

Investigation and Analysis of the Cognition of Menopause in Women Over 40 Years Old

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Abstract: *Objective:* To investigate and analyze the cognition of menopause in women over 40 years old. *Methods:* Using the stratified sampling method, 224 females, age ranging from 40 to 60, from our university staff (Xi'an Medical University) and the surrounding communities were selected, and both online and offline questionnaires were distributed. *Results:* (1) 224 questionnaires were recovered, with 204 valid questionnaires, among which 100 questionnaires were from our university staff (aged 42–60 years old) and 104 questionnaires from the surrounding communities (aged 40–60 years old); (2) the cognition of menopause among the surveyed population was found to be related to occupation and education level; the cognition of menopause among university staff (76%) was significantly higher than that of the surrounding communities (45.19%); (3) most people were able to accept menopausal hormone therapy; the degree of acceptance among the university staff (80%) was found to be higher than that among the surrounding communities (60.58%). *Conclusion:* According to the recovered data, women over the age of 40 have less than ideal cognition of menopause, and although the cognitive level of the university staff on menopause was found to be significantly higher than that of the surrounding communities, their cognitive level still requires improvement.

Keywords: Menopause; Questionnaire; Cognitive level

Online publication: November 25, 2022

1. Introduction

Menopause is an important stage in the transition of women from being reproductive to non-reproductive. The gradual decline of ovarian function and the fluctuation of hormone levels lead to a series of physical and psychological symptoms, such as menstrual disorders, hot flashes, sweating, fatigue, insomnia, irritability, depression, etc. [1]. As China gradually grows into an aging society, the number of menopausal women is also increasing. There are nearly 10 million women entering their 50s every year. As of 2018, there are 230 million menopausal women in China, with that number expected to rise to 280 million by 2030 [2]. We conducted a questionnaire survey on women over the age of 40 from Xi'an Medical College and the surrounding communities to understand the cognition and attitude of women of different intellectual classes toward menopause and also put forward a comprehensive management method for menopause to provide scientific advice for improving the quality of life of patients with menopausal syndrome and making the society more harmonious.

2. Materials and methods

2.1. Survey subjects

Women over the age of 40 were selected from among our university staff and the surrounding communities.

2.2. Investigation method and content

On the basis of reviewing literature, a questionnaire was designed through Questionnaire Star. A questionnaire survey was conducted by distributing online and offline questionnaires to women over 40 years old from among our university staff and the surrounding communities. The questionnaire consisted of two parts. The first part concerned sociodemographic data, including age, occupation, age at menarche, menstrual status, marital status, education level, *etc.* The second part consisted of several questions related to menopause: (i) “What do you think perimenopause refers to?”; (ii) “At what age do you think menopause begins?”; (iii) “What do you think are the symptoms of menopause?”; (iv) “How would you deal with menopause symptoms?”; (v) “Can you accept (menopausal) hormone therapy if you seek medical treatment?”; and (vi) “What is the preferred treatment plan?”. These were easy-to-understand and well-targeted questions. The subjects were divided into two groups, university staff and community group, for statistical description.

2.3. Data management and statistical analysis

Statistical analysis was performed with SPSS. Enumeration data were expressed as rate (%), χ^2 test was performed, and $P < 0.05$ was used to determine whether there was statistical significance.

3. Results

3.1. Sociodemographic data

A total of 224 questionnaires were distributed, with 204 valid questionnaires recovered. The effective recovery rate was 91.07%, with 20 invalid questionnaires. Among the valid questionnaires, 100 questionnaires were from the university staff, accounting for 49.02%, while 104 questionnaires were from the surrounding communities, accounting for 50.98%. From **Table 1**, it can be seen that the education level of the university staff is significantly higher than that of the community group, with 91.00% of the university staff having high school education or above, while only 22.12% of the community group having high school education or above.

Table 1. Education level

Group	Number of cases	Elementary school and below	Junior high school	High school	High school and above
University staff	100	0	1	8	91
Community group	104	19	45	17	23
Total	204	19	46	25	114

3.2. Knowledge of menopause

Women over the age of 40 have some, but not comprehensive, cognition of menopausal symptoms. 76.00% of the university staff have a high degree of cognition of menopause, but only 45.19% of the community group have a high degree of cognition of menopause. It can be seen from **Table 2** that the cognition of menopause among university staff is significantly higher than that of the community group. It can be seen that there is still a need to strengthen the cognition of menopausal symptoms in women over 40 years old. Using χ^2 test, $P < 0.05$ is considered to be statistically significant, indicating that the degree of cognition of

menopause is related to occupation. Moreover, different occupations have different demands for learning about menopause. As shown in **Table 3**, among the university staff, 38.00% think that it is very necessary to learn about menopause, 61.00% think that it is necessary, and 1.00% think that it is unnecessary; within the community group, 23.08% think that it is very necessary, 68.27% think that it is necessary, and 8.65% think that it is unnecessary. As can be seen from **Figure 1**, only eight respondents do not want to learn about menopause, indicating that most people are eager to learn about menopause. People who want to learn about the psychological aspects of menopause are the most, accounting for 78.92%, followed by the knowledge of improving sleep quality, which accounts for 75.98%.

Table 2. Knowledge of menopause

Group	Number of cases	Learnt	No knowledge
University staff	100	76	24
Community group	104	47	57
Total	204	123	81

Table 3. The demand for learning about menopause

Group	Number of cases	Very necessary	Necessary	Unnecessary
University staff	100	38	61	1
Community group	104	24	71	9
Total	204	62	132	10

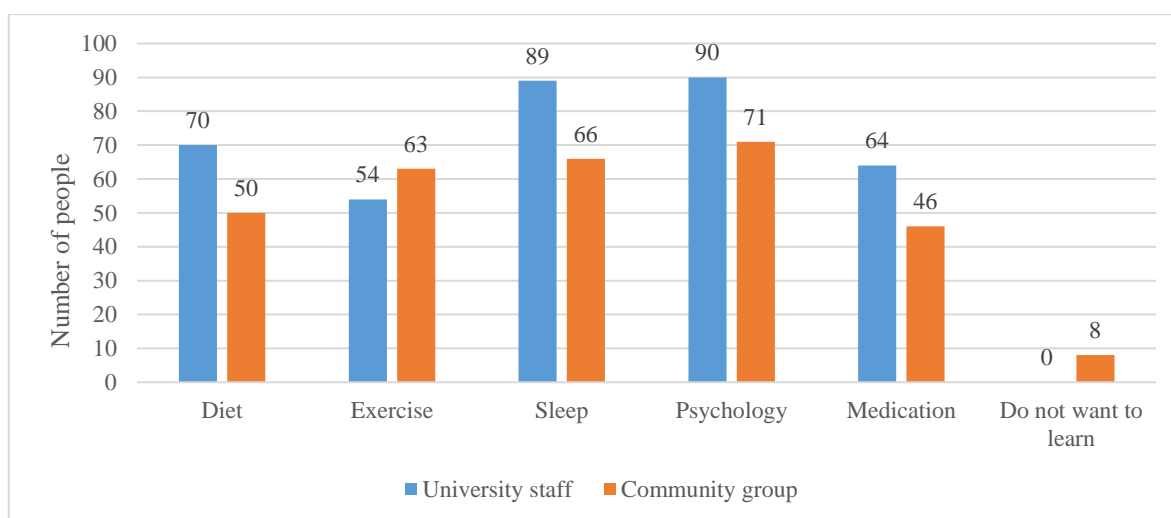


Figure 1. Learning intention of menopause-related knowledge

3.3. Management of menopause-related symptoms and attitudes toward menopausal hormone therapy

Every individual's body is different, and not all menopause symptoms are the same. As can be seen from **Figure 2**, among the many symptoms of menopause, sleep disorder is the most common, followed by depression or unhappiness, irritability and agitation, as well as paroxysmal hot flashes and sweating; frequent urination, dysuria, and other symptoms occur less frequently. The attitude of women when dealing with these symptoms varies. It can be seen from **Table 4** that among the university staff, 69 people chose to actively seek medical treatment, accounting for 69.00%, 27 people chose to self-regulate, accounting for 27.00%, and 4 people did not take treatment, accounting for 4.00%. Among the community group, 45

people chose to actively seek medical treatment, accounting for 43.27%, 41 people chose to self-regulate, accounting for 39.42%, and 18 people chose not to take treatment, accounting for 17.31%. **Table 5** shows that among the surveyed population, 143 people indicated their acceptance of menopausal hormone therapy (MHT), accounting for 70.10% (80 university staff, accounting for 55.94%, and 63 people in the community group, accounting for 44.06%). According to the data, the majority of people accept MHT. The acceptance of the university staff is higher than that of the community group.

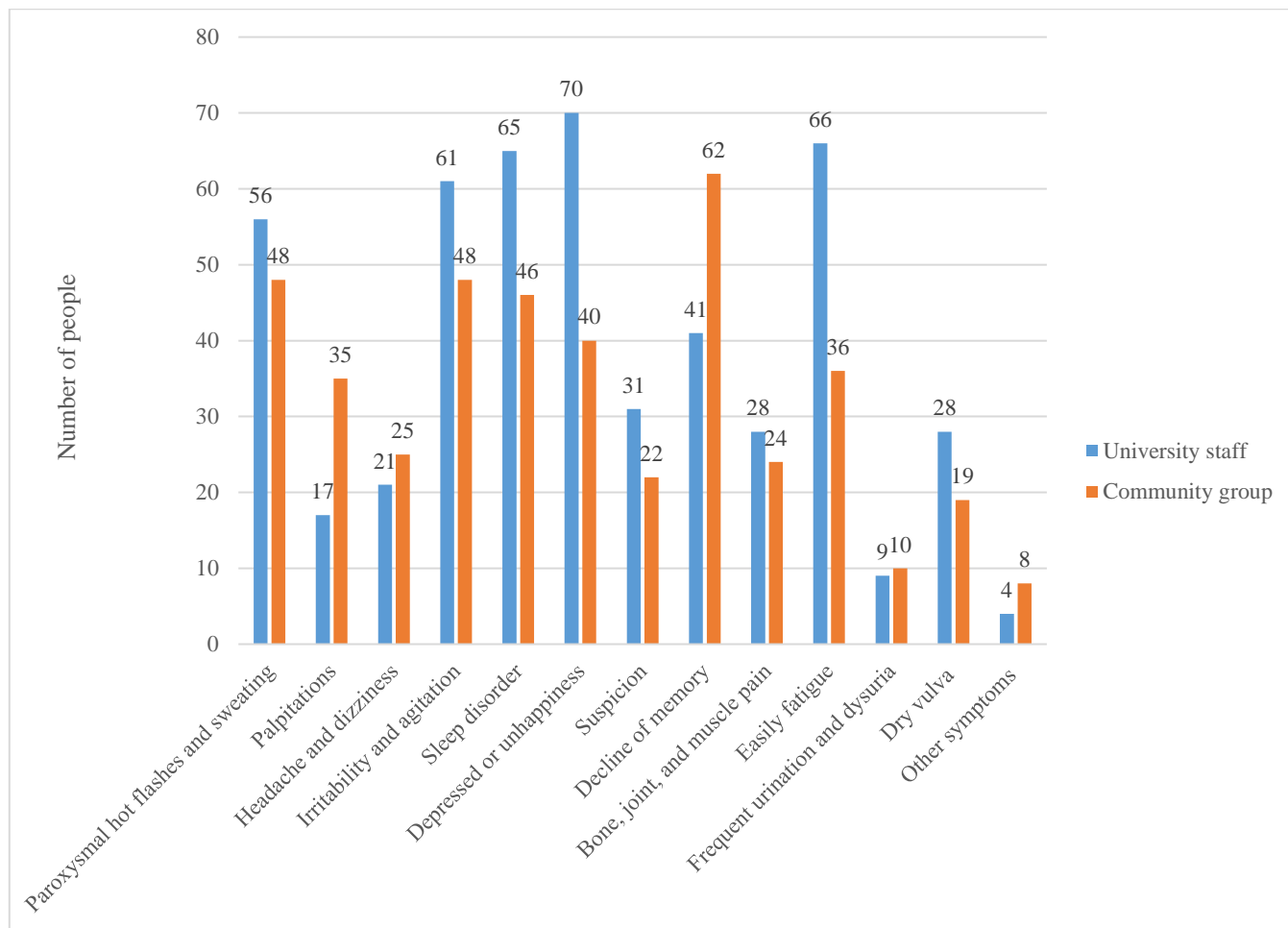


Figure 2. Statistics of menopause-related symptoms

Table 4. Attitudes when dealing with menopausal symptoms

Group	Number of cases	Actively seek medical treatment	Self-regulation	No treatment
University staff	100	69	27	4
Community group	104	45	41	18
Total	204	114	68	22

Table 5. Acceptance of menopausal hormone therapy

Group	Number of cases	Yes	No
University staff	100	80	20
Community group	104	63	41
Total	204	143	61

4. Discussion

Menopause refers to a transitional stage for women from reproductive period to old age. It includes the perimenopausal period, which is a period of different lengths before and after menopause. Entering into menopause, women will experience various symptoms due to the gradual decline of ovarian function and insufficient estrogen secretion. These symptoms are collectively referred to as “menopausal syndrome,” also known as “perimenopausal syndrome” or “menopausal syndrome”^[3]. With the continuous reduction of estrogen secretion, the symptoms increase, followed by multiple systemic diseases, such as those involving the circulation, the cardiovascular system, and the endocrine system. A survey has pointed out that the incidence of hot flashes in women aged 51–60 is about 63%^[4]. However, women over the age of 40 have an unsatisfactory perception of menopause. Another survey has discovered that the incidence of menopause symptoms in Chinese women is as high as 60–70%^[5]. As of 2021, although the life expectancy of Chinese women has reached 84.43 years^[6], which is significantly higher than that of men, their healthy life expectancy is lower than that of men^[7], indicating that women are mostly diseased in the later years of life. Therefore, middle-aged and elderly women require more attention from the society, among which menopause treatment and care are particularly important.

We conducted a questionnaire survey on the knowledge of menopause among women over 40 years of age from among our university staff and the surrounding communities. According to the results of the survey, the cognitive level of the university staff on menopause is significantly higher than that of the community group. In the surveyed population, the cognition of menopause is related to education level. The population with high school education and above generally overlaps with the population that has a correct perception of the concept of perimenopause. With the rise of education level, there is an increasing trend in the cognition of menopause. The cognition of menopause among the surveyed population may be related to their health concerns about menopause and their own environment. The higher the level of education, the stronger the cultural atmosphere of the environment in which they live. They involuntarily receive knowledge of various aspects in their daily lives, thus further improving their knowledge reserves, followed by their attentiveness to their own health. As a result, their cognition of menopause will be better. Therefore, more efforts should be made to popularize the knowledge related to the age of women with lower education level. At the same time, the survey results also show that the two groups have higher learning intentions about menopause-related knowledge.

Through this survey, we find that the surveyed population have different menopause symptoms, but the incidence of depression or unhappiness is as high as 53.92%. It is known that psychosocial factors are closely related to mood^[8]. Therefore, it is important to pay attention to the mental health of women in menopause, identify and evaluate psychological problems in a timely manner, provide targeted mental health care services, strengthen the communication skills of medical staff, provide mental health education for menopausal women and their families, and improve the social support for them^[9]. We also find that once menopausal symptoms appear, 55.88% of women choose to actively seek medical treatment, 33.33% choose to self-regulate, and 10.78% choose not to take treatment, suggesting that there are still a small number of women who do not know how to deal with menopausal syndrome. According to many medical literatures, diversified and personalized health management can help patients better cope with menopausal transition^[10]. In order to improve the quality of life of women in their later years, the preventive and healthcare work of menopause should be targeted and individualized, varying from person to person. Menopausal women are prone to obesity due to the decline of estrogen levels^[11]. Furthermore, as they age, activity decreases, along with calorie consumption. Weight gain and central obesity are some of the risk factors for cardiovascular disease^[12]. It is known that vegetables and fruits have low energy density; hence, they are beneficial in helping menopausal women control their weight. Several studies have pointed out that menopausal women should consume 500 g of vegetables and 250 g of fruits per day^[13]. Traditional

Chinese medicine (TCM) has unique views on the treatment of certain menopause symptoms. For example, in insomnia, TCM theory believes that insomnia is caused by the dysfunction of the viscera and the relative imbalance of yin and yang in the body ^[14]. Giving TCM treatment to patients with menopausal syndrome has significant advantages as it can improve the clinical treatment effect in patients ^[15]. TCM treatment is aimed at the whole body, thus helping to regulate the physical condition of menopausal women.

Guidelines have shown that the scientific application of MHT ^[16] can effectively relieve menopause-related symptoms and play an important role in delaying advanced chronic diseases in middle-aged and elderly women ^[5]. Our survey also shows that most women are able to accept MHT. For certain groups that have yet to accept MHT, health education may help correct their understanding of MHT and increase the use rate, thereby reducing the incidence of chronic diseases of various systems in perimenopausal women ^[17]. Generally speaking, different effects can be achieved when hormone therapy is used in different stages of life in women. Early initiation of hormone therapy is recommended for women without obvious contraindications. When initiating hormone therapy, a doctor should be consulted first, and based on the individual's situation, the timing and method of application should then be determined under the doctor's guidance. Reasonable types and doses of drugs would ensure medication safety. Hence, used in this way, MHT can relieve menopausal symptoms and improve the quality of life of menopausal women ^[18]. In addition, regular follow-up should also be done, and the dynamic changes of hormones in the body should be considered in order to maximize the effect. Studies in recent years have shown that significant curative effects can be achieved with certain exercise guidance on the basis of MHT ^[19]. A moderate amount of aerobic exercise, such as walking, aerobics, and Tai Chi, has better effects than any other sports and is easy to operate ^[20]. These exercises are of great benefit to perimenopausal women, helping to increase the level of estrogen, improve the bone mineral density in women, and improve the quality of life of women in their later years. Therefore, menopausal women should perform moderate aerobic exercise according to their physical status and exercise tolerance.

In conclusion, among women over 40 years old, the cognition of menopause among the community group is generally low, thus requiring improvement. Menopause is a major problem that women will experience in their later years, and it has a significant impact on their lives. Hence, society should pay more attention and provide sufficient support to these women, so that they would enjoy life and live well into old age.

Funding

This work was supported by the 2021 College Students Innovation and Entrepreneurship Training Program Project (No.: 121521116).

Disclosure statement

The authors declare no conflict of interest.

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