

# Sexual experiences of postmenopausal women in China: a qualitative study

Jie Chen, MD<sup>1,2</sup> , Haina Zhai, MD<sup>1,2</sup>, Hongyun Jin, MD<sup>1,2</sup>, Xiang Li, MD<sup>1,2</sup>, Pan Zhang, MD<sup>1,2</sup>, Rong Chen, PhD<sup>1,2,\*</sup>

<sup>1</sup>National Clinical Research Center for Obstetric and Gynecologic Diseases, Beijing, 100730, China

<sup>2</sup>Department of Obstetrics and Gynecology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, 100730, China

\*Corresponding author: Department of Obstetrics and Gynecology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, No. 1 Shuaifuyuan, Beijing 100730, China. Email: chenrongpumch@163.com

## Abstract

**Background:** Sexual dysfunction is common among postmenopausal women and can have a significant negative impact on quality of life.

**Aim:** This study aimed to explore perceptions, experiences, and coping strategies related to sex among postmenopausal women in China.

**Methods:** We used phenomenologic qualitative methods in this study. On the basis of purposive sampling and the data saturation principle, 21 volunteers from a community cohort study were selected for semistructured interviews. The data were analyzed and themes were extracted.

**Outcomes:** Thematic codes pertaining to sexual experiences and coping strategies were defined and assessed in this study.

**Results:** Four themes and 12 subthemes were extracted from the interview data. The sexual concepts were relatively conservative for most of the Chinese women; the majority experienced physical and psychological distress with respect to sex, although negative and positive psychological experiences were described. The women often passively accepted and adapted to negative changes to their sex lives during the postmenopause period.

**Clinical Implications:** This study highlights the importance of and need for effective dissemination of sexual health-related knowledge and the opening of appropriate communication channels.

**Strengths and Limitations:** By using a qualitative approach, this study provides individuals with the opportunity to describe their cognition and attitudes toward sexuality. Limitations include limited generalizability, as is true for most qualitative research. Additionally, the study is based solely on the female perspective and cannot fully reflect the sex life of couples.

**Conclusion:** The sexual experiences of our respondents exhibited distinct Chinese cultural characteristics. The interviews show the importance of paying attention to postmenopausal women's sexual health and providing relevant professional support and guidance to improve women's overall health-related quality of life.

**Keywords:** postmenopause; sexual life; sexual function; qualitative research.

## Introduction

Sex is a fundamental physical and psychological need for humans, just as sexual health is an important part of quality of life and normal sexual function an important condition for overall health.<sup>1,2</sup> The *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition)<sup>3</sup> classifies sexual dysfunction as sexual interest/arousal disorder, orgasm disorder, and genital-pelvic pain/insertion disorder, with distressing symptoms lasting >6 months. An epidemiologic survey showed that the percentage prevalence of sexual dysfunction among women aged 20 to 70 years in mainland China was 31% to 38%.<sup>4</sup> In general, postmenopausal women are prone to exhibiting poorer sexual function than women at other life stages.<sup>5-7</sup> In 2020, the life expectancy of Chinese women had exceeded 80 years,<sup>8</sup> indicating that approximately one-third of Chinese women's lives were spent in the postmenopausal period, which further highlights the importance of sexual health in maintaining women's quality of life.

Sexual health includes multiple elements, such as the experiencing and expression of thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, and practices.<sup>9-12</sup> Sexual

knowledge and attitudes play significant roles in the sexual function of postmenopausal women.<sup>13</sup> However, in China, the influence of traditional and conservative culture had been influential enough to make sex a sensitive topic that most women feel ashamed to discuss. In addition, emotions can affect sexual behavior by enhancing or diminishing sexual arousal and desire.<sup>14</sup> For example, the positive experience of high satisfaction within one's current sexual/couple relationship is associated with stronger sexual desire,<sup>15</sup> while shame, anxiety, fear, or disgust may hinder sexual arousal.<sup>16</sup> In response, Crisp et al<sup>17</sup> conducted research on coping strategies in healthy women, which showed that individual coping styles, particularly maladaptive strategies such as denial and self-blame, were associated with poorer sexual function of that person. Suffice to say, sexual experience involves a dynamic interplay among cognition, emotion, and coping behavior. A comprehensive understanding of Chinese postmenopausal women's interpretation and expression of sexual health, as well as their inner experience of sexual life and coping strategies after sexual change, can help medical staff better promote their sexual health.

Received: April 30, 2023. Revised: October 9, 2023. Accepted: October 23, 2023

© The Author(s) 2023. Published by Oxford University Press on behalf of The International Society of Sexual Medicine.

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact [journals.permissions@oup.com](mailto:journals.permissions@oup.com)

There have been studies investigating women's sexual function peri- and postmenopause in China, although these investigations mostly used quantitative methods, with their main research directions on the incidence of female sexual dysfunction and its influencing factors. However, sexual health involves a complex and comprehensive experience that requires not only assessment of objective indicators of sexual function but also attention paid to the subjective meaning of sex for each individual. In China, research on cognition, experience, and coping strategies of postmenopausal women is lacking thus far.

For these reasons, this study roots sexual issues within China's specific culture and environment to conduct qualitative interviews to gain an in-depth understanding of postmenopausal women's cognition, experience, and coping strategies of sexuality. The research question is as follows: What are the perceptions of sex and the experiences thereof for postmenopausal women in China?

## Methods

### Study design

This study employs a qualitative design and phenomenologic approach. The actual expression of the interviewees is an important source of information. This study adopts an explanatory qualitative model (hermeneutics) and phenomenologic framework to allow them to express their inner experiences fully, freely, and in their own words.<sup>18</sup> Colaizzi's method<sup>19</sup> of phenomenologic analysis was applied. We present our article in accordance with the Consolidated Criteria for Reporting Qualitative Research.<sup>20</sup>

### Participants

This study was part of the PALM project (Peking Union Medical College Hospital Aging Longitudinal Cohort of Midlife Women), a prospective community-based longitudinal cohort study initiated by the Peking Union Medical College Hospital, Beijing, China.<sup>21</sup> A purposive sampling method was adopted to recruit participants among women who came to the hospital to participate in the annual follow-up of the PALM project from March to October 2021, where they were asked if they were interested in discussing sexual topics. If they answered yes and met the inclusion criterion for this study, they were invited to complete individual in-depth interviews. The inclusion criterion was being a postmenopausal woman aged between 45 and 70 years who had not experienced menstruation for at least 12 months; thus, all participants were in either natural or surgically induced menopause. Since this study focused on the recent sexual experiences of women, women who had not been sexually active over the past 12 months were excluded. Further theoretical sampling was executed by the purposive sampling; specifically, we focused on diversifying the sample population in terms of age, occupation, educational level, economic conditions, and reproductive history.

The sample size of this study was based on information saturation, which means that no new information or themes were uncovered in the course of ongoing data collection,<sup>22,23</sup> and 21 women were ultimately selected for interviews. No participant refused to participate or dropped out. Table 1 shows general information on the respondents.

**Table 1.** General information on respondents (N = 21).

	No. (%)
Age, y	
≤50	3 (14.3)
51-60	8 (38.1)
>60	10 (47.6)
Education	
Junior high school	7 (33.3)
Senior high school	9 (42.9)
College/above	5 (23.8)
Work status	
Employed	2 (9.5)
Retired/housewives	19 (90.5)
Personal monthly income, RMB	
<5000	10 (47.6)
5000-10 000	6 (28.6)
>10 000	5 (23.8)
No. of children	
0	1 (4.8)
1	18 (85.7)
≥2	2 (9.5)
Time postmenopause, y	
1-4	7 (33.3)
5-10	6 (28.6)
>10	8 (38.1)
MHT use: no	21 (100)
Menopause type: natural	21 (100)

Abbreviation: MHT, menopausal hormone therapy.

### Data collection

Prior to actual data collection, the first author conducted preinterviews with 2 postmenopausal women to revise and refine the interview outline. Note that study data from the aforementioned preinterviews were not included in the analytic report.

Data were collected through face-to-face, semistructured, and in-depth interviews. Given the sensitive and personal nature of the interviews, they were held in quiet conference rooms with only the participants and interviewers. The request for audio recording was accepted by the participants. Additionally, since the purpose, content, and methods with respect to the individual interviews meant that a lot of private lives were shared, interviews were performed with strict anonymity and confidentiality and completed by the first author, who is female, has expertise in menopause nursing, and underwent specific qualitative research and interview training. Due to the sensitivity of sex-related topics, the interviews were initiated with indirect questions. The respondents were first asked to describe their feelings and views regarding menopause, and after rapport was established, they were asked questions with respect to (1) aspects of their recent sexual activities, (2) their feelings about postmenopausal sex, (3) their physical and psychological feelings during sex, (4) changes in their sex lives from pre- to postmenopausal periods and the factors that led to the observed changes, and (5) how they communicated with their partners regarding sex topics and handled issues relating to sexuality. Each interview lasted 25 to 50 minutes and was recorded with the consent of the participants. During the interviews, in-depth exploration and questioning were conducted in a timely manner based on the information conveyed by the respondents. These data were combined with observations of actions, expressions, and other nonverbal information elicited by respondents during

**Table 2.** Examples of the analysis process.

Theme: Sexual cognitive viewpoints		
Subtheme: code	Condensed meaning units	Extracted meaningful statements
<b>Necessity of sex</b>		
Continuing sexual life with a positive attitude	Sex is a normal physiologic need.	“Sex is a normal physiological need of men and women, just as important as eating and drinking.”
Sex maintains relationships	Sex is an expression of love and marital affection.	“Sex is also an expression of love and a means of emotional communication between couples.”
<b>Sexual alienation</b>		
Reject postmenopausal sexual behavior	The elderly should avoid sexual activity.	“The tradition of my mother’s generation is that postmenopausal couples should sleep in separate rooms.”
Equate sex with reproduction	Menopause implies the end of the reproductive stage.	“Menopause implies the end of the reproductive stage, and without a reproductive goal, there is no need for sex.”

the conversations to obtain comprehensive, extensive, and in-depth data.

### Data analysis

Interview recordings were independently transcribed by 2 other authors within 24 hours of each interview. Disparities between the accounts were finalized after repeatedly listening to the recording and confirming the exact wording with the interviewer. After the accuracy of the interview content was confirmed, the collected data were analyzed per the 7-step method reported by Colaizzi in a phenomenologic study<sup>19</sup>: (1) repeatedly reading the interview contents, (2) analyzing the data word-for-word to extract meaningful statements, (3) coding the recurring viewpoints to construct meaningful units, (4) clustering the coded viewpoints to obtain themes, (5) describing the clustered themes in detail, (6) repeatedly comparing and identifying similar themes to construct concise final themes, and (7) verifying the final themes with the respondents. The first author conducted the primary data analysis, which was finalized by all researchers by reviewing and refining the content over 3 meetings. Examples of the analysis process are shown in Table 2.

The participants were contacted by phone to check and confirm the credibility and integrity of the interview records and the topics that emerged after the data analysis to ensure the credibility of the study. All participants agreed that the results of the study did reflect their sexual experience, and they permitted the share, use, and publishing of the interview contents and research results derived from the interviews.

### Ethical considerations

Our study protocol was approved by the Ethics Committee of Peking Union Medical College Hospital (project S-K1979). All enrollees provided written informed consent and participated voluntarily. Participants also consented to anonymized quotes being used in dissemination.

### Results

The 21 respondents in our study were aged 46 to 67 years (mean  $\pm$  SD,  $58.24 \pm 6.42$ ); years of postmenopause were between 1 and 19 ( $8.33 \pm 5.35$ ); and all were married and lived with their husbands. As for socioeconomic characteristics, 23.8% had a college education, 52.4% had a personal

monthly income >5000 RMB, and 90.5% were retired or housewives at the time of the interviews. All respondents experienced natural menopause without receiving any menopausal hormone therapies (MHTs).

Through coding, sorting, and analyzing the interview data, we ultimately arrived at 4 themes: sexual cognitive viewpoints, sexual physiologic changes, sexual psychological changes, and responses to sexual changes.

### Theme 1: Sexual cognitive viewpoints

Women of different ages and education levels received different kinds of information regarding sex, which was reflected in their different cognitive attitudes toward postmenopausal sex.

#### *Necessity of sex*

With the development of society and changes in people’s conceptions of sexuality, the role of sex as an important influencing factor in married life has been gradually recognized and affirmed. In our interviews, the topic of sex was mentioned, and a majority of respondents believed that it was a normal physiologic need for human beings and played an essential role in maintaining the relationship between husband and wife:

[Sex] is a normal physiological need of men and women, just as important as eating and drinking. (respondent 2, 54 years old)

Sex is also an expression of love and a means of emotional communication between couples. Despite the increase in age and the decrease in sexual activity, it is still necessary. (respondent 14, 59 years old)

#### *Sexual alienation*

Although most respondents believed that postmenopausal sex was necessary, 28.6% (6/21) held a negative attitude toward it, believing that the elderly should avoid sexual activity. Respondents agreed with this concept, which is principally derived from the understanding of sexuality in traditional Chinese culture; that is, they had acquired most of their knowledge regarding sex from the life experiences of their elders:

The tradition of my mother’s generation is that postmenopausal couples should sleep in separate rooms. Elders

who have [sexual] needs are considered to be old but lustful and are laughed at. (respondent 12, 58 years old)

Menopause implies the end of the reproductive stage, and without a reproductive goal, there is no need for sex. (respondent 19, 67 years old)

## Theme 2: Sexual physiologic changes

Postmenopausal women experienced varying degrees of sexual physiologic changes as they aged, including decreased sex drive, vaginal dryness and pain during intercourse, and difficulties in achieving orgasm.

### Decreased sex drive

In this study, 71.4% of respondents (15/21) indicated that their sexual needs were significantly lower than before menopause; this manifested as a diminution in the frequency of sex and a loss of sexual interest:

I still had sexual desire just a few years before menopause, but as I am older now, I do not want it at all. (respondent 15, 64 years old)

Some respondents believed that life stressors, such as the responsibility of caring for their elderly, children, and/or grandchildren, constituted one of the principal causes of their decreased sex drive. Their responsibilities gave them less time and energy for their sex lives:

Look at me, although I am retired, I am even busier than when I was going to work. I have to take care of my 80-year-old mother and my 2-year-old grandson. Every day when I lie in bed, I just want to sleep. [*Respondent kept shaking her head and sighing when she talked.*] How can there be energy to think of [sex]? (respondent 1, 56 years old)

Another common cause of low sex drive was spousal health:

To be honest, I sometimes have the [sexual] need, but my spouse is not in good health and has hypertension and diabetes. He is not very keen on [sexual activity], so we rarely have it. Even when having it, it is not very satisfying; and over time, I have no interest. (respondent 3, 62 years old)

### Vaginal dryness and dyspareunia

Among respondents, 57.1% (12/21) mentioned vaginal dryness and reduced lubricating secretions during intercourse, making it painful. These symptoms led to unsatisfactory and even painful sexual experiences:

[Sex] has obviously changed, mostly due to the reduction of secretions. [The vagina] is very dry . . . [*pauses*] and [the penis] takes half a day but still fails to insert and causes more pain during back-and-forth movement. (respondent 6, 61 years old)

Some respondents said that even after taking relevant measures, they still experienced discomfort, and this hindered their sexual activity:

We also tried to use a lubricant, but it did not work. It is still very, very uncomfortable. I don't want to have sex anymore. (respondent 17, 52 years old).

### Orgasmic difficulties

Orgasm is a reaction to physical and psychological pleasures in sexual activity. In the interviews, 6 respondents reported that it was more difficult to achieve an orgasm than premenopause:

Having sex is not as intensely interactive as it was when I was younger. To be honest, it is more of a task, without interactions and feelings. (respondent 10, 54 years old)

The quality of our sex life was very high in the past, and we had orgasms almost every time. Now, it is very difficult. Although he has made a lot of effort, and I have cooperated with that, it is obviously not as exciting as before and it is difficult to achieve orgasm. (respondent 9, 51 years old)

## Theme 3: Sexual psychological changes

In response to changes in their sexual experiences, the majority of women felt negative emotions such as guilt, remorse, self-abasement, and worry. However, it was noteworthy that 3 respondents were not negatively affected by the changes and even expressed a positive experience of pleasure and satisfaction.

### Guilt and remorse

The interview data showed that for some women, sex was a form of reward for the relationship between men and women. When the respondents failed to meet the sexual needs of their husbands for physical or psychological reasons, they felt guilt and remorse:

He has more needs in this regard [sexual activity], but sometimes, I just don't have the energy to fulfill his needs. So, I deliberately ignore his romantic advances and that makes me feel sorry for him. (respondent 20, 48 years old)

During the whole process [intercourse], he took care of my feelings. If I felt pain, he would stop. I could sense that he was very sad. I also felt useless myself to not even fulfill the most basic duty as his wife. (respondent 17, 52 years old)

### Self-abasement

Some respondents noted in the interviews that as they grew older, their appearance and body shape changed, including loose skin, weight gain, and sagging breasts. This made them feel that they had lost their feminine beauty and characteristics, leading to self-abasement that affected the sexual experience:

Look at me now, I turned tanned, short, and fat. I look completely different from when I was young. [*Respondent smiles self-deprecatingly.*] He laughed at me for having a big belly several times, and this made me very embarrassed. It hurt my self-esteem. (respondent 13, 63 years old)

### Worries

Sex is the linkage in the relationship between husband and wife, and the quality of a married couple's sex life is an important component of their marriage. Some respondents,

especially relatively young women, were concerned about future marital crises due to changes in their sex lives. One respondent expressed such concerns because of her vaginal dryness and reluctance to engage in intimacy:

His rejection of me can still be tolerated right now, but it cannot be like that all the time, right? If it keeps going on like this, we will divorce, which is definitely not okay. [*Respondent shakes her head.*] (respondent 7, 56 years old)

There were also respondents who had lost confidence in their body shapes and worried about their husbands having extramarital affairs:

To be honest, my husband is still at his best now. He has a successful career and is mature and attractive, while I am no longer young and beautiful. It is why I am particularly insecure and always worry that he is having an affair. (respondent 9, 51 years old)

### *Pleasure and satisfaction*

Not all women in the interviews had negative psychological experiences. Three respondents said that they continued to enjoy sex, felt pleasure and happiness, and even gained greater sexual satisfaction:

As we are aging, my husband and I become emotionally closer, and we gain a deeper understanding of each other's needs. [*Our sex life*] has become more harmonious. (respondent 4, 64 years old)

Another respondent defined menopause as a completely new stage in which to enjoy sex with an open and positive mind:

I'm menopausal, we don't have to worry about menstruation and pregnancy, and we can enjoy [*sexual*] fun in any way we want. (respondent 8, 49 years old)

## **Theme 4: Responses to sexual changes**

### *Silence and avoidance*

In a healthy sexual relationship, both partners express their feelings and respect each other's right to participate in sex; active communication between partners is an effective solution to sexual distress.<sup>24</sup> Nevertheless, during the interviews we found that most women or their partners avoided talking about sex. They primarily adopted coping styles in which they avoided or ignored sexual aspects of their lives:

We have realized that [*our sex life*] is not the same as it used to be, but no one takes the initiative to talk about it. We both keep silent about this topic and try to avoid discussing our sex life as much as possible. (respondent 18, 63 years old)

One of the principal reasons mentioned by 1 respondent for avoiding communication was shame over sexual expression:

How do I dare to talk about this thing [*sex*]? It is too embarrassing. So we don't talk about these issues at all. (respondent 21, 66 years old).

### *Compromise and compliance*

To deal with changes in sexual function, such as decreased sex drive and dyspareunia, some respondents forced themselves to meet the needs of their sexual partners to maintain marital stability. They believed that sex was an obligation:

[*Sexual activity*] is really painful, and I have no fun at all. However, as a wife shouldn't it be necessary to fulfill his needs? [*Respondent forces a smile.*] . . . I have to bear it. (respondent 10, 54 years old)

Sometimes, he will be depressed or angry because of my rejection. This once affected our marital relationship. I don't want to break up our marriage, so I just grudgingly accept it. (respondent 5, 46 years old)

### *Proactively seeking solutions*

While most women accepted and adapted to the negative impacts of changes to their sex lives, others actively sought out solutions. Three respondents mentioned that exercise helped them maintain muscle tone, improve body shape, increase their attractiveness, and gain confidence in aspects of sex:

I run for an hour every morning and have lost 15 pounds in 3 months. Not only is my body slimmer, but my physical strength is also better. It makes me feel like I am back to my youth. I am now more devoted to my sexual life. (respondent 16, 65 years old)

Two respondents changed the original concepts of their sex lives through psychological adjustment and began trying to communicate with their partners:

I used to be reluctant to discuss sex with my husband. However, I believe that it is necessary to communicate between couples and I would tell him what I need and what I want him to do. After the communication, our relationship became more intimate, and the quality of our sex life has obviously improved. (respondent 14, 59 years old)

Unfortunately, when respondents were asked if they would seek advice and assistance from medical professionals, all expressed their reluctance to do so:

Aren't people like this [*vaginal dryness and painful intercourse*] when they get old? . . . It is not a disease, and it is not necessary to see a doctor, right? (respondent 6, 61 years old)

How embarrassing it is to see a doctor because of this kind of [*sexual*] problem. How embarrassing! It is enough to know the situation myself; there is no need to make everyone else know it [*shakes her head*]. (respondent 12, 58 years old)

## **Discussion**

China is influenced by traditional cultural and moral concepts such as sexual discretion, sexual shame, male dominance, and female submissiveness. Thus, public attitudes and behaviors

toward sex are relatively conservative, and the discussion of sexual topics is often regarded as taboo. However, social developments and improvements in educational levels have increasingly exposed Chinese women to new sexual concepts. In the present study, Chinese women showed diverse cognitions of sexuality, ranging from open to very conservative. Most women recognized the importance and necessity of sex and interpreted it not only as a normal physiologic need but also as an expression of love and marital affection. Yet, a majority of the respondents were shy; their expressions of sexuality were guarded and indirect. Most acquired their sexual knowledge from the experience of their elders, equating sex with reproductive goals and treating discussion of sex as indecent; this frequently led them to reject postmenopausal sex. Thus, among postmenopausal women, an important subgroup of Chinese women, traditional sexual concepts still predominate.

Numerous studies in China and other countries have shown that female sexual function declines with age. The prevalence of sexual dysfunction in postmenopausal women is significantly higher than among premenopausal women and manifests as low sexual desire, low sexual arousal, and poor vaginal lubrication that aggravates dyspareunia.<sup>6,25,26</sup> Our interviews showed that almost all postmenopausal women exhibited varying degrees of changed sexual function, primarily noted as a decreased sex drive, vaginal dryness, dyspareunia, and difficulties in achieving orgasm; these observations were consistent with previous reports. Although physiologic changes due to sex hormone insufficiency and postmenopausal symptoms have been identified as important risk factors in sexual dysfunction,<sup>27</sup> we herein demonstrated that increased daily life stressors, the burden of caring for family members, and spousal health also hindered intramarital sexual behaviors and sexual satisfaction. This, in turn, affected the sexual desire of postmenopausal women in China. These results have been confirmed in previous quantitative studies.<sup>28,29</sup>

Most of our respondents reported negative changes to their sex-related psychology, including guilt and remorse for being unable to fulfill their husbands' sexual needs. Inferiority complexes caused by changes in appearance or body shape and worries about marital breakdown due to changed sex lives indicated that psychological changes in Chinese women were mostly partner centered rather than self-centered. This, to a certain degree, reflects the influence of patriarchal norms in China. In many societies and cultures, sex is considered a man's right and a woman's duty. The Taiwanese scholars Yang et al<sup>30</sup> showed that some women experienced guilt and depression and questioned their marital role when they experienced postmenopausal loss of sexual desire and changes to their sex lives. In Iran, a woman's duty is to obey and fulfill the sexual demands of her husband, who has the right to divorce her if she fails to meet his needs.<sup>24</sup> Similarly, in Western society, some women believe that sex is an obligation and that it is their responsibility to care for the sexual needs of their partners.<sup>31-33</sup> It can thus be seen that traditional sexual cultures and concepts of sexuality continue to exert a profound impact on people's sexual psychology, even as societies and values continue to evolve. These results also suggest that investigators should, in the future, evaluate the attitudes and expectations regarding sex among male partners and ascertain how these attitudes affect the sexual psychology and behaviors of postmenopausal women.

It is noteworthy that 1 respondent in our study defined menopause as a completely new stage in which to enjoy sex with an open and positive mind. While focusing on emotional intimacy in their marital relationship, 2 respondents had more satisfying sexual experiences. These findings suggest that positive attitudes toward menopause and the adjustment of marital intimacy not only affect sexual function but also play an important role in the psychological adjustment of women to the postmenopausal period.

When confronted with negative impacts of changes to their sexual lives, most respondents in our investigation did not adopt any adjustment measures but rather passively allowed situations to develop and responded with a silent and avoidant attitude. Some respondents sacrificed their wishes and desires to satisfy the sexual needs of their husbands, aiming to preserve family integrity through compromise and obedience. This was similar to the attitudes and behaviors of Iranian women who chose submissiveness as a strategy in sexual relations—not only as a religious belief but also as a recognized social norm.<sup>24</sup> While most women adopted passive acceptance and adaptation strategies, some respondents approached the issue proactively and emphasized the benefits of exercise to improve their body shape and attractiveness, which was consistent with the findings of previous studies.<sup>30,34</sup> Some respondents additionally tried to actively communicate with their partners to improve the quality of their sex lives. Previous studies have shown that positive communication between couples often leads to greater sexual intimacy—leading in turn to even greater happiness and satisfaction.<sup>35,36</sup>

We observed that none of our respondents were willing to actively seek medical help regarding their situations and none received MHT, in contrast to an Australian study by Fooladi et al,<sup>37</sup> in which most Australian women actively sought medical assistance when faced with physical and emotional changes related to sex and used hormone replacement therapy to restore their sexual desire and pleasure. MHT is the most effective treatment for the relief of bothersome symptoms associated with menopause,<sup>38</sup> while the rate of MHT use is approximately 2% in eligible Chinese women.<sup>39</sup> In our study, although most participants communicated changes in their sexual function, these alterations were not considered to constitute a significant health issue; as such, the women were reluctant to share their personal sexual experiences with others or ask for help, and none of them received MHT. Thus, cultural values, health beliefs, and a lack of knowledge concerning effective treatments for sexual dysfunction may affect women's perceptions of sexuality and can be barriers to addressing sexual distress for postmenopausal women.<sup>40</sup> These circumstances also confirm the importance of and need for effective dissemination of sexual health-related knowledge and the opening of appropriate communication channels.

Despite these findings, this study had some limitations. Although the diversity of the sample was taken into account, a number of the participants were not included in the interview—due to privacy issues associated with the volunteering nature of this study—especially those who had undergone surgical menopause and used MHT. As such, their views might be different from those included. The severity of menopause symptoms affects sexuality.<sup>41</sup> Unfortunately, this study did not investigate severity of symptoms, so future studies should include this variable to gain a more complete understanding. Moreover, because spouses play a crucial role in sexual relationships, a study based solely on the female perspective

cannot fully reflect the sex lives of couples. Therefore, we recommend including interviews with sexual partners to gain additional—and likely novel—insights into the issue of postmenopausal sexuality.

## Conclusion

Our research explored the actual sexual experiences of postmenopausal women in China. In general, our study participants' sexual experiences exhibited distinct Chinese cultural characteristics. For example, the sexual concepts of most of the Chinese women were relatively conservative, and the majority experienced physical and psychological distress with respect to sex and professed negative psychological experiences. The women often passively accepted and adapted to changes in their sex lives. Thus, the results suggest that to improve the overall health-related quality of life of postmenopausal Chinese women, it is important to pay attention to their sexual health and provide relevant professional support and guidance.

## Acknowledgments

We are deeply grateful to the women who gave their time to be interviewed.

## Author contributions

J.C. contributed to study design, data collection, interpreting the results, drafting the paper, and revision of the manuscript. H.Z. contributed to data analysis and revision of the manuscript. H.J. contributed to data analysis and revision of the manuscript. X.L. contributed to data analysis and manuscript content approval. P.Z. contributed to table formatting and revision of the manuscript. R.C. contributed to study design, interpreting the results, and writing and revising the manuscript. All authors saw and approved the final version of the article.

## Funding

This study was supported by the National High Level Hospital Clinical Research Funding (2022-PUMCH-B-123) and the National Natural Science Foundation of China Project (grants 81871141 and 82201781).

## Conflicts of interest

All the authors proclaim that they have no conflict of interest or any relationships which could have a possibility to influence this work.

## Data availability

The data supporting the findings of this study will be available by the authors, without any reservation.

## References

- Carpenter JS, Reed SD, Guthrie KA, *et al.* Using an FSDS-R item to screen for sexually related distress: a MsFLASH analysis. *Sex Med.* 2015;3(1):7–13.
- Addis IB, Van Den Eeden SK, Wassel-Fyr CL, *et al.* Sexual activity and function in middle-aged and older women. *Obstet Gynecol.* 2006;107(4):755–764.
- Female sexual dysfunction. ACOG practice bulletin clinical management guidelines for obstetrician—gynecologists, number 213. *Obstet Gynecol.* 2019;134(1):e1–e18.
- Zhang C, Tong J, Zhu L, *et al.* A population-based epidemiologic study of female sexual dysfunction risk in mainland China: prevalence and predictors. *J Sex Med.* 2017;14(11):1348–1356.
- Tong J, Zhang C, Zhu L, Zhang L, Jinghe L. Sexual dysfunction in perimenopausal women based on a national epidemiological survey in China. *Climacteric.* 2019;22(2):190–194.
- Nappi RE, Wawra K, Schmitt S. Hypoactive sexual desire disorder in postmenopausal women. *Gynecol Endocrinol.* 2006;22(6):318–323.
- De Lorenzi DR, Saciloto B. Factors related to frequency of sexual activity of postmenopausal women. *Rev Assoc Med Bras.* 2006;52(4):256–260.
- National Bureau of Statistics. Final statistical monitoring report of the outline for the development of Chinese women (2011–2020). 2021. Accessed September 2, 2023. [http://www.gov.cn/xinwen/2021-12/21/content\\_5663667.htm](http://www.gov.cn/xinwen/2021-12/21/content_5663667.htm)
- Thomas HN, Thurston RC. A biopsychosocial approach to women's sexual function and dysfunction at midlife: A narrative review. *Maturitas.* 2016;87:49–60.
- Mollaoglu M, Tuncay F, Fertelli TK. Investigating the sexual function and its associated factors in women with chronic illnesses. *J Clin Nurs.* 2013;22(23–24):3484–3491.
- Politano CA, Valadares AL, Pinto-Neto A, Costa-Paiva L. The metabolic syndrome and sexual function in climacteric women: a cross-sectional study. *J Sex Med.* 2015;12(2):455–462.
- Fischer VJ, Andersson G, Billieux J, Vögele C. The relationship between emotion regulation and sexual function and satisfaction: a scoping review. *Sex Med Rev.* 2022;10(2):195–208.
- Avis NE, Zhao X, Johannes CB, Ory M, Brockwell S, Greendale GA. Correlates of sexual function among multi-ethnic middle-aged women: results from the Study of Women's Health Across the Nation (SWAN). *Menopause.* 2005;12(4):385–398.
- Graham CA. The DSM diagnostic criteria for female sexual arousal disorder. *Arch Sex Behav.* 2010;39(2):240–255.
- Carvalho J, Nobre P. Gender differences in sexual desire: how do emotional and relationship factors determine sexual desire according to gender? *Theol Sex.* 2011;20(4):207–211.
- Bancroft J, Graham CA, Janssen E, *et al.* The dual control model: current status and future directions. *J Sex Res.* 2009;46(2–3):121–142.
- Crisp C, Vaccaro C, Fellner A, Kleeman S, Pauls R. The influence of personality and coping on female sexual function: a population survey. *J Sex Med.* 2015;12(1):109–115.
- Liamputtong P. Qualitative research methods. 5th edn. Victoria: Oxford University Press, 2020.
- Colaizzi PF. Psychological research as the phenomenologist views it. In: Valle RS, King M eds. *Existential-Phenomenological Alternatives for Psychology.* Oxford University Press; 1978:48–71.
- Tong A, Sainsbury P, Craig J. Consolidated Criteria for Reporting Qualitative Research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care.* 2007;19(6):349–357 <https://doi.org/10.1093/intqhc/mzm042>.
- Sun X, Luo M, Ma M, *et al.* Ovarian aging: an ongoing prospective community-based cohort study in middle-aged Chinese women. *Climacteric.* 2018;21(4):404–410.
- Dworkin SL. Sample size policy for qualitative studies using in-depth interviews. *Arch Sex Behav.* 2012;41(6):1319–1320.
- Morse JM, Penrod J, Hupcey JE. Qualitative outcome analysis: evaluating nursing interventions for complex clinical phenomena. *J Nurs Scholarsh.* 2000;32(2):125–130.
- Bahri N, Latifnejad Roudsari R, Azimi HM. “Adopting self-sacrifice”: how Iranian women cope with the sexual problems during the menopausal transition? An exploratory qualitative study. *J Psychosom Obstet Gynaecol.* 2017;38(3):180–188.
- Lan Y, Huang Y, Song Y, *et al.* Prevalence, severity, and associated factors of menopausal symptoms in middle-aged Chinese women: a community-based cross-sectional study in Southeast China. *Menopause.* 2017;24(10):1200–1207.

26. Burri A, Hilpert P, Spector T. Longitudinal evaluation of sexual function in a cohort of pre- and postmenopausal women. *J Sex Med.* 2015;**12**(6):1427–1435.
27. Ambler DR, Bieber EJ, Diamond MP. Sexual function in elderly women: a review of current literature. *Rev Obstet Gynecol.* 2012;**5**(1):16–27.
28. Woods NF, Mitchell ES, Smith-Di JK. Sexual desire during the menopausal transition and early postmenopause: observations from the Seattle Midlife Women's Health Study. *J Womens Health (Larchmt).* 2010;**19**(2):209–218.
29. Lianjun P, Aixia Z, Zhong W, Feng P, Li B, Xiaona Y. Risk factors for low sexual function among urban Chinese women: a hospital-based investigation. *J Sex Med.* 2011;**8**(8):2299–2304.
30. Yang CF, Kenney NJ, Chang TC, Chang SR. Sex life and role identity in Taiwanese women during menopause: a qualitative study. *J Adv Nurs.* 2016;**72**(4):770–781.
31. Hinchliff S, Gott M, Ingleton C. Sex, menopause and social context: a qualitative study with heterosexual women. *J Health Psychol.* 2010;**15**(5):724–733.
32. Elmerstig E, Wijma B, Swahnberg K. Prioritizing the partner's enjoyment: a population-based study on young Swedish women with experience of pain during vaginal intercourse. *J Psychosom Obstet Gynaecol.* 2013;**34**(2):82–89.
33. Laumann EO, Paik A, Glasser DB, et al. A cross-national study of subjective sexual well-being among older women and men: findings from the Global Study of Sexual Attitudes and Behaviors. *Arch Sex Behav.* 2006;**35**(2):145–161.
34. El Hajj A, Wardy N, Haidar S, et al. Menopausal symptoms, physical activity level and quality of life of women living in the Mediterranean region. *PLoS One.* 2020;**15**(3):e0230515.
35. Heiman JR, Long JS, Smith SN, Fisher WA, Sand MS, Rosen RC. Sexual satisfaction and relationship happiness in midlife and older couples in five countries. *Arch Sex Behav.* 2011;**40**(4):741–753.
36. Karraker A, Delamater J, Schwartz CR. Sexual frequency decline from midlife to later life. *J Gerontol B Psychol Sci Soc Sci.* 2011;**66**(4):502–512.
37. Fooladi E, Bell RJ, Whittaker AM, Davis SR. Women's expectations and experiences of hormone treatment for sexual dysfunction. *Climacteric.* 2014;**17**(6):674–681.
38. Stuenkel CA, Davis SR, Gompel A, et al. Treatment of symptoms of the menopause: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab.* 2015;**100**(11):3975–4011.
39. Yu Q. Population education of menopausal knowledge in China. *Climacteric.* 2019;**22**(4):323.
40. Nappi RE, Nijland EA. Women's perception of sexuality around the menopause: outcomes of a European telephone survey. *Eur J Obstet Gynecol Reprod Biol.* 2008;**137**(1):10–16.
41. Zhao Y, Dong W, Sun L, et al. Analysis of factors that influence the quality of sexual life of climacteric women in China. *Climacteric.* 2019;**22**(1):73–78.