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# Evaluation of Uterine Warm and Cold Distemperament (Su-e Mizaj) in Persian Medicine: A Qualitative Study

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## Abstract

**Objectives:** Uterus is one of the most important organs of a woman which purifies the blood and carries a fetus and its function is related to the main organs like the brain, heart, liver, kidneys, and stomach. Uterine distemperaments are among the most important diseases of this organ and various symptoms are mentioned for them in Persian medicine (PM). Accordingly, the evaluation of these symptoms will help the diagnosis and treatment of different types of disorders related to the female reproductive system.

**Materials and Methods:** This concept analysis qualitative study was conducted to collect and classify the symptoms of uterine distemperaments using a hybrid method and included theoretical, fieldwork, and analysis phases. In the theoretical phase, the resources of PM were reviewed, followed by interviewing the experts of PM and patients with uterine distemperament in the fieldwork phase. Finally, the guidelines were provided for diagnosing uterine warm and cold distemperaments.

**Results:** The signs and symptoms of uterine distemperaments were classified into 5 general categories including menstrual blood characteristics (i.e., volume, consistency, color, smell, temperature, and outgoing speed), uterine discharges, pubic hair characteristics, other characteristics related to the female reproductive system, and the general symptoms. Eventually, the most important concepts were converted to a guideline of “Major and Minor Diagnostic Criteria for Uterine distemperaments”.

**Conclusions:** In general, the recognition of the symptoms of uterine distemperaments facilitates the prevention, diagnosis, and treatment of different types of gynecologic disorders. The results of the current study can be an appropriate basis for designing and standardizing diagnostic tools for uterine distemperaments and related diseases.

**Keywords:** Persian medicine, Iranian traditional medicine, Uterus, Temperament, Qualitative research

## Introduction

Persian medicine (PM) or Iranian traditional medicine (ITM) is ancient traditional medicine. It dates back to over 8000 years BC. According to Avicenna, the goal of medical science is to maintain health and to restore it if it is lost. The PM system attempts to suggest the best possible methods through which an individual can live an optimum healthy life with a minimum ailment (1, 2).

In PM, temperament plays a key role in the prevention, treatment, and presentation of lifestyle-related recommendations (1,3,4). The hot, cold, humid, and dry temperaments are considered as the pillars of PM (5). In addition, four types of produced humors in the human body include phlegm (*Balgham*), blood (*Dam*), yellow bile (*Safra*), and black bile (*Sauda*) (3,4).

In addition to general body temperament, each organ has its own temperament and distemperament is one of the most important diseases of each organ. PM sources demonstrate various symptoms for the distemperament of

each organ (6).

The uterus is one of the most essential organs of a woman's body that is responsible for purifying the blood and carrying the fetus. The uterus is related to important organs such as the brain, heart, liver, kidneys, and stomach thus the complications of uterine diseases may spread through the whole body (7,8).

Many gynecologic problems in modern medicine are known to be associated with uterine distemperaments in PM, including menstrual cycle disorders, increased uterine bleeding, infertility, recurrent abortions, preterm delivery, uterine and vaginal infections, cervicitis, and cervical ulcers (7).

There are several studies on the indices of the general temperament and specific temperament of some organs such as the brain and stomach. However, no study is available on the uterine temperament. The important role of the uterus in a woman's body necessitates the evaluation of uterine distemperaments indices (3,6,9).

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Therefore, the present study evaluated the concepts related to warm and cold uterine distemperaments (WUD & CUD) based on a scientific approach. This is a part of a project for explaining the types of uterine distemperaments designed in two Ph.D. dissertations in the PM. In this regard, a similar study evaluating the moist and dry uterine distemperaments is underway.

The results of this study introduce a valid and practical diagnostic guideline for complementary and alternative medicine and PM specialists. In addition, this qualitative study can be used to construct tools including a checklist and a questionnaire for the diagnosis of WUD and CUD for therapeutic and research purposes.

## Materials and Methods

Content analysis is a research method that has come into wide use in health studies in recent years. Further, it is one of the numerous research methods that is used to analyze text data and helps to classify large amounts of texts into an efficient number of categories that represent similar meanings (10). The concepts are labels that describe phenomena and provide a “concise summary of thoughts”. Furthermore, concept analysis brings about the clarification, identification, and meaning of words (11). This qualitative study aimed to carry out concept analysis using a hybrid method. The hybrid model consists of theoretical, fieldwork, and analysis phases, which are used to define and apply the concepts in empirical and practical fields (12).

### Theoretical Phase

The main goal of the theoretical stage is to create and develop an appropriate background for deep analysis and redefinition of the concept in later phases (13).

At this phase, available PM resources were examined to obtain a working definition for WUD and CUD concepts so as to enter the fieldwork phase.

Thus, 10 of the most important and comprehensive PM sources were selected by the experts for reviewing purposes. The selection process was carried out by requesting 11 PM experts in the field of women’s diseases in order to prioritize resources that are important for evaluating uterine distemperaments. A total of 20 book titles was presented, followed by choosing the books referred by at least 4 experts (36%) for analysis by the research group. The definitions and indices related to WUD and CUD were extracted from these sources. In this study, the standard qualitative content analysis was used based on the method proposed by Elo and Kyngäs in order to analyze the textual data in phases 1 and 2 of hybrid methods (14).

For this purpose, analysis units were separated from the literature and divided into smaller units called “meaning units”. Then, obvious and hidden concepts were separated from each meaning unit, the coding was carried out, and similar codes were subcategorized, followed by forming

and categorizing the main category. The conceptual position of each sign (i.e., former, attribute, or subsequent) was determined as well. To facilitate this process, the results were tabulated to keep track of and compare the results of each phase. Further, attempts were made to present a summary of the contents of working definition texts for the WUD and CUD concept.

### Fieldwork Phase

At this phase, empirical data were used to enhance and refine the elementary definition of the concept in the first phase (13).

The aim of this phase was to examine the characteristics of WUD and CUD based on the clinical experience of the experts and the clinical symptoms of the patients in order to obtain a more complete definition of the concept by clarifying the characteristics mentioned in the literature.

### Expert Opinions

At this phase, a purposeful sampling technique (15) was conducted on PM specialists and the interview continued until reaching the data saturation level (16).

The inclusion criteria of the specialists included having academic and non-academic education in PM with a minimum of 5 years of work experience related to the subject matter of the research. On the other hand, the exclusion criteria were refusing voice recordings by the experts. Individual in-depth and semi-structured interviews were conducted with 12 PM specialists. To observe the research ethics, participants were reminded that the citation would be carried out unanimously and there would be the possibility of withdrawing the research at any stage. Furthermore, face-to-face interviews were conducted with 9 experts at their workplace, including interviewing via email with 3 experts who were unavailable. Moreover, each interview lasted 30 to 90 minutes and face-to-face interviews were recorded using a voice recorder and then carefully implemented after obtaining the consent of the participants. Any interview began with open-ended questions such as “How to suspect and diagnose a uterine distemperament in a patient?” or “What is the most important symptoms of WUD and CUD in your opinion?”. Then, specific probing questions were raised for each characteristic and clarifications were made accordingly. In 3 online interviews, the questions were emailed and when the responses were returned, complementary questions were sent if further explanations were necessary. As in the theoretical phase, meaning units were extracted from the concepts derived from the interviews, coded, and then categorized at this phase.

### Interview With Patients

The inclusion criteria were married women of childbearing age (15-45 years old) who referred to PM clinics. The following issues were considered as exclusion

criteria due to the direct effect on uterine temperament and consequently the results of the study:

- Regular consumption of hormonal drugs during the recent 3 months;
- Using intrauterine device;
- Any uterine surgery during the previous 6 months;
- Pregnancy;
- Substance abuse;
- Any chronic and debilitating diseases such as cancer, multiple sclerosis, systemic lupus erythematosus, and liver cirrhosis (due to the effects of their medication on uterine temperament);
- Refusal of participants from continuing the study.

At this phase, interviews were conducted with 2 and 4 patients with the warm and cold uterus, respectively. The warm-cold uterus of these patients was diagnosed by a PM specialist (a member of the research team) by taking a detailed history and vaginal examination. Regarding the time-consuming interviews and possible shyness in answering private questions, the questions were sent to the patients by emails. After reviewing the answers, complementary questions and explanations were asked via the telephone. Additionally, interviewing questionnaires included general (open-ended) and detailed questions about the types of symptoms that were associated with their uterine temperament. The findings were categorized the same as the previous phase.

#### Data Analysis

In the final analysis phase, the findings of theoretical and fieldwork phases were compared and differences and similarities were discovered by weighting the findings. A more complete definition of WUD and CUD and its symptoms was presented by combining the findings from theoretical and fieldwork phases. Then, 4 sessions were held with 10 experts and the obtained concepts from the literature review and interviews were discussed via “nominal group” and “focus group discussion” methods. Eventually, the symptoms were summarized and weighed and the major and minor criteria were presented for the diagnosis of WUD and CUD.

#### Trustworthiness

Several measures were taken to test trustworthiness. At the preparation phase, interview questions were presented by the research team and reviewed several times during the interviews. In addition, attempts were made to consider diversity among participants in terms of age, gender, and work history, along with work and life places. Demographic and other characteristics of the participants were also explained in detail. The inclusion criteria for participants were selected in a way to have the most access to information and the examples of direct quotations and participants' statements were presented as well. Then, initial interviews were investigated with the research team to properly conduct semi-structured interviews.

At the organizational stage, initial coding was raised and reviewed by the research group to verify the authenticity of the coding process. During the analysis, frequent reference was made to data and initial codes to ensure the accuracy of the coding process. All stages of the research, including data collection, analysis, and themes formation were fully described (the audit chain) so that the others could audit the research when reading (17).

## Results

### Theoretical Phase Results

The 10 reference books of the ITM selected by the research team included *Al-qanun Fi'l-Tibb*, *Zakhireye Kharazmshahi*, *Tebb-e-Akbari*, *Exir-e-Azam*, *Kamel-al-Sanaat Al-Tibbiah*, *Sharh qanon Ibn Sina (Sharh Qarshi)*, *Sharh fosool Boghrat*, *Sharhe asbab va Alamat*, *Treatments of Aghili Moalejat-e Aghili*, and *Kholasat-ol-Tajarob* (Table 1). The materials related to WUD and CUD were extracted from each book and tabulated as well (Table 2). After reviewing the table of all the books, WUD and CUD symptoms obtained from the theoretical phase were categorized in five categories including menstrual bleeding, uterine discharge, pubic hair status, the other characteristics of the female reproductive system, and general symptoms and a working definition was presented for WUD and CUD (Table 3).

### Expert Opinions Results

The interviews were conducted with 12 ITM specialists (Table 4) in order to collect the signs and symptoms of WUD and CUD, especially the more clinically useful symptoms. The findings from each interview with the experts were tabulated as in the previous phase. Then, the extracted points from the interviews were collected in a table and categorized as well. Most of the mentioned symptoms by the experts were also present in the PM textbooks. In some cases, the experts also suggested symptoms that were not mentioned in the literature.

### Patients Interview Results

The interviews were conducted with 6 patients with cold (n=4) and warm (n=2) uterus. The findings of the interviews were coded and the points from all patients were collected in a single table and categorized as well.

### Data Analysis

All obtained symptoms from the literature and interviews with both experts and patients were collected in one table and the frequency of each symptom was determined by percentage. After analyzing this table, the research team concluded that the diagnostic importance of various symptoms of WUD and CUD is not the same. Some symptoms are more commonly observed in the clinic and are more cited by the experts. Some of the symptoms are still unexplained and ambiguous or there is no criterion for their measurement and they are not currently helping

**Table 1.** Characteristics of PM Reviewed Resources in the Theoretical Phase

Book Name	English Name	Author	Author's Years of Life	Language	Topic
<i>Al-qanun Fi'l-Tibb</i>	Canon of Medicine	Ibn Sina (Avicenna)	(980-1037 AD) (18)	Arabic	Fundamentals of Medicine – diseases - Pharmacy and industry
<i>Zakhireye Kharazm Shahi</i>	Treasure of Kharazm Shah	Ismaeil Jorjani	(1042-1137 AD) (18)	Persian	Fundamentals of Medicine – diseases - Pharmacy and industry
<i>Tebb-e-Akbari</i>	Akbari's Medicine	Mohammad Akbar Arzani	18 th century (19)	Persian	Diseases
<i>Exir-e-Azam</i>	Great Elixir	Mohammad Azam Khan	19th century (20)	Persian	Diseases
<i>Kamel-al-Sanaat al-Tibbiah</i>	The Perfect Art of Medicine-The Royal Book	Ali Ibn Abbas Majusi Ahwazi (Haly Abbas)	(949-982 AD) (21)	Arabic	Fundamentals of Medicine – diseases - Pharmacy and industry
<i>Sharh qanon Ibn Sina (Sharh Qarshi)</i>	Commentary on Avicenna's canon	Ibn Nafis, Ali Ibn Abi Hazm	(1210-1288) (22)	Arabic	Fundamentals of Medicine – diseases - Pharmacy and industry
<i>Sharh fosool Boghrat</i>	Commentary on Hippocrates' Aphorisms	Ibn Nafis, Ali Ibn Abi Hazm	(1210-1288) (22)	Arabic	Fundamentals of Medicine – Diseases
<i>Sharhe asbab va Alamat</i>	Explanation of causes and symptoms	Nafis Ibn Evaz Kermani	15 th century (19)	Arabic	Diseases
<i>Moalejat-e Aghili</i>	Treatments of Aghili	Aghili Shirazi	18 th century (19)	Persian	Diseases
<i>Kholasat-ol-Tajarob</i>	Summary of experiences	Baha Al-Dolah Razi	16 th century (19)	Persian	Diseases

**Table 2.** Examples of Tables for Each Book and the Extraction of Obvious and Hidden Concepts, as well as Codes, Subcategories, and Categories Obtained From Content Analysis

References	Meaning Unit	Obvious Concepts	Hidden Concepts	Conceptual Position			Codes	Subcategories	Categories
				An.	Ch.	Af.			
Al-qanun; Vol. 3, p. 478 The chapter on menstrual bleeding cessation or its reduction	One of the uterine causes of menstrual bleeding cessation is the weakness of the uterus. The causes of uterine weakness is cold, dry, warm and dry, along with cold and dry uterine distemperaments.	Causes of menstrual bleeding cessation are cold uterine distemperament, dry uterine distemperament, warm and dry uterine distemperament, cold and dry uterine distemperament	Both warm and cold uterine distemperaments can lead to menstrual bleeding cessation		*	*	Cessation of menstrual blood due to cold and warm uterine distemperaments	Reduction or the cessation of the menstrual blood	Menstrual blood characteristics

Note. An., Antecedent; Ch., Characteristics; Af., Aftermath.

the diagnosis. For this reason, during 3 sessions with 10 experts, the derived concepts from phases 1 and 2 were discussed via “nominal group” and “focus group discussion” methods for their weighting and reevaluation. The result of these sessions was to determine the most important and most commonly used symptoms in the form of major and minor criteria for diagnosing WUD and CUD, the details of which are provided in Table 5.

**Discussion**

Uterine distemperaments include an important part of uterine diseases that, if not diagnosed and treated, can cause a variety of disorders (7, 27).

The present study, to the best of our knowledge, is the first standard qualitative study on uterine distemperaments, which explains comprehensive characteristics of WUD and CUD. The findings of this study showed that WUD and CUD can lead to a wide range of symptoms, which are

categorized into general and gynecologic symptoms. The most important symptoms are those related to menstruation characteristics as several experts mentioned it. Some of these symptoms are specific for one distemperament, and some overlap between both WUD and CUD. For instance, both distemperaments can lead to a decrease or increase in menstrual bleeding and a distemperament can occasionally cause paradoxical symptoms as well. For example, WUD can both increase uterine bleeding (hypermenorrhea) and decrease it (oligomenorrhea and amenorrhea). Overall, the PM texts have raised a wide range of symptoms to the distemperament of any organ because the manifesting symptoms vary depending on the severity of the distemperament and individual body characteristics. Several experts participated in this study and some of the PM sources, known as explanations, describing major and important books (e.g., the *Al-qanun*), have dealt with this issue. For example, three

**Table 3.** WUD and CUD Working Definition Derived From the Theoretical Phase of the Study

<b>WUD working definition</b>	<p>Characteristics of the WUD are divided into 5 general categories including menstrual bleeding characteristics (i.e., amount, consistency, color, odor, temperature, and expulsion rate), uterine discharge, pubic hair status, the other characteristics of the female reproductive system, and general symptoms</p> <ul style="list-style-type: none"> <li>Menstrual bleeding characteristics include decreasing the menstrual bleeding volume (7, 23, 24), menstrual blood concentration (8, 23, 25), menstrual bleeding dilution in the case of dominant <i>Safra</i> humor (8, 23, 25, 26), and malodorous menstrual blood (7, 23, 24), having warm and burning sensation during the discharge of menstrual blood (8, 25-28), high discharge velocity of menstrual bleeding in the case of dominant <i>Safra</i> humor (8, 23, 25, 26), the color of menstrual blood is in red (7, 23, 28), dark red (26), yellowish (7, 27, 28), and black (7, 8, 23-25, 28) spectrum</li> <li>Red uterine discharge in the case of dominant dam humor and yellowish and smelly discharge in the case of dominant <i>Safra</i> humor (7, 8, 23, 25-27, 29)</li> <li>Pubic hair status including excessive pubic hair (8, 23, 26), the presence of thick and black hair on the mons pubis and thighs (26, 28), excessive hair between the mons pubis and umbilical area (25)</li> <li>Other characteristics of the female reproductive system include menarche much earlier than 14 years old (27), the warmth of the body during vaginal examination (23, 28), the presence of a burning sensation during intercourse (27)</li> <li>General symptoms encompass dry lips (7, 23, 28), dark yellow urine (7, 23, 28), tachycardia (7, 23), pulse strength (28), pulse magnitude (28), dilation of body vasculature (28), anxiety and palpitation (23), slim body (8, 23, 25, 26), pain in the liver (7, 23), dry stool (28), expanded breathing (28), a yellow face in the case of general heat (8, 26), excessive body hair in the case of general heat (7), and high desire for cold foods (28)</li> <li>Warm uterine distemperament can ultimately lead to amenorrhea (7, 8, 27, 28), increased uterine bleeding (7, 8, 23, 24, 27), infertility (26-30), and abortion (7, 8, 23, 29) as subsequent signs</li> <li>The uterine complications of dominant warm humors (yellow bile and blood) include uterine ulcers (7, 23, 24, 29), itching uterus (8, 23, 25, 26), uterine rash (25, 26, 29), and uterine warts (26)</li> </ul>
<b>CUD working definition</b>	<p>CUD characteristics are divided into 5 general categories including menstrual bleeding characteristics (i.e., volume, consistency, color, odor, temperature, and expulsion rate), uterine discharge, pubic hair status, the other characteristics of the female reproductive system, and general symptoms</p> <ul style="list-style-type: none"> <li>Menstrual bleeding characteristics include the reduction or cessation of menstrual bleeding like oligomenorrhoea or amenorrhea (7, 8, 23-26), prolonged menstruation period (8, 26), prolonged blood-free days (7, 23-25, 28), cold menstrual blood (27), diluted menstrual blood (7, 8, 24-26), or concentrated menstrual blood in severe cold cases (24, 28). The color of the menstrual blood is in whitish or darkish and opaque (7, 23, 24, 28) or light red (8, 25, 26) range</li> <li>White uterine discharge in cases of dominant <i>Balgham</i> humor, dark, and black and concentrated discharge in the case of dominant <i>Sauda</i> humor (7, 8, 23, 25-27, 29)</li> <li>Pubic hair status includes low hair density (7, 8, 23, 25, 26) and thin pubic hair (26)</li> <li>Other features of the female reproductive system include menarche much later than 14 years of age (27), paresthesia in the suprapubic area (Khader a'alaye Rahem) (7, 23), cold cervix during intercourse (27), and cold uterus during vaginal examination (23)</li> <li>General symptoms encompass light-colored urine (7, 23), color corruption and bad skin color (7, 23, 28), white color in the case of general coldness (8, 26), pulse difference (23, 26), strong pulse (26), the coolness of the ends in a non-cold condition (28), cold skin in palpation in the case of general coldness (8), low-density and white body hair in the case of general coldness (26), and general symptoms of the cold distemperament in case of dominance of coldness over the whole body (25)</li> <li>Predisposing CUD factors (former) include high consumption of dense and cold foods (7, 23), history of so frequent intercourse (7, 23)</li> </ul> <p>CUD can ultimately lead to increased uterine bleeding (7, 8, 23, 24, 27), menstrual bleeding cessation (7, 8, 25-29), infertility (26-30), abortion (7, 8, 23, 27, 28), uterine bloating (Nafkkeh in the uterus)<sup>1</sup> (7, 8, 23, 25-29) (subsequent)</p> <p>Among the complications of dominant cold humors (<i>Balgham</i> and <i>Sauda</i>) in the uterus are the uterine prolapse in the event of dominant sticky <i>Balgham</i> in the uterus (23, 29), solid uterine swelling in the case of accumulation of soda in the uterus (38)· cervical warts due to the condense <i>Sauda</i> humor (23, 29), and uterine hemorrhoids caused by soda humor present in the uterus (8, 23, 26, 29)</p> <hr/> <p>1. Nafkkeh in the uterus: The accumulation of dense gas in the uterus causing the sensation of swelling and pain in the suprapubic region and vaginal flatulence</p>

Note. WUD: Warm uterine distemperaments; CUD: Cold uterine distemperaments.

experts believed that the menstrual blood is diluted and increases at the beginning of the WUD spectrum (mild warm distemperament) while it is dense and decreases at the end of the spectrum (severe warm distemperament), and could even be found as spotting. In such cases, other diagnostic and general symptoms, as well as the assessment of the course of distemperament development and severity through precise history-taking and physical examination will help the diagnosis. Blackish menstrual blood and burning sensation during bleeding were among the most important symptoms of WUD and those of CUD included oligomenorrhoea, amenorrhea, and prolonged blood-free days. A high percentage of texts and experts have mentioned these symptoms. Yellowish uterine discharge with a sharp annoying smell for WUD

and relatively white discharge for CUD were among the important diagnostic symptoms according to the texts and experts. The warmth of the body palpation and the uterus during the vaginal examination in addition to an excessive sexual desire for WUD and the coldness of the buttocks, thighs, and the area below the navel, and finally, a low sexual desire for CUD were also among the cases that were agreed almost definitely by the experts. The general body symptoms of uterine distemperaments are of significant help to the diagnosis process. In addition, it shows that uterine distemperament can affect the whole body. The opposite condition is also true. This means that each of the general distemperaments of the body can affect the organs, particularly the uterus. The other valuable concepts include predisposing and

**Table 4.** Characteristics of Participating Experts in the Fieldwork Phase

Number	Gender	Age	Level of Education	Length of Work Experience (year)
1	Female	41	M.D, Ph.D.	15
2	Female	43	M.D, Ph.D.	10
3	Female	40	M.D, Ph.D.	10
4	Female	39	M.D, Ph.D.	6
5	Female	38	M.D, Ph.D.	8
6	Female	41	M.D, Ph.D.	10
7	Male	40	M.D, Ph.D.	10
8	Female	55	B.Sc.	25
9	Female	47	M.D, Ph.D.	14
10	Female	35	M.D, Ph.D.	5
11	Female	44	M.D, Ph.D.	6
12	Female	39	M.D, Ph.D.	6

subsequent signs for uterine distemperament (Table 3). Knowing the predisposing signs is useful for preventing uterine distemperament in addition to helping the doctor on correct diagnosis. The subsequent signs are also the complications of the uterine distemperament. Many disorders associated with the female reproductive system, which are raised in conventional medicine and have no exact cause, can be a complication of uterine

**Table 5.** Major and Minor Criteria Prescribed for Diagnosis of WUD & CUD

Cold uterine distemperament (CUD)	Warm uterine distemperament (WUD)
Major	Major
<ol style="list-style-type: none"> <li>1. Retened or decreased menstrual blood (oligomenorrhea or amenorrhea)</li> <li>2. Reduction in number of bleeding days</li> <li>3. Long menstruation cycle</li> <li>4. Long blood free days</li> <li>5. Spotting in the first 3-4 days of menstruation</li> <li>6. Coldness of extremities in non-cold conditions</li> <li>7. The uterus suffers from local coldness<sup>a</sup></li> <li>8. The uterus benefits from local warmth<sup>b</sup></li> <li>9. Cold uterus during the internal examination</li> <li>10. Cold palpation during external uterine examination (thigh, below the umbilicus, buttocks)</li> <li>11. Pale cervix and pale vaginal mucosa in speculum exam</li> <li>12. Uterus bloating<sup>c</sup></li> </ol>	<ol style="list-style-type: none"> <li>1. Warm menstrual blood</li> <li>2. Excessive menstrual blood</li> <li>3. High sexual desire</li> <li>4. Feeling warmth by sexual partner</li> <li>5. Red cervix in speculum exam</li> <li>6. Red and hyperemic vaginal mucosa in speculum exam</li> <li>7. Warm uterus during the internal examination</li> <li>8. Warm palpation during external uterine examination (thigh, below the umbilicus, buttocks)</li> </ol>
Minor	Minor
<ol style="list-style-type: none"> <li>1. Difficult expulsion of menstrual bleeding</li> <li>2. Dysmenorrhea</li> <li>3. Premature menopause</li> <li>4. Recurrent uterine discharge (infectious and noninfectious)<sup>e</sup></li> <li>5. Simple ovarian cyst</li> <li>6. Low sexual desire</li> <li>7. History of infertility or subfertility</li> <li>8. White body skin color</li> <li>9. Cold body general palpation</li> <li>10. The uterus suffers from cold foods<sup>f</sup></li> <li>11. The uterus benefits from warm foods<sup>g</sup></li> <li>12. Low-density pubic hair</li> <li>13. Poly Cystic Ovarian Failure</li> </ol>	<ol style="list-style-type: none"> <li>1. Short blood free period</li> <li>2. Fast menstrual blood expulsion rate</li> <li>3. Spotting before menstruation</li> <li>4. Premature menarche</li> <li>5. Vaginal itching when eating warm foods<sup>d</sup></li> <li>6. Vaginal burning when eating warm foods</li> <li>7. Uterine (vaginal) pruritus</li> <li>8. Diluted and clear discharge</li> <li>9. High-density pubic hair</li> <li>10. Extension of the pubic hair to the abdomen and thigh</li> <li>11. Hyperactivity or fast general movements</li> </ol>

<sup>a</sup> Hypogastric discomfort, abdominal cramp, dysmenorrhea and spotting when sitting on cold surfaces or any exposure of uterus to cold environment.

<sup>b</sup> Pleasure, comfort and relief of abdominal, hypogastric or menstrual pain when sitting on warm surfaces or any exposure of uterus to warm environment.

<sup>c</sup> Accumulation of gas in uterus causing suprapubic pain and swelling and vaginal gas passing

<sup>d</sup> Warm foods such as Date, Honey, Cinnamon

<sup>e</sup> Approximate equivalent of "Recurrent vaginitis"

<sup>f</sup> Cold foods such as yoghurt, cucumber, salad

<sup>g</sup> Pleasure, comfort and relief of abdominal, hypogastric or menstrual pain by using warm foods

distemperament from a traditional medicine perspective. An important point mentioned by most experts, though not considered as diagnostic symptoms, was "changes in patient's symptoms since before". This is a very good guide to detect distemperament type, because there may be no typical signs of distemperament in some cases. However, it is found that the patient has been changed from his normal status in the past and has moved toward warm or cold distemperament while taking her history. In addition, conventional medicine explains some of the bleeding features of the menses. For instance, normal values are defined for the age of menarche and menopause, the length of each menstrual period, menstrual intervals, the blood-free days, and the blood volume for each period cycle (31, 32).

For example, the normal bleeding volume in each menstrual cycle is 30-80 cc (32). However, it is unknown which individuals have about 30 cc or 80 cc bleeding. On the other hand, individual differences, even in the normal range, are affected by the uterine temperamental characteristics in the PM. Thus, it can be predicted that the person, even if she is currently in the normal range, is susceptible to which uterine distemperament and which preventive measures must be taken to avoid having an abnormal range in the future. In conventional medicine,

it is mentioned that the physiological uterine discharge is clear, white, or light gray, and odorless in the case of uterine discharge. Colored and smelly discharge can be found in a variety of vaginitis. Further, candidal vaginitis, white and concentrated discharge, bacterial vaginosis, white/gray discharge with the fish smell, trichomonas vaginalis, green/yellow discharge, desquamative inflammatory vaginitis, purulent secretions, and cytolytic vaginosis cause sticky white discharge (33).

The present study showed that the color of discharge is associated with a variety of uterine distemperaments in PM. For example, yellow and malodor discharge is related to warm and dry uterine distemperament due to dominant *Safra* humor. Furthermore, white discharges are associated with cold and moist uterine distemperament due to the dominant *Balgham* humor. Therefore, the treatment of uterine distemperaments can eliminate abnormal discharge and improve patients with recurrent uterine infections and recurrent vaginitis (33).

Sohrabvand et al conducted a study in Farsi based on the Ph.D. thesis in PM and investigated the relationship between general and uterine temperament with women infertility in Iran. This study was the first scientific research to design a uterine temperament assessment tool. First, the characteristics of the uterine temperament and distemperaments were extracted from 16 PM sources. A questionnaire was then developed to determine the uterine distemperaments, which included 9 questions for determining uterine coldness vs. warmth and 3 questions for determining uterine dryness vs moisture. The qualitative phase of this study was briefly done and only included a literature review and follow no standard qualitative approach. Moreover, the questionnaire did not fully undergo standard tooling stages (34).

However, the present study was based on a hybrid model, as well as a standardized and approved method for carrying out qualitative studies in the field of medical and health sciences. Several previous studies have so far used the mentioned questionnaire (Sohrabvand et al<sup>34</sup>) to determine uterine temperament (4,35).

Sultana et al examined the general and uterine temperament in menopausal transition symptoms in India. In this study, the symptoms were collected from Ibn Sina's *Al-qanun* book and a questionnaire was designed to determine the general and uterine temperament accordingly (36). In the qualitative phase of this study, text review only included a single book and followed no standard method.

Similarly, Zaidi and Sherani investigated the relationship between general temperament and menarche. The temperament was determined using a questionnaire in Greek medicine. In this questionnaire, there were several questions about menstruation characteristics in addition to general temperament questions (37).

The academic discipline of ITM at the Ph.D. level is newly established (10 years), which is among the

limitations of the present study. Therefore, some (but not all) of the experts, who had no experience in PM before the ITM college, were assumed to have relatively low experience.

Gynecologists are mostly women in Iran considering religious beliefs. Therefore, 11 participants were women in this study and thus there was low gender diversity among the experts.

Due to the lack of accurate diagnostic criteria, attempts were made to include patients who were diagnosed with severe distemperaments during the patient's selection phase. The prevalence of warm uterus was low; therefore, the screening was particularly difficult for the warm uterus.

The findings of this study showed that many of the symptoms and complications of uterine distemperaments are consistent with the current equivalents in conventional medicine. Additionally, disorders such as amenorrhea, hypomenorrhea, menorrhagia, dysmenorrhea, leukorrhea (vaginal discharge), cervical ulcers, uterine infections, abortions, and infertility are included in this category (38, 39). On the other hand, some of the symptoms and complications are still not completely explained and have no equivalence in conventional medicine.

The results of the present study can be used to precisely explain the diseases associated with uterine distemperaments and to find the equivalent of these diseases in conventional medicine. Considering that many symptoms of the uterine distemperaments are not addressed in the conventional medicine and not used for the detection of gynecologic disorders, the wide variety of presented symptoms and features in this study can be a missing link in the diagnosis and treatment of gynecologic disorders. In addition, this qualitative study can be used as a basis for making a WUD and CUD diagnostic tool in the form of a checklist and a questionnaire.

Further, the proposed criteria can be used as the primary diagnostic tool for experts. It is suggested to apply these criteria in larger studies with more experts and patients in order to complete and edit the criteria and to determine the exact number of major or minor signs needed for diagnosis.

It is also suggested to repeat the fieldwork phase with the presence of more experts and patients in future studies. The diagnosis with determined criteria based on the viewpoints of more experts will particularly increase the credibility of future studies.

Another suggestion is to design a comprehensive study for the accurate explanation of "spectral symptoms" of the current study, leading to the development of clinical guidelines.

Likewise, the result analysis demonstrated that the experts put more emphasis on dealing with the patient in the clinic although some helpful diagnostic issues such as the evaluation of the pulse are not used in everyday practice due to measurement difficulty. Accordingly,

studies involving more experts with further emphasis on clinical issues such as the pulse will achieve complete and more accurate diagnostic criteria.

### Conclusions

In this study, the characteristics of WUD and CUD were investigated from the PM perspective. In addition, a more complete understanding of the related concepts, especially the WUD and CUD diagnostic criteria was obtained by merging the findings of theoretical and fieldwork phases, followed by presenting WUD and CUD diagnostic criteria. Understanding WUD and CUD facilitates the prevention, diagnosis, and treatment of uterine disorders and the fast use of some lifestyle recommendations and treatment methods proposed in ITM. The results of this study are the basis for designing and standardizing a diagnostic instrument for WUD and CUD and other related diseases from the PM perspective and can be used for both research and clinical purposes.

### Conflict of Interests

Authors have no conflict of interests.

### Ethical Issues

The Ethics Committee of Shahid Beheshti University of Medical Sciences approved the study under the code of IR.SBMU.RETECH.REC.1395.1.24 and all participants provided their informed written consent.

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