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A Therapeutic Approach to Premenstrual Syndrome (PMS): Modularized Treatment Program

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Keywords
Premenstrual syndrome (PMS) · Premenstrual dysphoric disorder (PMDD) · Cognitive-behavioral therapy (CBT) · Lifestyle habits

Summary
Background: The paper presents a modularized treatment approach for women with premenstrual symptoms. Many women of reproductive age suffer from physical and/or mental premenstrual complaints, which can significantly reduce the quality of everyday life. Current studies showed positive effects of cognitive-behavioral therapy and lifestyle interventions. Overall, there is a lack of effective treatment approach. **Method:** The present approach addresses women with a severe premenstrual syndrome (PMS) or premenstrual dysphoric disorder (PMDD). It consists of a detailed psychoeducation, cognitive interventions regarding PMS-related dysfunctional cognitions, strategies to change dysfunctional behaviors, and targets lifestyle issues such as stress, relaxation, balanced diet, and sports. **Results:** First results of the efficacy as well as the contentment with the treatment program were reported within a case study. **Conclusion:** The paper presents newly developed treatment guidelines, which can be integrated both, in research and therapeutic practice. The treatment guidelines should be used in further research to optimize the treatment of premenstrual burden.

Schlüsselwörter
Prämenstruelles Syndrom (PMS) · Prämenstruelle Dysphorische Störung (PMDS) · Kognitiv-behaviorale Therapie (KVT) · Lebensgewohnheiten

Zusammenfassung
Hintergrund: Die vorliegende Arbeit stellt ein modularisiertes Behandlungsprogramm für Frauen mit prämenstruellen Beschwerden vor. Zahlreiche Frauen im reproduktionsfähigen Alter leiden unter körperlichen und/oder psychischen prämenstruellen Beschwerden, die zu starken Einschränkungen im Alltag führen können. Nur in sehr wenigen Studien wurden Behandlungsansätze für prämenstruelle Beschwerden untersucht. Positive Effekte konnten dabei für kognitiv-behaviorale Therapien sowie Ansätze zur Veränderung von Lebensgewohnheiten gezeigt werden. **Methodik:** Das vorliegende Programm wurde basierend auf effektiven Ansätzen zur Behandlung prämenstrueller Beschwerden entwickelt und richtet sich an Frauen mit einem stark ausgeprägten prämenstruellen Syndrom (PMS) oder einer prämenstruellen dysphorischen Störung (PMDS) mit dem primären Ziel, die Symptome besser bewältigen zu können. Das Programm umfasst eine ausführliche Psychoedukation, kognitive Interventionen und Strategien zur Veränderung störungsaufrechterhaltender Verhaltensweisen. Zudem werden Strategien zur Veränderung von Lebensgewohnheiten bezogen auf Stress, Entspannung, Ernährung und Bewegung erarbeitet. **Ergebnisse:** Der Einsatz des Programms sowie erste Belege zur Effektivität und Zufriedenheit werden anhand einer Fallvignette verdeutlicht. **Schlussfolgerung:** Mit der vorliegenden Arbeit liegt ein strukturiertes Programm für die Behandlung von Frauen mit PMS/PMDS vor, das in der therapeutischen Praxis eingesetzt werden kann. Das Programm sollte in wissenschaftlichen Studien erprobt werden, um die Behandlung prämenstrueller Beschwerden weiter zu verbessern.

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Introduction

Premenstrual symptoms affect a large number of women of reproductive age, although symptoms vary greatly in severity and intensity, which is why affected women are also subject to different degrees of stress [Steiner et al., 2003]. In total more than 150 physical and mental complaints are reported [Blake, 1995]. Physical complaints include, inter alia, chest pain, bloating and fatigue. Among the psychological complaints are depressive moods, hopelessness, anxiety and affective lability [Halbreich et al., 2007]. Depending on the severity of symptoms, we can differentiate among mild premenstrual complaints that cause no impairment, premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD) [Campagne and Campagne, 2007]. Epidemiological studies have placed the point prevalence for severe PMS at 20%, and an additional 5-8% meet the criteria for PMDD [Halbreich et al., 2003].

PMDD is a particularly strong expression of PMS and the psychological symptoms are comparable to those of major depression [Bentz et al., 2012]. In the fifth edition of the 'Diagnostic and Statistical Manual of Mental Disorders' (DSM-5), PMDD has been included as a separate diagnosis, but PMS has not [Ehret and Berking, 2013]. Therefore the criteria of the American College of Obstetricians and Gynecologists [ACOG, 2000] are usually used for diagnosis of PMS. By that measure, PMS exists if at least one physical and one affective symptom from a list of 10 symptoms (4 physical and 6 affective) occur within 5 days of the onset of menstruation, lead to significant reduction in functioning and quality of daily life and occur for 2 consecutive menstrual cycles. According to DSM-5, PMDD is diagnosed when at least 5 of 11 possible symptoms occur before the onset of menstruation. Among the symptoms are depressed mood, anxiety, affect lability, irritability, lack of interest, the feeling of difficulty concentrating and loss of control, lack of energy, a feeling of being overwhelmed, changes in sleep, changes in the sensation of hunger and various physical symptoms (e.g., swelling of the breasts or joint pain). To establish a diagnosis, the symptoms must be confirmed by prospective daily assessments over 2 consecutive menstrual cycles and be alleviated with the onset of menstruation [APA, 2013]. In the 10th edition of the 'International Statistical Classification of Diseases and Related Health Problems' (ICD-10), there is no listing for a diagnosis of PMDD. The only option is to classify the symptoms as 'other recurrent depressive disorders' (F38.8) and to combine it with the medical diagnosis 'premenstrual complaints' (N94.3) [Dilling and Mombour, 2008]. Thus for a treatment of premenstrual complaints to be indicated, most authors consider that at least the suggested criteria for PMS of the ACOG [2000] should be met [Yonkers et al., 2008]. In addition, thorough diagnostics are important in order to avoid possible pathologizing of normal cycle-dependent changes and symptoms [Epperson et al., 2012].

Premenstrual complaints have a lot in common with affective and somatoform disorders [Angst et al., 2001]. Some authors argue that PMS/PMDD are only menstrual cycle-dependent, but are otherwise not different from the symptomatology of affective and somatoform disorders [Ditzen et al., 2011]. There are so far no somatic parameters (e.g., hormones) for the detection of PMS/PMDD and thus none to be used for diagnostics [Yonkers et al., 2008]. In the DSM-5, PMDD is classified as an affective disorder, because the affective symptoms are considered to be the main characteristics of the diagnosis [APA, 2013]. However, this is viewed critically by some authors, because the selection of symptoms was rather arbitrary, physical symptoms were hardly considered and the selection cannot be attributed to scientific findings [e.g., Halbreich, 2004].

Furthermore, it should be noted that it is often difficult to make a differential diagnosis that discriminates PMDD from other disorders (e.g., recurrent brief depressive disorders, bipolar-II disorders with rapid cycling). The differentiation relies on cyclical change, which necessitates a precise analysis of the temporal occurrence of the symptoms by means of a prospective symptom diary [Schwärzler and Hautzinger, 2002]. Some authors propose that alongside the prospective diary, consideration should be given to at least a 30% increase in symptoms between the premenstrual and symptom-free phases [Campagne and Campagne, 2007], which can be helpful in case of diagnostic uncertainty.

The etiology is considered to be an interplay of biological and psychological factors. Thus, hormonal changes within the menstrual cycle as well as psychosocial factors and personality traits are discussed as causal factors [cf. Lenzinger et al., 1997]. Currently there are no adequate (neuro-) biological findings, so theoretical models have been developed that postulate an interaction of biological, psychological, environmental and social factors [Blake, 1995; Ussher et al., 2002].

The suffering of the affected women varies among individuals; however, some are affected so strongly that during the premenstrual phase, they cannot cope adequately with their daily work and their productivity is impaired [Borenstein et al., 2005; Tschudin et al., 2010]. Social impairments, such as conflicts in their intimate relationship and social isolation, are also reported due to the symptoms [Chrisler and Caplan, 2002].

Despite the high prevalence figures (20% severe PMS; 5-8% PMDD [Halbreich et al., 2003]) and the high level of psychological strain, existing treatment approaches have scarcely been evaluated scientifically. Possible treatment approaches include lifestyle interventions (e.g., sports, stress reduction, relaxation training, diet), homeopathic approaches and hormone therapies. Psychopharmacotherapy and psychotherapy are also used, but only a few methodologically high-quality studies have examined their efficacy [Busse et al., 2009]. The most frequently used psychopharmacotherapies are selective serotonin reuptake inhibitors (SSRIs). It is recommended that these be taken during the last 2 weeks of the cycle, with a pause at the onset of menstruation [Passow and Bolz, 2012]. The symptoms are often treated psychopharmacologically in the German health-care system. It must be acknowledged, however, that the effectiveness of these medications comes at the cost of significant side effects, such as headaches, insomnia and decreased libido [Lenzinger et al., 1997]. Psychotherapeutic ap-

Table 1. Overview of session content

Topic	Module overview	Sessions	Relevance
Psychoeducation	Introduction: My PMS and I	2	mandatory
Cognitive interventions	Cognitive Intervention I: Thoughts – my constant companions	2	mandatory
	Cognitive Intervention II: How do I think during my PMS?	2	mandatory
	Cognitive Intervention III: What would I advise a friend to do?	2	mandatory
	Cognitive Intervention IV: Why does nobody take me seriously?	1	optional
	Cognitive Intervention V: Think confidently! But how?	2	mandatory
	Cognitive Intervention VI: Is conflict pre-programmed?	2	optional
Lifestyle change	Coping with Stress I: Stay loose!	1	mandatory
	Coping with Stress II: Stress, ease up!	2	optional
	Coping with Stress III: More pleasure –more joy!	2	optional
	Healthy Life I: Do diet and exercise affect PMS?	1	mandatory
	Healthy Life II: Fighting against one's weaker self	1	optional
	Healthy Life III: What is a healthy diet?	2	optional
Relapse prevention	Conclusion: My personal plan for the future	2	mandatory

proaches, particularly cognitive-behavioral therapy (CBT), offer an alternative, but are rarely used. Previous CBT programs for women with PMS or PMDD focused on psychoeducation, identifying and changing negative automatic cognitions, as well as learning coping strategies [cf. Blake et al., 1998; Ussher et al., 2002; Kirkby, 1994]. In a meta-analysis, Kleinstäuber et al. [2012a] incorporated 22 studies of the effectiveness of CBT and pharmacotherapy with SSRIs. Both treatment approaches produced medium effect sizes (pre-post CBT: d = 0.24 to 0.70; pre-post SSRI: d = 0.29 to 0.58). Hunter et al. [2002] conducted a study comparing the two methods. No difference between CBT (n = 24) and pharmacotherapy (n = 21) could be detected. However, the patients in the CBT group reported at the 6-month follow-up that they were better able to cope with their complaints, which argues for the use of CBT and its long-term efficacy.

There have likewise been only scattered findings about approaches favoring lifestyle interventions (exercise, diet, relaxation techniques) in treatment of PMS/PMDD. Steege and Blumenthal [1993] showed that women with severe premenstrual symptoms who underwent a 3-month program for either aerobic (n = 12) or strength training (n = 11) achieved relief. There is also evidence of the effectiveness of relaxation techniques. Goodale et al. [1990] divided 46 women randomly into relaxation, reading or painting groups and, after 5 months observed significantly greater symptom improvement in the relaxation group. There have been no controlled studies of the effectiveness of dietary changes for PMS; however, 64% of 658 women reported, in a survey on their experiences with various PMS treatments, that a change in diet was the most helpful [Corney and Stanton, 1991].

The overview shows that various treatment approaches have been pursued, but that so far no comprehensive and scientifically evaluated program exists for the treatment of PMS and PMDD. Affected women report that they are dissatisfied with the available treatment options and their effectiveness [Kraemer and Kraemer, 1998]. The aim of the present work is to introduce a new treatment approach in which cognitive interventions and lifestyle changes were combined.

Treatment Guidelines

Therapy Format and Elements

The modularized treatment approach presented below was designed based on previous research results and includes elements of cognitive behavioral therapy and interventions for lifestyle changes. It is currently being evaluated in a randomized controlled trial for patients with severe PMS or PMDD [Kues et al., 2014].

Patients who undergo this treatment approach should have severe PMS or PMDD. Medical differential diagnoses such as endometriosis or polycystic ovary syndrome should be ruled out by the attending gynecologists before the start of treatment, since these often lead to PMS-like symptomatology, without PMS. If the symptomatology is not unique to the premenstrual phase due to a medical condition, medical treatments should be administered first. Then it can be tested in each case, whether individual components of the treatment program seem promising.

For diagnostics, in addition to a retrospective symptom screening, a symptom diary should be kept over 2 consecutive menstrual cycles [e.g., Ditzen et al., 2011; APA, 2013]. With regard to the therapeutic parameters, it must be decided whether the treatment of PMS/PMDD is primary, or whether the present treatment approach should be embedded in an ongoing therapy (e.g., for an anxiety disorder). Before the treatment program starts there should also be a detailed behavioral analysis, to establish the relevant priorities and therapeutic goals, based on the symptoms and their consequences.

The treatment program consists of 14 modules and begins with a psychoeducational introduction. Following that come 6 modules of cognitive interventions and 6 modules for lifestyle change. The last module is a summary of the content and has a section on relapse prevention. 1–2 sessions should be scheduled for each module. Given the individual nature of complaints, some modules can be considered optional, depending on the outcome of the diagnostics and behavioral analysis. Various exercises and homework assignments were designed for each module. These are particularly important so that the patients can work out the most relevant priorities and try them in their daily lives (table 1).

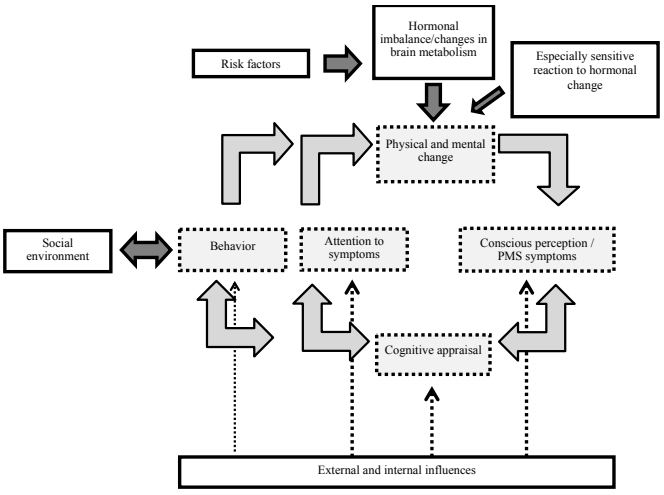

Fig. 1. Model explaining the impact of premenstrual changes.

Module 1: My PMS and I

The goal of the first module is for the patient to develop an understanding of her own symptomatology, through comprehensive psychoeducation about PMS. This understanding lays the foundation for further treatment. Identifying and classifying one's own symptoms is necessary in order to eventually achieve change.

At the beginning, the therapist works through with the patient what is meant by PMS, what symptoms it includes (physical vs. psychological) and how severe the patient's symptoms are. The difference between PMS and PMDD, following the diagnostic criteria, is also explained.

In the next step, the patient receives information about the origin of and risk factors for PMS. These include general biological factors such as hormonal changes during the menstrual cycle (e.g., distinction between the follicular phase [no PMS] and the luteal phase [PMS]) [Braendle, 1987], or the influence on PMS of life phases that are characterized by intense hormonal changes (menarche, postpartum phase, menopause) [e.g., Vichnin et al., 2006; Hassan et al., 2004]. Genetic factors (e.g., changes in estrogen receptors, changes in serotonin transport) are also discussed [Huo et al., 2007]. The patient receives an overview of risk factors, such as everyday stressors, genetic predispositions and social influences, that can promote PMS [Fontana and Palfai, 1994; Huo et al., 2007]. In collaboration between the therapist and the patient, individual origins and risk factors are then determined. Based on this, a general model of the disorder is worked out, with possible triggers, perpetuating factors and consequences, and applied to the patient's situation (fig. 1). Treatment options and the evidence to support them are presented and the patient's previous treatment experiences are ascertained and validated. This is important, because many patients have already unsuccessfully tried many treatments, which can have an adverse effect on their motivation to proceed with psychotherapy. An important section at the end of the module is the formulation of personal goals to promote motivation for therapy and to appropriately select the subsequent content for the patient.

Module 2: Thoughts – My Constant Companions

The aim of Module 2 is to acquaint the patient with the role of thoughts and their relationship to feelings and behaviors. At the beginning of this module, the patient is taught the so-called ABC Schema [Ellis, 1993]. This is done using general, non-PMS-specific everyday situations involving different thoughts, feelings and behaviors (e.g., by using imagination exercises). It is particularly important that the patient understand the connections among thoughts, feelings and behavior, so that she can apply them to her own daily life. Later in the module, the patient receives PMS-specific examples. Experience has shown that it is important for patients to allow enough time for the exercises, since the content of other modules connect to them later.

Example: PMS-specific ABC Model

A: A PMS sufferer perceives changes in her body (e.g., tension in the chest, fluid retention).

B: 'I don't feel well!'; 'Today I would like to just pull the blanket over my head!'

C: Social withdrawal, restlessness.

Module 3: How Do I Think during My PMS?

The aim of Module 3 is to teach the patient about the ways of thinking that occur during PMS. This is an important foundation upon which to work out the role of negative automatic thoughts in the development and maintenance of PMS. The first step is to use the 'Lemon Exercise' [see exercise instructions in, e.g., Kleinstäuber et al., 2012b], which illustrates the influence of thoughts on physical reactions. Subsequently, a scenario is described (e.g., a family disagreement), to explore with the patient possible thoughts and beliefs (e.g., 'I can't take it anymore!'; 'Does no one understand me?'; 'I always have to do everything myself!') and their consequences (anger, rage, disappointment, long arguments). It is important for the further course of therapy for the patient to recognize that these thoughts are usually automatic responses and therefore are often not deliberately controlled. Then the patient is taught how she can identify negative automatic though ts, for example by thorough self-questioning about a sensitive situation (e.g., 'What were you thinking in the situation?'; 'What were you afraid of?') or by re-imagining the situation in individual slices (the patient should imagine the situation as a film sequence, which she can put on 'pause' from time to time). The patient also learns how she can formulate her thoughts (for example, using a statement rather than a question; using the first-person form). Finally, the first individual negative PMS-related thoughts are considered, before this is continued as homework with a thought protocol.

Module 4: What Would I Advise a Friend to Do?

The aim of Module 4 is to teach the patient to analyze her negative automatic thoughts. Being able to analyze one's own thoughts

is a prerequisite for the patient to learn change her own thoughts in later modules. Using case studies, various techniques are taught (e.g., a pro/contra list, change of perspective or reality-testing of thoughts) [Leahy, 2007]. The patient learns how to apply on her own the individual techniques (acquired in Module 3). 1 to 2 preferred techniques for analysis are selected, with the patient and therapist working together. As a homework assignment, the patient is then supposed to analyze another example of her negative automatic thoughts, using the selected techniques.

Module 5: Why Does Nobody Take Me Seriously?

In Module 5, various prejudices about PMS are discussed and analyzed with the patient. There are many stubborn prejudices about PMS and other topics related to menstruation, and these create a breeding ground for negative attitudes to the subject, as well as those who suffer from it. At the beginning, the patient therefore receives information about the origin of prejudices about the (pre-) menstrual phase (e.g., the view of menstruation in the Bible or in the Middle Ages). As the module proceeds, it addresses the consequences that such prejudices may have for the patient: For one thing, she may confront prejudicial comments or attitudes from other people and/or be devalued by them. This, in turn, can have adverse effects upon the patients, such as social withdrawal. Secondly, those who suffer from PMS often have prejudices about it themselves. The result is that they stigmatize themselves, devalue their own behavior or their own symptoms and disparage themselves. This likewise strengthens and maintains stress. The patient must therefore learn that the prejudices can originate with others or with themselves, but in both cases, they increase the patient's suffering.

Using various examples, the patient is guided to analyze PMS-specific prejudices (those of others and their own).

Example: 'When a woman has PMS, you can't have a reasonable conversation with her!'

Where Does This Prejudice Come From?

This prejudice refers to the widespread assumption that women are less accommodating at that time, because of hormonal influences. The prejudice is based on outdated medical ideas, according to which women are labile and unpredictable due to their hormones. This has led to various assumptions, for example that you shouldn't take women with PMS seriously and that it's impossible to have a reasonable conversation with them.

What Is the Evidence against It?

The exact causes of PMS are not yet completely understood. It is known that in the second half of the cycle, the corpus luteum hormone, progesterone, is produced, while the release of estrogen declines. This hormonal change is a possible reason for psychological and physical symptoms. Definite scientific reasons for mood swings, however, do not yet exist. It must also be considered that every woman has quite different symptoms.

Finally, the patient determines what her own PMS myths are, and asks her friends about it (e.g., 'What do you think about women with PMS?'). These myths are addressed in the next therapy session and are dealt with using the techniques developed in Module 4. However, it is important to acknowledge that some of the myths, such as 'Women with PMS can have trouble concentrating!' because of their symptoms, may be applicable to some women. This must be considered by the therapist as therapy proceeds.

Module 6: Think Confidently! But How?

The goal of Module 6 is to develop helpful thoughts that can help to increase overall well-being in the premenstrual phase. The patient is first given examples of helpful thoughts and tips for formulating them (e.g., they should be believable, concrete, pertaining to everyday life). Using an example of a PMS situation, the module explains how a negative automatic thought can be analyzed (using techniques from Modules 4 and 5) and reformulated. Based on individual situations from the thought protocol (Module 3), the patient practices coming up with helpful thoughts. Often patients are initially skeptical and describe the helpful thoughts as 'artificial'. This view should be validated, and it is important to note the process of practicing in daily life. Then options are developed to easily remember the helpful thoughts in everyday life (e.g., placing a reminder in a prominent place, or an index card inscribed with the thought in one's purse). As homework, the patient practices the use of a helpful thought in daily life. The implementation is addressed in the next session, so that any necessary changes of the thought can be worked out.

Case Study

Ms. T. suffers from severe mood swings before her menstrual period. She is more irritable at this time of the month, and is more likely to get into quarrels with her friends. At such moments, she often feels abandoned by her friends, whom she likes and values greatly.

Negative thought: 'The others can never put up with me during my 'critical' days'.

Questioning the Thought:

– What evidence is there for the thought?

  It more often led to quarrels in our group of friends.

– What is the evidence against the thought?

  'I get along well with my friends and do a lot with them'.

  'My friends appreciate my sense of humor'.

  'Our friendship has been through so much that a few quarrels will not be a problem'.

After the self-questioning, tips are discussed to formulate an alternative thought, such as the importance of signal words (in the example: 'never') or the use of the first-person form.

Helpful Thought:

'I know that my friends like me, even if we sometimes have little squabbles'.

Module 7: Is Conflict Pre-programmed?

In Module 7, the patient learns to recognize and to change PMS-related problem behaviors in daily life. First, the patient receives psychoeducation about problematic behavior patterns such as avoidance, self-protection, excessive recourse to the health-care system or lack of communication skills. The module addresses the fact that many behavior patterns are helpful at first, but can become dysfunctional if too frequently or too intensively used. The patient is helped to figure out how long the behavior is functional and when it becomes dysfunctional (e.g., using 4-field tables). After that, the relationship to PMS is addressed, and the model of the disorder can be used. Case studies can illustrate the short - and long-term, positive and negative consequences of the problem behaviors.

Case Study of Over-Reliance (Abridged)

Ms. K. (age 24) has suffered from PMS for several years. On the critical days she generally feels very dejected and sad. Ms. K. said that she first addressed this problem 3 years ago with her gynecologist, who recommended the Pill. But Ms. K. discontinued it because of its side-effects. She also sought the advice of her general practitioner, who recommended St. John's Wort, which did not help either. So then she visited a complementary health-care practitioner, who recommended more herbal medicines. At the beginning, Ms. K. had the feeling that the products were helping, but now her mood swings are very strong again. Now Ms. K. often spends hours researching on the Internet and exchanging views with other sufferers. Ms. K. now wonders whether she should take antidepressants, because they helped a woman she met online.

Individual strategies for change are worked out based on 4-field tables, such as exercise and social contact instead of self-protection, appropriate search for information instead of excessive reliance, or expressing calmly one's needs and criticism instead of negative communication. The therapist, however, must take into account that a certain behavior on the part of the patient may not only be problematic. A reasonable amount of self-protection in the sense of stress reduction can help to relieve PMS. As homework, the patient thinks about how her problem behaviors could be changed.

Module 8: Stay Loose!

The goal of Module 8 is for the patient to grapple with stress and relaxation, and to learn to incorporate more relaxation in her life. This is of central importance, since stress can reinforce PMS. At the beginning, detailed information is conveyed about stress (e.g., 'What is stress?'; 'What are the effects of stress on the body?') and the 'stress traffic light' is introduced [cf. Kaluza, 2012]. The stress traffic light is then applied to PMS, making clear the reinforcing effect of stress on physical and psychological symptoms. It is important to note that premenstrual symptoms function both as stressors and as stress responses and can also be intensified by a stressor. Then the patient reflects on her own stressors and stress reactions.

The functionality of relaxation is discussed as a counterpole to stress in this module. The opposite effects of stress and relaxation can, for example, be explained with reference to the sympathetic and parasympathetic nervous systems. The patient is taught various relaxation techniques and the general parameters of relaxation, and given individual exercises (Progressive Muscle Relaxation according to Jacobson (PMR); relaxing body journeys). Relaxation methods that are found to be helpful should then be practiced and recorded daily. With reference to Module 7, however, it is important to tell the patient that stress can never be completely avoided. Relaxation techniques and other stress-reducing methods should therefore provide support to the patient in dealing with stressful situations, but should not thereby promote dysfunctional avoidance behavior and somatization.

Module 9: Stress, Ease Up!

To cope better with stress over the long term, the patient learns in Module 9 to what extent her own beliefs and her experience of stress are related. First the function of negative automatic thoughts is considered as a stress amplifier [according to Kaluza, 2012]. To do this, at first general examples are used (e.g., the boss asks you to perform a task quickly), before individual situations are considered. The patient creates an individual stress model, in which she identifies her typical stress amplifiers and their role in her experience of stress. In addition, the topic of faulty reasoning [as discussed by Hautzinger, 2009] is discussed, because this may also be a stress amplifier in PMS, by indirect influence on the symptoms. Then the patient's own faulty reasoning and stress amplifiers are analyzed, using the preferred techniques from Module 4.

Module 10: More Pleasure – More Joy!

This module aims to improve the patient's resistance to stress, because intense stress can aggravate premenstrual complaints. The focus is on improving the capacity for pleasure and the engagement in positive activities. At the beginning, general information is conveyed about pleasure. The rules for pleasure and the conditions for enjoyment, according to Lutz [2005], are taught and a classic pleasure exercise is demonstrated. As homework, further pleasure exercises are to be integrated into everyday life.

The patient receives a list of recommendations for positive activities. This is the basis for creating a concrete plan for positive daily activities. It is important to relate these positive activities to the PMS and to work out to what extent positive activities can affect not only one's mood, but also the entire symptomatology of PMS.

Module 11: Do Diet and Exercise Affect PMS?

Module 11 conveys information on diet and exercise and their relationship to PMS and the possible worsening of symptoms

[Steege and Blumenthal, 1993; Corney and Stanton, 1991]. In the first block of this module, the patient receives information about how certain foods can affect symptoms (e.g., caffeine, alcohol, food with high salt content) [Bhatia and Bhatia, 2002]. She is given the task of completing a food log for a week, which will be discussed in a later therapy session. Some of the functions of eating are also discussed (such as distraction, comfort or reward).

The second block of the module works on how exercise and PMS interact: A little exercise can make symptoms worse, and conversely, severe symptoms can lead to little exercise. Functions and benefits of exercise and specific positive effects of exercise on PMS are illustrated (e.g., mood improvement, reduction of physical symptoms, stress reduction). The meaning of exercise for the individual patient is discussed further, based on sample statements (e.g., exercise to me means relaxation; exercise to me means extra effort and stress). As homework, the patient receives a list of various sports and types of exercises and is instructed to choose activities that she would like to incorporate into her daily routine.

The entire module must consider whether the patient already has a healthy and balanced diet and sufficient exercise. If she does, the two subsequent modules are not required.

Module 12: Fighting against One's Weaker Self

Module 12 illustrates how exercise can be optimized in everyday life in order to promote general well-being. Because some patients report that they lack time and/or motivation, it is important to discuss first the short- and long-term positive consequences of exercise as well as the adverse effects of physical inactivity (e.g., by using the 4-field table). Various strategies are then developed to increase exercise (e.g., climbing stairs, getting off the bus one station early). Following up on this, the therapist and patient create an individual exercise plan with fixed time intervals. For homework, the patient keeps an exercise log for about a week and notes possible problems and solutions.

Module 13: What Is a Healthy Diet?

Module 13 again takes up the subject of diet in relation to PMS, this time in detail. It is important for the patient to learn to change her diet over the long term, to reduce the adverse effect of diet on PMS. First, the completed food log is used to derive a target plan. This makes it clear where the current pattern can be optimized. Individual dietary recommendations are presented to the patient, which at the same time make it clear that these do not constitute a diet as such [Bhatia and Bhatia, 2002]. Rather, certain foods should be identified that can have a positive or negative impact on PMS symptoms (e.g., consuming nutrients such as vitamin B-6, magnesium, potassium and calcium; avoiding excessive salt). For homework, the patient considers possible obstacles and solutions to implementation of the target plan.

Module 14: My Personal Plan for the Future

Module 14 concludes the treatment and aims to summarize the module content, to underline useful techniques learned and to create a plan for the future. This will assure the longest possible treatment outcome. Therefore, it is very important to motivate the patient to additional practice (e.g., the long-term effects of practice and working out individual practice strategies, as reminders for daily life). The patient develops a list of typical early warning signs, so as to be able counteract these in a timely manner. She then identifies the strategies that were particularly helpful to her during the treatment and to which she imagines she might have recourse when suffering from PMS. Other PMS-related patient goals for the future are also set. The patient should also think about which of the strategies she has learned could help her to achieve these goals. This provides further motivation and increases the likelihood that she will practice them in her everyday life. Finally, all the helpful strategies are compiled into a 'strategy chest'.

Case Vignette

Prehistory

Ms. K. (age 30) received the treatment program presented here as part of the 'Praemensis Program' (for details, see Kues et al. [2014]). The patient said that she had been under gynecological treatment for 3 years and had tried various hormonal therapies (e.g., the contraceptive pill, a coil), without success. Since she is a student and also has a job, it is hardly possible to avoid stressful phases. She and her partner have lived together for 2 years and, especially before menstruation, she noted that there have been 'unnecessary quarrels'.

Diagnostics

Ms. K. filled out the revised version of the DSM-IV-TR-based questionnaire for PMS of Ditzen et al. [2011], and kept a prospective diary for 2 menstrual cycles. The DSM-5 criteria for PMDD were met; there were no comorbid mental disorders.

Description of the Treatment

The patient benefited greatly from the psychoeducational elements. The information about her complaints and the answers to her specific questions (e.g., 'Can my stress be a trigger?') were a relief to her. When working on the cognitive modules, she reported that analyzing and questioning her own thoughts was new for her and that because of the change in perspective, 'counter-arguments and alternative thoughts came to mind'. Avoidance behavior was also critically discussed. The conclusion was that she should integrate sufficient rest periods in her daily life, while at the same time minimizing adverse consequences of social withdrawal. In addition, the patient learned various communication techniques to improve her relationship with her partner during the premenstrual phase. The most important issue for Ms. K. was coping with stress. She began to integrate PMR into her daily routine and learned, through pleasure exercises, to take more time to enjoy beautiful things. Exercise was of less importance for Ms. K., and since she was already actively engaged in sports, Module 12 was mostly omitted. The subject of diet was very relevant to Mrs. K., since she reported very unhealthy and irregular eating habits in stressful situations. Keeping a diet log and adhering to the dietary recommendations (e.g., reducing coffee consumption) was initially difficult. Under therapeutic guidance, she succeeded in meeting the individual targets, step by step. Finally, Ms. K. set up a 'strategy chest'.

Clinical Outcome

Overall, the therapy can be judged successful. During her premenstrual phases, Ms. K. filled out various outcome measures before and after the treatment. In the Questionnaire for Assessment of Level of Coping with Pain (Fragebogen zur Erfassung der Schmerzverarbeitung, FESV; [Geissner, 2001]), behavioral pain management improved from a 30 to 54 cumulative value for mental distraction, from 16 to 31 for countervailing activities and from 8 to 21 for rest and relaxation techniques. Also, the version of the Pain Disability Index reformulated for premenstrual symptoms (PDI [Tait et al., 1990]) showed a significant decline in impairment (total scores pre: 32, post: 14). In the questionnaire measuring patient satisfaction (ZUF-8; [Schmidt and Nübling, 2002]), the patient stated that she was satisfied with the program (mean = 3.5; range of the questionnaire: 1–5). The symptom diary to the end of treatment showed that Ms. K. no longer met the DSM-5 criteria for PMDD. She reported at the end of therapy that it was very important for her to 'feel understood', 'to learn a lot of new things', and that her complaints were addressed 'in many ways'.

Discussion and Outlook

The present work presented a modularized treatment program for women with PMS or PMDD, designed on the basis of earlier therapeutic approaches for treatment of premenstrual complaints. The program is structured and includes a wide range of cognitive elements as well as therapeutic content for lifestyle interventions. Some of the modules are optional.

Among the strengths of the treatment program is the large variety of topics, which allows an individual approach to dealing with complaints. PMS-specific case studies that resemble everyday life encourage the patient to learn the particular techniques and apply them to their own problems. Our previous therapeutic experiences with the program showed that the women were very satisfied with the comprehensive information provided. Furthermore, women who had already tried numerous treatments reported that the program taught them new strategies to deal with their complaints. These aspects were also illustrated by the case vignette. We have observed similar positive therapeutic histories in therapeutic practice. The treatment manual is currently being evaluated for efficacy [Kues et al., 2014], and further work in this area will be published in the near future.

In addition to its strengths and hitherto positive therapeutic histories, however, it is important to acknowledge some important points before using the treatment program. Before starting treatment, it should be ensured that an adequate diagnosis has been made and that only women with clinically significant distress receive this treatment (at least meeting the ACOG [2000] criteria). Regarding the diagnostic procedure it must be considered that there are currently only a few diagnostic tools that enable a clear and empirically validated distinction between mild premenstrual complaints that do not require treatment and severe PMS or PMDD [Bentz et al., 2012]. For the German-speaking countries, there are 2 retrospective symptom screening instruments (Screening Instrument for Premenstrual Symptoms [Screening-Instrument für Prämenstruelle Symptome] [Bentz et al., 2012], and the DSM-IV-TR-based questionnaire for premenstrual syndrome [Ditzen et al., 2011]), which should be used in combination with a symptom diary. Our past experience shows that this combination has proven worthwhile. Patients report that they particularly find keeping a symptom diary to be helpful and instructive, because it gives them an overview of their own symptoms and their severity. In the diagnostics, care should be taken to avoid pathologizing normal cycle-related changes. However if there are severe complaints, the specific diagnosis can be quite a relief to the patient. Thus the introduction of the PMDD diagnosis in DSM-5 was also justified, in that it was necessary, on the one hand, to provide women with severe symptoms with a diagnosis and thus pave the way for treatment, while on the other hand, women who scarcely suffer at all from their premenstrual changes should not be unnecessarily stigmatized and pathologized [Wakefield, 2013].

Furthermore, the potential for side effects to psychotherapy should be borne in mind (e.g., greater tension or hopelessness) [Ladwig and Nestoriuc, 2014]. In carrying out the present treatment program, it would be conceivable, for example, that the improvement of problems in the style of communication in the intimate relationship or the work with the modules on diet and exercise could aggravate critical eating behavior. With regard to PMS or PMDD, it should also be considered that patients differ greatly in their symptomatology and the therapist therefore should take into account individual needs, despite the benefits of structured treatment programs [Knafla and Ehlert, 2001]. Another important aspect is the therapeutic consideration of negative experiences resulting from patients' previous failed treatment attempts [Halbreich et al., 2003; Kraemer and Kraemer, 1998], which often makes women with PMS or PMDD feel stigmatized and not taken seriously [Chrisler and Caplan, 2002]. For the therapist, this means that the suffering of the women concerned should not be underestimated; in the therapeutic context they should feel understood and taken seriously. In our experience, this can be ensured mainly through a high degree of validation as well as the use of case studies. It is also important that the therapist be knowledgeable about PMS/PMDD, so as to be able to give the patient satisfactory answers about ambiguities of symptomatology as well as to derive explanatory models.

In summary, it can be said that the treatment manual combines cognitive behavioral interventions with changes in lifestyle and can be individually tailored to meet patients' needs. The case vignette showed, in the example of a single case, that a patient benefitted from the treatment program and was very satisfied with its content. This treatment manual offers the practitioner the ability to embed the topic of premenstrual complaints in existing psychotherapy for possible comorbid disorders and thus afford the patients a comprehensive treatment.

Note

The individual modules, worksheets and other documentation of the treatment manual can be obtained from Dr. Cornelia Weise (weise@uni-marburg.de).

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