (39.80)
	46–55	1315 (34.13)	177 (37.26)	763 (34.57)	375 (32.02)
	≥56	174 (4.52)	5 (1.05)	112 (5.07)	57 (4.87)
Clinical working years	≤5	282 (7.31)	26 (5.47)	152 (6.89)	104 (8.88)
	6–10	517 (13.42)	58 (12.21)	266 (12.05)	193 (16.48)
	11–20	1189 (30.86)	138 (29.05)	687 (31.13)	364 (31.08)
	≥20	1865 (48.41)	253 (53.26)	1102 (49.93)	510 (43.55)
Speciality	Obstetrician	335 (8.69)	19 (4.00)	167 (7.57)	149 (12.72)
	Gynecologist	1166 (30.26)	124 (26.11)	532 (24.11)	510 (43.55)
	Obstetric-gynecological physicians	2186 (56.74)	331 (69.68)	1454 (65.88)	401 (34.24)
	Reproductive/gynecological endocrinologist	166 (4.31)	1 (0.21)	54 (2.45)	111 (9.48)

Table 2. Mastery of knowledge of menopausal syndrome (n, [%])*.

	Number	Community	Grade 2	Grade 3
Total	3853	475 (12.33)	2207 (57.28)	1171 (30.39)
Not familiar at all	122 (3.17)	20 (4.21)	78 (3.53)	24 (2.05)
Not very familiar	2054 (53.31)	310 (65.26)	1203 (54.51)	541 (46.20)
Familiar with most of the knowledge	1584 (41.11)	141 (29.68)	879 (39.83)	564 (48.16)
Comprehensive mastery	93 (2.41)	4 (0.84)	47 (2.13)	42 (3.59)

*χ^2 (6, N = 3853) = 69.24, $p < 0.001$.

Table 3. Clinical working experience of menopausal syndrome (years) (n, [%])*.

	Number	Community	Grade 2	Grade 3
Total	3853	475 (12.33)	2207 (57.28)	1171 (30.39)
0	814 (21.13)	132 (27.79)	464 (21.02)	218 (18.61)
≤5	1514 (39.29)	175 (36.84)	880 (39.87)	459 (39.20)
6–10	716 (18.58)	62 (13.05)	408 (18.49)	246 (21.01)
11–20	521 (13.53)	70 (14.74)	290 (13.14)	161 (13.75)
≥20	288 (7.47)	36 (7.58)	165 (7.48)	87 (7.43)

*χ^2 (8, N = 3853) = 26.75, $p < 0.001$.

3.2 Mastery of Knowledge and Clinical Experience of Menopausal Syndrome

In the analysis of physicians' mastery of climacteric syndrome, perceived knowledge of menopause varied significantly across hospital tiers ($p < 0.001$). More than half of the respondents reported having limited familiarity with menopausal syndrome (56.48%). The proportion of physicians who indicated limited understanding of climacteric syndrome was the lowest in grade 3 hospitals (48.25%) and the highest in community hospitals (69.47%). Meanwhile, the proportion of respondents who thought they were familiar with most of the knowledge of climacteric syndrome was the highest in grade 3 hospital group (48.16%) and the lowest in community hospital group (29.68%) (Table 2).

In terms of clinical working experience of menopausal syndrome, 60.42% of the respondents had less than five years of clinical experience in menopausal diagnosis and treatment, or even no relevant clinical experience (21.13%) (Table 3).

3.3 Clinical Practice of Diagnosis and Treatment of Menopausal Syndrome in China

To begin with, we conducted a survey assessing physicians' workload, attitude, diagnostic approaches, and treatment practices regarding menopause (Fig. 1).

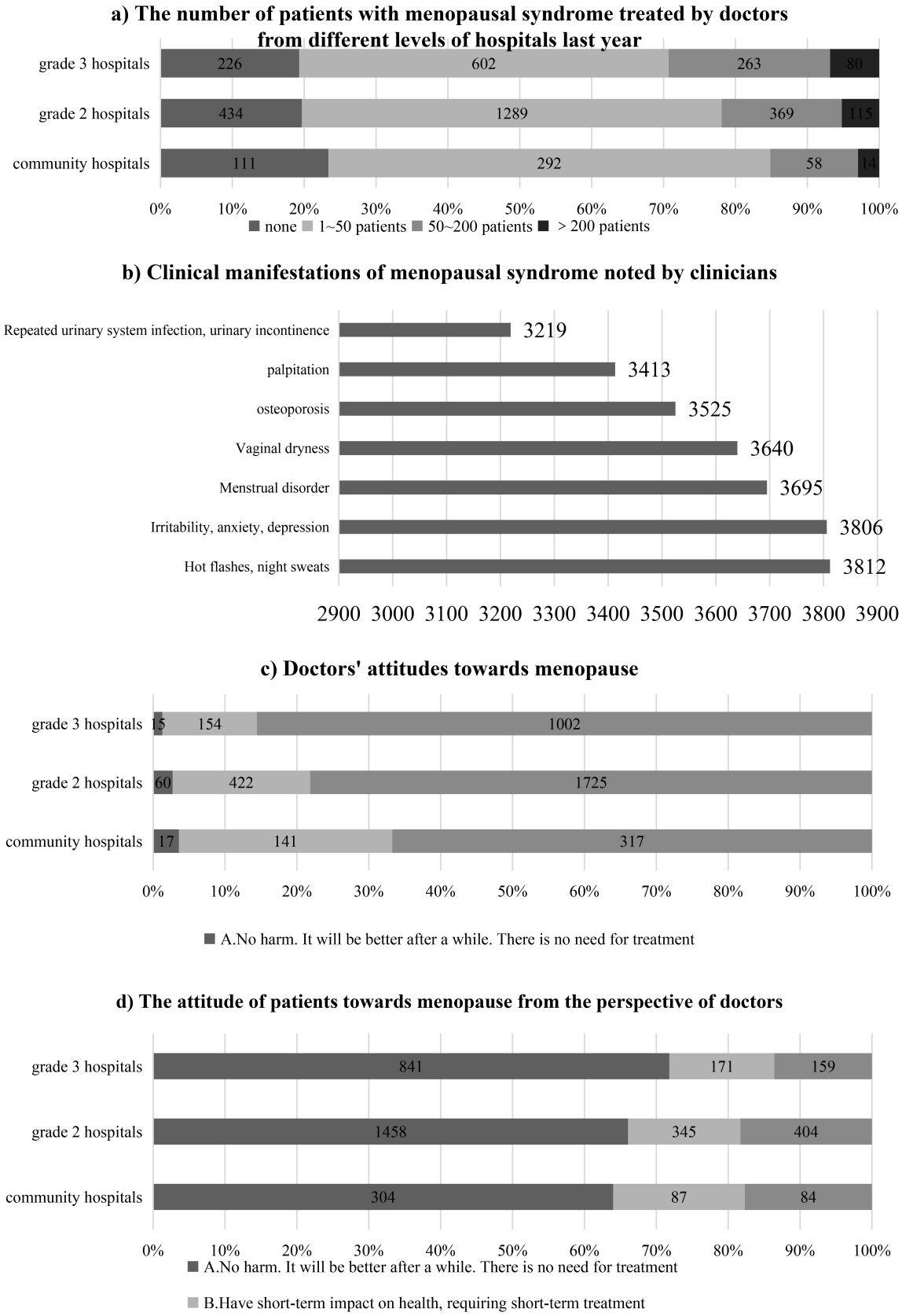


Fig. 1. Clinical exposure and symptom recognition of menopause syndrome at the hospital level. (a) The number of patients with menopausal syndrome treated by doctors from different levels of hospitals last year. (b) Clinical manifestations of menopausal syndrome noted by clinicians. (c) Doctors' attitudes towards menopause. (d) The attitude of patients towards menopause from the perspective of doctors.

3.3.1 The Workload of Chinese Doctors in Treating Menopausal Patients

In the past year, the majority of respondents had treated 1 to 50 patients with menopausal syndrome (2183, 56.6%), followed by 17.91% of respondents treating 50 to 200 patients last year with menopausal syndrome (690, 17.91%). Interviewees from different levels of medical institutions generally saw a similar scale of patients with climacteric syndrome (Fig. 1a).

3.3.2 Chinese Doctors' Diagnosis of Menopause Syndrome

In the survey, 436 doctors (91.79%) from community hospitals, 2049 (92.84%) doctors from grade 2 hospitals and 1104 (94.28%) doctors from grade 3 hospitals knew that the concept of menopause was a period from the decline of ovarian function to the disappearance of menopause symptoms. Additionally, 472 (99.37%) doctors from community hospitals, 2183 (98.91%) doctors from grade 2 hospitals, and 1167 (99.66%) doctors from grade 3 hospitals understood how to diagnose menopause according to age, last menstruation period and laboratory examinations. The most reported clinical manifestations were hot flashes, night sweats and other vasoconstriction symptoms (3812, 98.94%), while issues related to the urinary system were mentioned less (3219, 83.55%) (Fig. 1b).

3.3.3 Chinese Doctors' Attitude Towards Menopause and Hormone Therapy

We collected doctors' general attitude towards menopause (Fig. 1c). At the same time, we also investigated the attitude of Chinese females towards menopause in the eyes of doctors (Fig. 1d). We also investigated the attitudes of doctors and patients towards the treatment of menopausal symptoms (Fig. 2). Among the 3853 participants, 1451 (37.66%) reported that they often recommend menopausal hormone therapy to patients, 1620 (42.05%) occasionally recommend menopausal hormone therapy to patients, 626 (16.25%) seldom recommend, and 156 (4.05%) never recommend (Fig. 2a). In the clinical work of the interviewees, the most common reasons for patients to receive hormone therapy are hot flashes, night sweats, insomnia and other vasomotor symptoms (78.91%). Other main reasons include vaginal dryness, difficulty in sexual intercourse (58.99%), low bone mass and high risk of osteoporosis (42.30%) (Fig. 2b). Furthermore, 2406 (62.44%) respondents said they would consider hormone therapy or recommend it to their partners, and 411 (10.67%) respondents or their partners were using hormone therapy (Fig. 2c). As for therapeutic regimens, the vast majority of respondents agreed that women with a uterus should use the "estrogen + progesterone" plan, while women without a uterus should only use estrogen (3162, 82.07%). In addition, 3275 (85.00%) respondents had a good understanding of the timing of starting medication. The most commonly used initial estrogen type and dose was Femoston 1/10 (1296, 33.64%), followed by Progynova 1 mg/d (936, 24.29%), Progynova 0.5 mg/d (699, 18.14%), Femoston 2/10 (176, 4.57%) and Progynova 2 mg/d (123, 3.19%). 623 (16.17%) of respondents had never used initial estrogen (Fig. 2d). Among physicians who recommended hormone therapy for their patients, we investigated the main concerns leading patients to refuse the treatment and the main reasons for discontinuation (Fig. 2e,f).

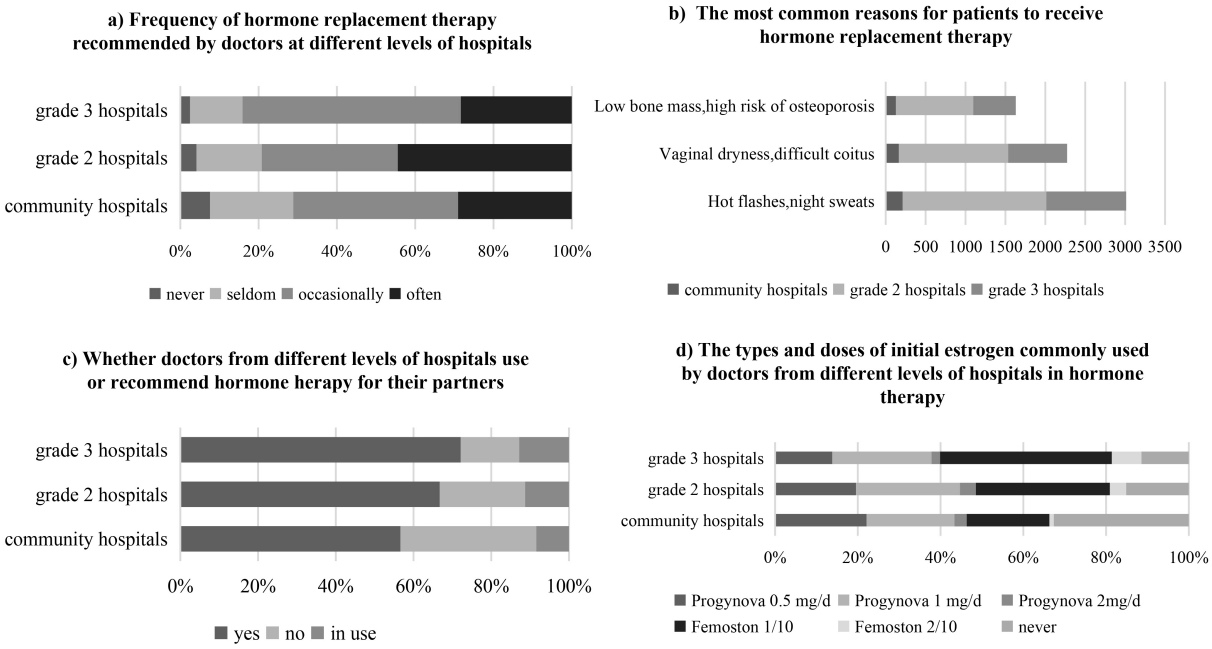
3.3.4 Application of Traditional Chinese Medicine in the Treatment of Menopausal Syndrome

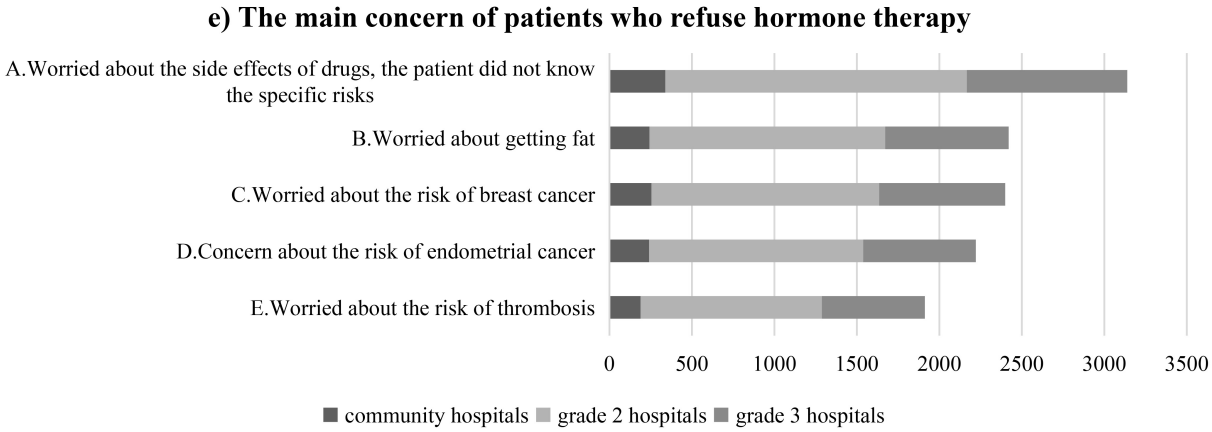
A total of 95 respondents (2.47%) did not believe TCM to be effective for patients with menopausal syndrome. In contrast, 2343 respondents (60.81%) considered TCM to be effective for only a small proportion of patients. Additionally, 1240 (32.18%) believed TCM to be effective for most patients, while 175 (4.54%) disregarded it as effective for almost all patients (Fig. 3a). Use of TCM was also widespread, reported by 84.12% of grade 3, 79.38% of grade 2, and 67.58% of community hospitals. Moreover, 3033 (78.72%) of doctors chose the TCM they often prescribe to patients, and 820 (21.28%) doctors never prescribed the drugs listed in the options (Fig. 3b).

4. Discussion

For a long time, menopausal syndrome has not received enough attention from patients and doctors in China. However, with the rapid aging of the population, an increasing number of women are entering menopause, bringing this health issue into sharper focus. HT offers significant advantages, primarily the highly effective relief from debilitating menopausal symptoms such as hot flashes, night sweats, and vaginal dryness, thereby substantially improving quality of life and sleep, while also providing proven benefits for preventing osteoporosis and reducing bone fracture risk. However, there are notable disadvantages, including an increased risk of serious health conditions such as breast cancer, blood clots, stroke, and, for certain types of therapy, heart disease, particularly when initiated in women over 60 or more than 10 years after menopause onset, making the decision to use HT a highly individualized risk-benefit analysis that must be carefully weighed with a healthcare provider [10,11].

Currently, there exists a significant gap in both foundational knowledge and updated clinical practices regarding menopausal syndrome among Chinese obstetricians and gynecologists. Encouragingly, numerous medical institutions have initiated specialized training programs in recent years to enhance physicians' understanding of menopausal health management [12]. Our survey is a comprehensive investigation on the knowledge of menopausal syndrome, the clinical application of HT, and the application of TCM participated by gynecologists and obstetricians from hospi-





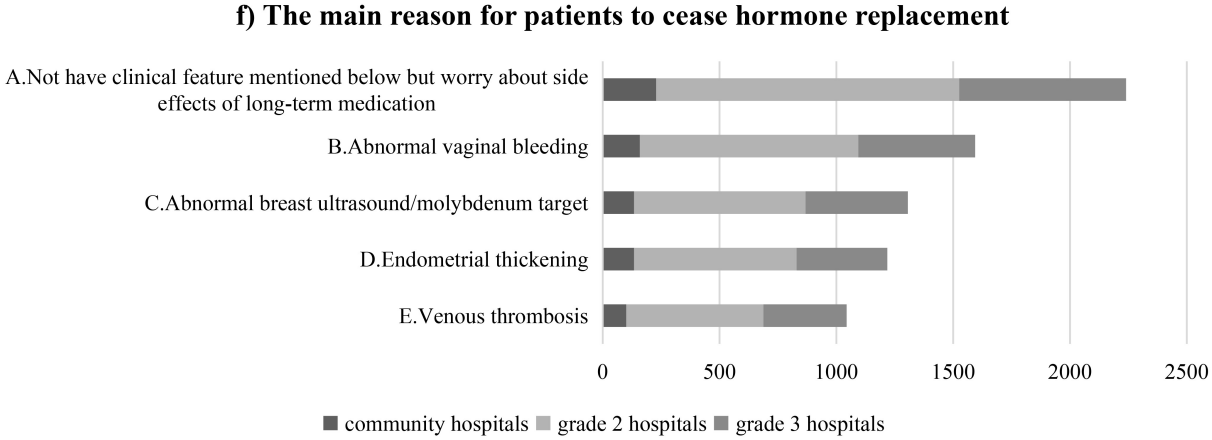


Fig. 2. Attitudes of doctors and patients toward hormone therapy (HT). (a) The frequency of hormone therapy recommended by doctors at different levels of hospitals. (b) The most common reasons for patients to receive hormone therapy. (c) Whether doctors from different levels of hospitals use or recommend hormone therapy for their partners. (d) The types and doses of initial estrogen commonly used by doctors from different levels of hospitals in hormone therapy. (e) The main concern of patients who refuse hormone therapy. (f) The main reason for patients to stop hormone therapy.

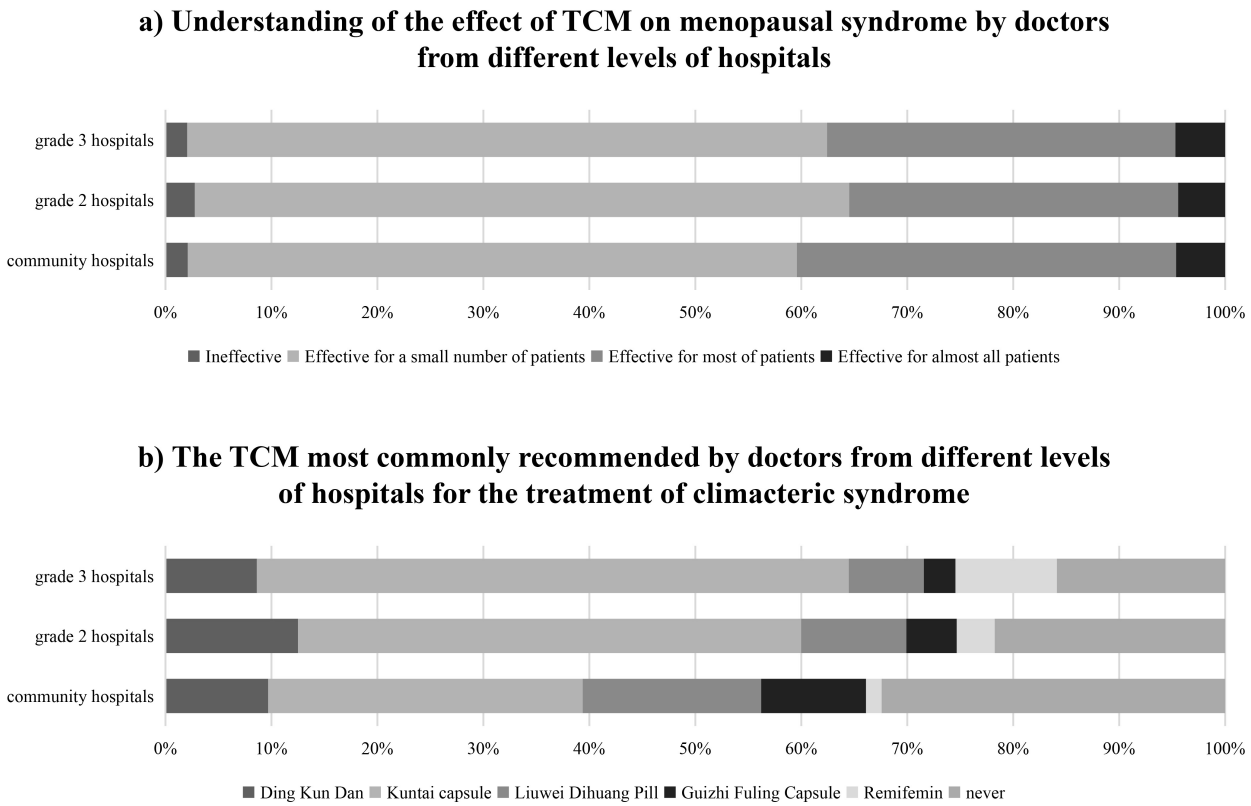


Fig. 3. Doctors' general attitude towards the use of TCM. (a) Understanding of the effect of TCM on menopausal syndrome by doctors from different levels of hospitals. (b) TCM most commonly recommended by doctors from different levels of hospitals for the treatment of menopausal syndrome. TCM, traditional Chinese medicine.

tals at all levels throughout China [13]. Our results show the clinical practice of diagnosis and treatment of climacteric syndrome under China's hierarchical medical system. Through this study, we aimed to gain a more precise understanding of the strengths and limitations of menopause diagnosis and treatment within China's hierarchical medical system, thereby better supporting Chinese clinicians in advancing their practice in this field.

Our study is distinguished by its large sample size, with a total of 4458 Chinese healthcare professionals completing the questionnaire, of which 3853 were deemed valid for analysis. The respondents represented a wide age range (18 years to over 56 years), with varying levels of clinical experience (from less than 5 years to more than 20 years). As the majority of gynecologists and obstetricians in China are female, most participants in our study were women, although male physicians also accounted for 2.62% of the sample.

In most general hospitals in China, gynecologists and obstetricians are typically divided into subspecialities such as gynecology, obstetrics, and reproductive endocrinology. Our study included respondents from all these areas. In contrast, physicians in community hospitals generally practice across broader scopes without such subspecialties, and this group was also represented in our sample [10].

This descriptive study focuses exclusively on China's hierarchical healthcare system, which comprises three tiers: community hospitals, grade 2 hospitals, and grade 3 hospitals. This system is designed to rationally distribute patient flow, optimize resource allocation, and ensure continuity of medical services. Community hospitals primarily provide care for common illnesses and public health services; grade 2 hospitals deliver regional healthcare and initial emergency treatment for severe cases; and grade 3 hospitals are responsible for managing complex diseases as well as conducting scientific research, education, and technical guidance [9].

Our study aims to investigate the diagnostic and management practices related to menopause—a common chronic condition—within this hierarchical system. Specifically, we sought to determine whether differences exist in the understanding and clinical approach to menopausal care among physicians at different levels of medical institutions.

Overall, Chinese obstetricians and gynecologists currently demonstrate a relatively comprehensive understanding of menopause, including its definition, clinical manifestations, and the diagnosis and treatment of menopausal syndrome [14,15]. Our survey indicates that nearly half of the Chinese gynecologists and obstetricians consider themselves to have a relatively solid understanding of

menopausal disorders, while the remainder perceive gaps in their knowledge regarding menopausal care. A higher proportion of community hospital doctors perceived themselves as having insufficient knowledge of menopausal care. Surprisingly, physicians in grade 3 hospitals did not express greater confidence in their understanding of menopausal disorders compared to those in grade 2 hospitals.

We also surveyed the number of years physicians had been engaged in the diagnosis and treatment of menopausal disorders. The results showed that more than half of the respondents had been involved in this field for five years or less. Interestingly, the proportion of community physicians with over ten years of experience in menopausal care (62.26%) was significantly higher than that of physicians in grade 2 (20.62%) and grade 3 hospitals (21.19%). Overall, the distribution of physicians by years of experience was generally comparable across all hospital levels included in this study. A notable "experience-knowledge paradox" emerged: although community physicians tend to have longer practical experience in treating menopausal patients, their conceptual understanding of the condition remains relatively outdated. This discrepancy may be attributed to unequal access to continuing education and updated clinical guidelines [10].

Although menopausal symptoms significantly affect women's quality of life, they have historically received limited attention—both from patients and gynecologists—largely due to the perception that menopause is not a life-threatening condition [16]. With advances in medical science and the resulting increase in life expectancy, greater emphasis has shifted towards enhancing patients' quality of life.

Our survey showed that most Chinese obstetricians and gynecologists currently hold a correct attitude towards menopausal syndrome. However, a subset of physicians, particularly those in community hospitals, continue to exhibit outdated or unscientific views. From the physicians' perspective, many patients still believe that menopausal symptoms do not require intervention. The limited awareness among community hospital physicians may reflect deeply rooted clinical habits and insufficient opportunities for professional development, despite national guidelines clearly emphasizing that menopausal symptoms affecting quality of life warrant timely medical treatment [17]. The relatively low clinical utilization rate of HT mentioned subsequently, along with prevalent concerns about its side effects, may also contribute to the misconceptions regarding menopause among community hospital physicians.

Since the publication of the WHI findings, physicians and the public have been more conservative about HT use, and the effectiveness and safety of HT have always been a concern [18]. In previous surveys, Chinese doctors had a negative attitude towards this treatment and seemed to be overconcerned with the risks of HT [10,19]. In our survey of frequency of HT recommended by doctors at different levels of hospitals, 84.12% of doctors from grade 3 hospitals, 79.20% of doctors from grade 2 hospitals and 77.16% of doctors from community hospitals often or occasionally recommend HT to patients, while 28.84% of doctors from community hospitals, 20.80% of doctors from grade 2 hospitals and 15.88% of doctors from grade 3 hospitals never or seldom recommend [20]. These data suggest that Chinese gynecologists and obstetricians now have a high acceptance of HT for menopausal syndrome. Doctors from higher-level hospitals have a higher recognition of hormone therapy, which indicates that it is necessary to strengthen the knowledge update of grass-roots doctors. In the investigation of the causes of HT initiation, hot flashes, night sweats and other vasoconstriction symptoms are the most common causes, which is consistent with the previous results [21].

However, when the choice comes to clinicians themselves, more than half of them would consider HT (67.26%), which is lower than the rate they tend to recommend it to their patients (79.70%). Compared with other respondents, the proportion of respondents from community hospitals who do not consider menopausal HT or do not recommend partner use is the highest. Physicians tend to use HT more cautiously for themselves or their partners, reflecting that they still remain sceptical about current menopausal medications. Therefore, stronger and more up-to-date clinical research evidence needs to be provided to doctors to enhance their confidence in HT. Additionally, menopause-related training and academic conferences regarding menopausal management should be promoted to alleviate physicians' underlying apprehensions [22].

The attitude of patients toward HT needs more attention. In our survey, doctors reported that Chinese women have many concerns about HT. Many patients refuse HT or stop HT without any clinical symptoms just because they are worried about the risk of long-term medication, without knowing the specific side effects of HT [16]. In addition, gaining weight seems to be the side effect that Chinese women are most worried about. It is necessary to strengthen the popular science education of HT.

According to the 2022 hormone therapy position statement of The North American Menopause Society, various formulations, doses, and routes of prescription HT preparations have comparable high efficacy for relieving vasomotor symptoms and should be determined individually and reassessed periodically [4]. Our survey shows that Chinese obstetricians and gynecologists are using HT for menopause that keeps pace with the times. The interviewees fully grasped the personal medication plan and timing of HT.

As for using TCM, compared with doctors from other levels of hospitals, the respondents in secondary hospitals have a more positive attitude towards the efficacy of traditional Chinese medicine in the treatment of climacteric

syndrome (97.24%). In the treatment of climacteric syndrome, the use rate of TCM in community hospitals was the lowest (67.58%), and was the highest in grade 3 hospitals (84.12%). Chinese patent drugs (i.e., Ding Kun Dan, Kuntai capsule, Liuwei Dihuang Pill and Guizhi Fuling Capsule) are the most commonly recommended TCM for the treatment of menopausal syndrome by respondents at all levels of medical institutions [17].

Limitations

This study is a cross-sectional investigation and cannot reflect the changes in the diagnosis and treatment of menopause in China over time. This study did not objectively quantify the physicians' knowledge of menopause. We only asked the physicians to evaluate their own level of knowledge. As there are still many controversial issues regarding menopause that remain unresolved, it was not feasible to design a questionnaire with definitive answers to quantify the physicians' knowledge of menopause. Additionally, this study investigated the physicians' attitudes toward TCM but did not collect their feedback on the comparison between HT and HT in terms of efficacy. These limitations will be key areas of focus in our future research.

5. Conclusions

Our survey shows that the understanding of menopause among Chinese physicians remains limited. In different levels of hospitals, doctors' understanding of menopausal syndrome differs, and doctors from community hospitals have a relatively narrow view, which requires further education and training. Chinese doctors have a very positive attitude towards HT. Meanwhile, there are still some doubts about HT, such as potential side effects. The side effects patients are most concerned about are obesity and breast cancer. Patients often terminate HT due to fear of side effects caused by long-term medication. Chinese obstetricians and gynecologists have a positive attitude towards the curative effect of TCM on menopausal syndrome. Our findings demonstrate the differences in the clinical practice of menopause management in China's hierarchical medical system.

Availability of Data and Materials

Data sets generated during the current study are available from the corresponding author on reasonable request, which were used under license for the current study, and so are not publicly available.

Author Contributions

WL, YL, SZ, XD, YD, XM, JG, and AS designed the research study. YL provided specific guidance and oversight for the implementation plan design. YD provided experiential insight and advice based on previous similar research protocols. XM assisted in the drafting and documentation of the research protocol. WL and AS designed and analyzed statistics; WL and AS wrote the first draft of the manuscript. WL, SZ, XD, JG, YW, and AS were involved in the acquisition of questionnaire data and participated collaboratively in the subsequent analysis and visualization of the data; AS were responsible for writing-review and editing. All authors contributed to editorial changes in the manuscript. All authors read and approved the final manuscript. All authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work.

Ethics Approval and Consent to Participate

Our study involved a questionnaire survey. Therefore, informed consent was obtained from all participants. The study design, including the consent procedure, was reviewed and approved by the Ethics Committee of Peking Union Medical College Hospital of the Chinese Academy of Medical Sciences on June 8, 2020 (approval no.: S-K 1206). The procedures have been performed by the Declaration of Helsinki.

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Conflict of Interest

The authors declare no conflict of interest.

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