Complementary and alternative therapies for premenstrual syndrome: an exploratory study

*Hadayat A. Amasha[1], Ragaa Ali Mohamed[2], Haylaa Nageeb[3]

[1]*Maternity, Gynecological and Obstetrical Nursing, Faculty of Nursing/ Port-said University, Egypt*

[2]*Maternal & Newborn Health Nursing, Faculty of Nursing / Cairo University, Egypt*

[3] *Secondary technical nursing school, Dakahlia, Egypt*

Abstract

Background: Data related to the use of complementary and alternative therapies (CAT) for premenstrual syndrome in the communities is scarce. There is very limited information about complementary and alternative therapies practice among nursing students in Dakhalia governorate, Egypt.

Methods: A descriptive exploratory design was conducted in Dakahlia governorate, Egypt, on all secondary technical nursing schools students to explore the use of complementary and alternative therapies to relieve premenstrual syndrome.

A sample of 1120 students was included. A structured self-administered questionnaire (Arabic language) was used for data collection in the period of March to May, 2014.

Results: Most of the study subjects (87.0%) used CAT to minimize symptoms of premenstrual syndrome. Herbal therapy was the most commonly used as CAT followed by hydrotherapy, changing food types, massage and exercise.

Conclusion: The majority of girls used CAT to minimize PMS. The greater part of students used herbal therapy to relieve their symptoms, followed by hydrotherapy; food Change; massage; and exercise.

*__Corresponding author:__ *Email: drtotoa67@yahoo.com*

Introduction

Premenstrual syndrome (PMS) can be defined as a recurrent disorder that occurs every month in the luteal phase of the menstrual cycle, and remits with the onset of menstruation. It is characterized by a complex set of symptoms, which include physical, psychological and behavioral changes of varying severity. This can interfere with the lives of girls, as well as their interpersonal relationships [(1)].

The National Center for Complementary and Alternative Medicine (NCCAM) stated that, "complementary and alternative medicine is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine". NCCAM categories and examples of these types of therapies have been reported in the literature. Some of these procedures have been widely used and researched, whereas others are relatively unknown in the United States [(2)].

A systematic review was designed by Stevinson, and Ernst to determine whether the use of such therapies was supported by evidence of effectiveness from rigorous clinical trials. Twenty seven randomized controlled trials investigated various complementary and alternative therapies in women with PMS. These included herbal medicine, homeopathy ,dietary supplements , relaxation , massage ,

reflexology ,chiropractic , and bio-feedback . Despite some positive findings, the evidence was not compelling for any of these therapies, due to various methodological limitations. So, no complementary and alternative therapies can be recommended as a definitive treatment for PMS [3].

On the other hand, Ghanbari et al conducted a quasi- experimental study to evaluate the effect of aerobic exercises on the severity of PMS in Tehran University of Medical Sciences on 91 volunteer women aged 16-48 years old, with regular menstrual cycle, and without any medical disease, reported that three months of regular aerobic exercises effectively reduced the severity of PMS symptoms [4]. Many girls seek alternative therapies including: herbs, botanical dietary supplements, vitamins and minerals because conventional therapies don't help them, or because they want to avoid the risk of side-effects of hormonal or psychotropic drugs [5, 6].

Maternity nurses play a crucial role as educators and counsellors, especially regarding PMS management.

The aim of this study was to explore complementary and alternative therapies used by nursing technical school students to minimize PMS in Dakhalia, Egypt.

Material and Methods:

Research design:

An exploratory design was used to meet the purpose of the study. The study was conducted at all secondary technical nursing schools (fifteen schools), which are present in Dakahlia governorate, Egypt.

Participants:

All student girls at the fifteen schools with an age range from 14 – 18 years; a pilot study was carried out on 10% of the total sample (124). The researchers selected 10.0% from each school and did not include them in the actual study sample. The total number of students who had PMS was 822 girls. Students who got married and/or those who suffered from any systemic health problems were excluded.

Data collection:

A self-administered structured questionnaire was used as a tool for data collection. The questionnaire was developed by the researchers (in Arabic language) after review of the relevant literature and Modified Version of Menstrual Distress Questionnaire (MMDQ), designed by Moss [7] and modified by the researchers and used to assess symptoms that participants experienced in the week before their period.

Content validity for the questionnaire was tested by a group of experts (five experts in nursing academic field). The questionnaire was modified according to the experts' comments and recommendations.

Ethical Consideration:

Ethical approval to conduct the study was obtained from the Faculty of Nursing, Port-Said University. Official permission was obtained from the headmaster of each institute included in the study. Oral consents were obtained from participants after explanation of the purpose of the study.

Data analysis:

The statistical analyses were performed using Statistical Package for Social Sciences (SPSS) version 20.0. Qualitative data were described using number and percent. Quantitative data were described using minimum and maximum, mean and standard deviation. Level of significance was at 5.0%. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables.

Results:

Most of the studied students' (87.0%) used complementary and alternative therapies to minimize premenstrual syndrome. The greater part of the students (97.5%) reported that the herbal therapy was the main CAT they used

to minimize PMS followed by hydrotherapy (75.5%), food change (60.1%), massage (49.7%), exercise (43%), fixed oils (5.7%), prayers (4.2%), aromatherapy (3.1%), and others (rest / sleep and hot apostasy) (0.6%).

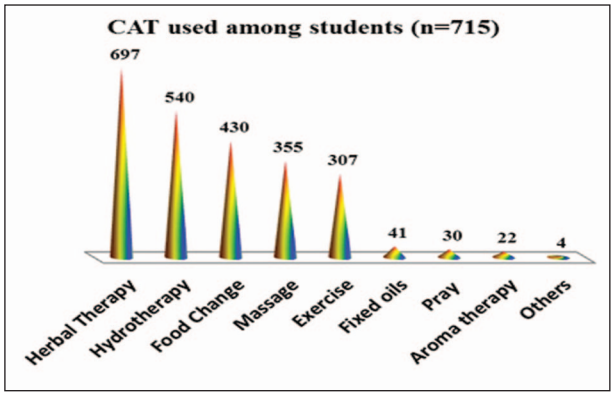

Fig 1. The different CAT used by students to reduce PMS symptoms (n = 715)

Table1. Common types of CAT used by nursing students to reduce PMS symptoms (n= 715)

Types of CAT No.	Nursing students =715	
	%	
Herbal Therapy*	697	97.5
Aniseed	475	68.1
Tea	218	31.3
Cinnamon	182	26.1
Fenugreek	299	43.0
Orchid	63	9.1
Peppermint	370	53.1
Treatment using Fixed oils*	**41**	**5.7**
Corn oil	8	19.5
Olive oil	28	68.3
Sesame oil	3	7.3
Hydrotherapy*	**540**	**75.5**
Warm bath	479	88.7
Warm water on lower abdomen/ lower back	102	18.9
Cold bath	26	4.8
Food change*	430	60.1
Low intake of food and beverages containing caffeine, cola, and chocolate	311	72.3
Low intake of sweets	157	36.5
Limitation of salty food	179	41.6
Green leafy vegetables and foods containing vitamin B6	236	54.9
Exercise*	**367**	**51.2**
Abdominal exercises	76	20.7
Back exercises	26	7.1
Breathing exercises	58	15.8
Walking exercises	218	59.4
Massage*	**355**	**49.6**
Abdominal massage	316	89.0
Back massage	71	20.0

*More than one answer

Table 2. Time during which students used a CAT, reasons and its effects on PMS relief (n= 715).

Items	**Nursing students (715)**	
	No.	%
Time of use (n = 715)		
Pre-menstruation	16	2.2
During menstruation	450	63.0
Pre & during menstruation together	249	34.8
Reason for using *		
Available at home	330	46.2
Cheap	47	6.6
Better than pharmacological	316	44.2
Effective	333	46.6
No side effects	293	41.0
Effect of its use*		
Overall improvement	661	92.4
No improvement	54	7.6

*More than one answer

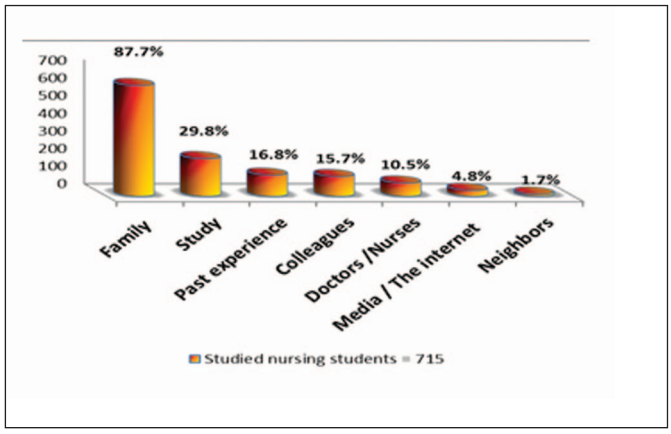

Fig 2. Sources of knowledge for the use of CAT

Table 3. Degree of PMS and types of CAT (n = 715)

Types of CAT	Degree of PMS				X^2	MCP
	Mild PMS (n = 386)	Moderate PMS (n = 250)	Strong PMS (n =77)	Severe PMS (n = 2)		
	%	%	%	%		
Herbal Therapy	97.4	97.6	98.7	50.0	7.322	0.074
Fixed oil	3.5	6.0	10.1	0.0	7.443*	0.049*
Hydrotherapy	74.6	76.0	79.2	50.0	1.851	0.575
Food Change	59.3	60.0	64.9	50.0	1.192	0.800
Exercise	39.9	43.6	57.1	0.0	8.879*	0.023*
Massage	47.7	51.2	54.5	50.0	1.826	0.684

#others (rest/sleep and hot apostasy) X^2: value for Chi square MC: Monte Carlo test *: Statistically significant at $p \leq 0.05$

Discussion:

The aim of this study was to explore complementary and alternative therapies used by nursing technical school students to minimize PMS. In this study, the prevalence of PMS was 73.4% as measured by (MMDQ). This is in agreement with Seedhom et al., who reported that the prevalence of PMS was 80.2% among 253 unmarried female students at El-Minia University [8]. Also, the results of the current study is in agreement with Mohamed et al., who found that the prevalence of premenstrual syndrome among females in the child bearing period in Alganaen Village (Suez Canal), Egypt, was 80.8% [9]. Moreover, the current results are close to the findings of Ibrahim et al. who reported that 80.0% of students suffer from PMS at the Faculty of Nursing, Ain Shams University [10].

Most of the students (87.0%) who participated in the current study, and were suffering from PMS, used complementary and alternative therapy to minimize premenstrual syndrome. The same findings were reported by Yassin, who stated that more than three quarters of the study subjects had experienced PMS; of these, 72.7% of them used herbal remedy for treatment of PMS [11].

The current study finding is not in line with those reported by Ibrahim et al. who indicated that the most previous methods used to relieve PMS were analgesic drugs with music, antispasmodics with light therapy, and light therapy with calcium (28.1%, 21.3%, & 19.2%) respectively [10].

In the present study, the majority of students used herbal therapy (97.5%) to minimize premenstrual syndrome symptoms. The most common herbs used were: aniseed (68.1%), peppermint (53.1%), and fenugreek (43.0%). According to Howland, herbal remedies are one of the most prominent forms of complementary and alternative treatment used in the treatment of depression and anxiety, as well as sleep disorders [12].

Other workers reported that fenugreek was the most common herbs used to manage menstrual disorders followed by peppermint and aniseed [11, 13].

Das stated that, systemic symptoms of dysmenorrhea (fatigue, headache, nausea, vomiting, lack of energy) improved in the fenugreek seed group ($p<0.05$). No side effects were reported in the fenugreek group. Also, due to its estrogen-like properties, fenugreek helps to lessen the effect of hot flushes, mood fluctuations which are common symptoms of PMS [14].

In the present study, the results showed that 4.3% of students used ginger to minimize PMS. Khayat et al. evaluated the effecst of ginger on the severity of symptoms of PMS. They reported that, ginger was effective in reducing the severity of the physical and behavioral symptoms of PMS and they recommended its use as treatment for PMS [15].

Studies are very scanty in this field. Further studies should be conducted to determine the efficacy of different types of herbal therapy on PMS.

Conclusions:

The majority of girls used CAT to minimize PMS. The majority of students used herbal therapy to relieve their symptoms, followed by hydrotherapy; food Change; massage; exercise; fixed oils; and aromatherapy. The main sources of the girls' information about CATs were: their family.

References:

1. Shabnam M. Non pharmacological treatment of premenstrual syndrome. *African Journal of Midwifery and Women's Health.* 2011; 5:148-152.

2. National Center for Complementary and Alternative Medicine (NCCAM), what is complementary and alternative medicine? What is CAM? 2012: Available at:http://nccam.nih.gov/health/.

3. Stevinson C, Ernst E. Complementary/alternative therapies for premenstrual syndrome: a systematic review of randomized controlled trials. *Am J Obstet Gynecol.* 2001; 185:227-35.

4. Ghanbari Z, Manshavi F, Jafarabadi M. The effect of three months regular aerobic exercise on premenstrual syndrome. *Journal of Family and Reproductive Health.* 2008; 2: 167-171.

5. Webster D, Lua J, Chenb J, Wang Z. Activation of the μ_opiate receptor by vitexagnus castus methanol extract: Implication for its use in PMS. *Journal of Ethanopharmacology.* 2006; 106:216-221.

6. Kimberly BL , Lori BH. Complementary and alternative medication for women's health issues. *Nutrition in Clinical Practice*. 19, 2009; 24:589-609.

7. Moos R H. The development of a menstrual distress questionnaire. *Psychosomatic Medicine.* 1968; 30: 853-867.

8. Seedhom A, Mohammed E, Mahfouz E. Life style factors associated with premenstrual syndrome among El-Minia University students, Egypt. Hindawi Publishing Corporation *ISRN Public Health.* 2013; ID 617123: p. 6.

9. Mohamed EH, Youssef IM, Ahmed AB,

Hamied AS. Prevalence and factors affecting premenstrual syndrome in Alganaen Village Suez Governorate. *Med. J. Cairo Univ*. 2013; 81:25-28.

10. Ibrahim RM, Soliman SM, Mahmoud HM. Effect of vitexagnuscastus (VAC) on premenstrual syndrome among nursing students. *Journal of American Science*. 2012; 8: 144-153.

11. Yassin SH. Herbal remedy used by rural adolescent girls with menstrual disorders. *Journal of American Science.* 2012; 8:467-473.

12. Howland RH. Herbal therapies. *Journal of Psychosocial Nursing and Mental Health Services*; 2005; 43:16-9.

13. El Gazar W T. Uses of complementary and alternative therapy in management of menstrual disorders among adolescent girls in an Egyptian Village [Master thesis] obstetrics and gynecologic Nursing. Alexandria University; 2009.

14. Das S. Optimization of ultrasound – assisted extraction of total flavonoids and anti oxidation properties from trigonellafoenum-graecum seeds with response surface methodology. *IJPSR.* 2013; 4: 4308-4318.

15. Khayat S, Kheirkhah M, Moghadam Z, Fanae H, Kasaeian A, Javadimehr M. Effect of treatment with ginger on the severity of premenstrual syndrome symptoms. Hindawi Publishing Corporation. *ISRN Obstetrics and Gynecology.* 2014; Article ID 792708.