A study about menstrual disturbances among Syrian Private University students.

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A study about menstrual disturbances among Syrian Private University students.

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Abstract:

Introduction

The menstrual cycle is a monthly series of changes a woman’s body goes through to prepare for the possibility of pregnancy. Disturbances of menstrual cycle varies and among those are the following. Premenstrual syndrome: Is a group of negative mood or physical symptoms that occur after ovulation and recede in the early phase of the menstrual cycle. Menorrhea is one of the most common female complaints. In half of the cases, the cause is unknown and may be a sign of a serious problem. Oligomenorrhea: Menstrual bleeding that is less than normal, about less than 80ml, and that lasts less than 2 days. Polycystic Ovary Syndrome: Women usually suffer from obesity, acne, and masculine features - the voice becomes deep, breasts decrease in size, and excess body hair appears. Dysmenorrhea: menstrual-related pain or cramping in the lower abdomen, is one of the most common women's problems

Materials and Methods

The data related to this study was collected using paper questionnaires. These forms were designed by the student in charge of the research under the supervision of the professor responsible for the thesis

This data from the paper questionnaires was entered into a SPSS file version 25 to be analyzed and the results of this study found. Where the descriptive analysis (frequencies and percentages) was found for all variables in the study, and the inferential analysis included the study of the existence of relationships and correlations between many of the studied variables using Chi-square tests and One way-ANOVA.

Results

The sample in our study consisted of 315 female students from various faculties at the Syrian Private University. The largest number of female students who answered this questionnaire were female students of the Faculty of Human Medicine, as their number reached 131 female students, or 42%. Female students of the Faculty of Pharmacy came in second place, with a total of Their number is 57 students at a rate of 18%, while the students of the College of Dentistry reached 30
students at a rate of 10%. The rest of the students were distributed among the rest of the colleges between the College of Informatics Engineering, Petroleum Engineering and Business Administration, where their number reached 49, 9, 39 students, at a rate of 16% and 3%, and 12%, respectively. When examining menstrual disorders that occurred among female students who suffer from other diseases such as thyroid diseases, we found that two female students had amenorrhea with a rate of 18%, and polycystic ovary syndrome in two female students also with the same percentage, and the menstrual cycle was regular for 4 female students with a rate of 36%, and there was a female student Only one had heavy menorrhagia with a rate of 9%, and two students suffered from a lack of menorrhagia with a rate of 18%. As for the female students who suffered from autoimmune diseases, 4 female students had a regular cycle with a rate of 67%, and only two female students had heavy periods with a rate of 33%.

As for the female students who suffered from secondary amenorrhea with a rate of 33%, and 9 female students also had regular cycles. As for the rest of the menstrual disorders, 3 female students suffered from each menstrual disorder, with a rate of 11% for each.

Conclusion
Menstrual problems are common in our societies but studies that cover these disturbances are very rare. Further studies are needed in order to identify the predisposing factors and finding proper treatment.

Introduction:

The menstrual cycle is a monthly series of changes a woman's body goes through to prepare for the possibility of pregnancy. Each month, the ovary releases one egg. This process is known as ovulation. At the same time, hormonal changes prepare the uterus for pregnancy. If ovulation occurs and the egg is not fertilized, the lining of the uterus that has formed comes out through the vagina and this is the menstrual period.1

Premenstrual syndrome:
Is a group of negative mood or physical symptoms that occur after ovulation and recede in the early phase of the menstrual cycle. For its diagnosis, it is required that there be at least 7 symptoms-free days in the month, and that the symptoms have an impact on the woman’s daily life and activities, and that the same symptoms are recorded for three cycles.

Assessment of menstrual flow:
Menorrhea is one of the most common female complaints. In half of the cases, the cause is unknown and may be a sign of a serious problem4.
Normal menstrual (or menstruation) blood loss is about 30-40 milliliters or 2-3 tablespoons over a period of 4-5 days, menorrhagia is the loss of more than 80 milliliters of blood in one menstrual cycle, or Loss of twice the normal amount. The blood flow continues in this case for more than seven days, which prompts the woman to change the sanitary pad or tampon every two hours or more. A woman may suffer from large blood clots, and she may also suffer from anemia as a result of blood loss and its volume being greatly affected.
Oligomenorrhea: Menstrual bleeding that is less than normal, about less than 80ml, and that lasts less than 2 days.

Polycystic Ovary Syndrome: Women usually suffer from obesity, acne, and masculine features - the voice becomes deep, breasts decrease in size, and excess body hair appears.
The percentage of women with PCOS ranges from 5-10%. This syndrome is the most common cause of infertility in the United States. Secondary amenorrhea refers to the absence of three or more menstrual cycles in a row in a woman who was menstruating before, after a pregnancy has been excluded.

**Dysmenorrhea:**
Dysmenorrhea, menstrual-related pain or cramping in the lower abdomen, is one of the most common women's problems. It is of two types:
1) **Primary:**
It begins 2-3 years after menstruation and peaks between the ages of 15-25 and decreases with age and after childbirth. It is a spasm in the lower abdomen that starts within 24 hours before the menstrual cycle and may spread to the back and the medial face of the thighs and can be accompanied by vomiting and diarrhea and in 25% of females these symptoms are intolerable.
2) **Secondary:**
It usually does not start before the age of 25, and the cause is often endometriosis, or DIC. The pain here starts before menstruation and peaks at the end of menstruation and takes 2-3 days to stop.

**Methods:**

**Study tools:**

The data related to this study was collected using paper questionnaires. These forms were designed by the student in charge of the research under the supervision of the professor responsible for the thesis. Approvals were acquired from the Deanship of the University.

**Statistical analysis:**

This data from the paper questionnaires was entered into a SPSS file version 25 to be analyzed and the results of this study found. Where the descriptive analysis (frequencies and percentages) was found for all variables in the study, and the inferential analysis included the study of the existence of relationships and correlations between many of the studied variables using Chi-square tests and One way-ANOVA.

**Results:**

1. **Duration of menstruation:**
The length of the menstrual cycle, which is the period between the first day of menstruation until the first day of the next menstruation, was less than 21 days for 26 female students at a rate of 8%, and between 21-35 days for the largest number of female students, amounting to 257 female students at a rate of 82%, while 32 female student, so this period was more than 35 days, at a rate of 10%.
The number of menstrual days for these female students was less than 3 days for 20 female students (6%), between 3-7 days for 253 female students (80%), and longer than 7 days for 42 female students (13%).

2. **Flow disturbances:**
   Menstruation repeats once every less than 21 days, with a rate of 7%, and 27 female students suffered from a lack of menstrual blood with a rate of 9%. 27 female students suffered from menorrhagia, which was defined as a menstrual period of more than 7 days and/or menstrual blood loss of more than 800 ml, which means more than 5 sanitary napkins per day, with a percentage of 9% of the female students, while the largest number of female students is 225 female students Their menstrual cycle was regular by 71%.

3. **Dysmenorrhea:**
   We found that it was absent in 14 students at a rate of 4%, and mild, meaning that it does not prevent daily activity and does not need painkillers among 104 students, at a rate of 33%, and moderate intensity, meaning that it prevents daily activity and needs painkillers and is forced to be absent from work among 152 students at a rate of 48%, while the rest of the students The number of them is 45 students, so the degree of difficulty was severe, meaning that it greatly affected the daily activity, and painkillers did not help, and there were accompanying symptoms such as fatigue, headache, and nausea, in 14% of the students.

4. **Prenomenstrual Syndrome:**
   Present in 244 female students with a rate of 77%, and absent with 71 female students with a rate of 23%. Of the 112 female students affected by this syndrome, this syndrome affected them in terms of activity and having to take medication by 36%. As for 132 female students, this syndrome did not affect them by 42%. 96 female students seek medical advice at a rate of 30%, while the remaining 219 students did not seek medical advice for their symptoms at a rate of 70%.

5. **The relationship between dysmenorrhea and the number of menstrual days:**
   By studying the relationship between the severity of dysmenorrhea and the number of menstrual days, we found a statistically significant relationship between these two variables, as it was found that the largest percentage of female students had varying degrees of dysmenorrhea when the number of menstrual days ranged from 3-7 days, as it was 85% of the female students. They had a mild degree of dysmenorrhea when the number of menstrual days ranged between 3-7 days, 81% of them had a medium degree of dysmenorrhea, and thus the P value was 0.0011, which indicates a relationship between the number of menstrual days and the severity of dysmenorrhea.

6. **The relationship between physical activity and the severity of dysmenorrhea:**
   Also, by studying the relationship between the severity of dysmenorrhea and the physical activity of female students, we found a statistically significant relationship between these two variables, as the percentage of female students who sit a lot and their degree of dysmenorrhea was an average of 58%, compared to 7% for female athletes, and 36% for
active female students. P value 0.0077, which indicates a relationship between physical activity and the severity of dysmenorrhea.

7. **The relation between BMI and the type of menstrual disorder:**
And by studying the relationship between the pattern of menstrual cycle disorder and the body mass index, a relationship of significant statistical significance was found. The P value of 0.0003 indicates that there is a statistical relationship between these two variables.

**Discussion:**

- The timing of the onset of menstruation (menstruation) is specific to the individual, within a wide range of normal life, as the mean age at menarche varies from one population to another and is known to be a sensitive indicator of various characteristics including nutritional status, geographic location, environmental conditions, and the magnitude of social and economic inequalities. In the community, where menstruation tends to occur earlier in life as living standards in the community improve, for example adequate nutrition and improved health care.

- The age at which menstruation began for the largest number of female participants was between 12-13 years, and this result was consistent in our study with the study conducted in Egypt, where the average age of menstruation in their study was 12.1 years with a standard deviation of 1.6 years, as their age range was from 11-16 years, which is similar to the age range in our study.

- In Western European countries, the average age at menarche appears to have decreased over the past 150 years from more than 16 years to less than 14 years. In the United Kingdom, girls enter puberty around the age of 10 with an average age at menarche of 12.9 years. In Italy, the mean age at menarche was estimated to be 12.4 ± 1.3 years.

- North American adolescent girls also show trends toward early menarche with the average age for black American girls ranging from 12.06 to 12.16 years and white American girls ranging in age from 12.55 to 12.88 years with 90% of teenage girls having menstruated by 13.75 years.

- Early menarche combined with risky sexual behavior in the early teenage years may lead to transmission of sexually transmitted diseases, unwanted pregnancy and its dangerous illegal termination as well as teenage motherhood; All of this negatively affects the reproductive health of adolescent girls.

- Our study indicated that the length of the menstrual cycle lasted 21-35 days for the largest percentage of 82% of female students, while menstruation lasted for 80% of female students from 3-7 days. Between 21 and 35 days in 237 female students (83.7%) and menstruation lasted for 3-7 days in 248 female participants (87.6%).

- Our study showed that 225 female participants had regular menstrual periods at a rate of 71%, while 90 female participants, or 27%, indicated irregularity and disturbances in their menstrual cycle, but they did not mention whether this disorder occurred in the first year only or continued for what After the first year of menstruation, in contrast to the
Egyptian study, which indicated that 207 female participants (73.1%) had regular menstrual periods since menstruation, and 54 (19.1%) reported irregular menstrual periods except during the first 6-12 months after menstruation While only 22 (7.8%) continued to have irregular periods after the first year of menstruating

- 301 female students indicated in our study that they suffer from dysmenorrhea, with a rate of 96%, and among these female students, 104 female students answered that their dysmenorrhea was mild, with a rate of 33%, and 152 female students answered that their dysmenorrhea was moderate, with a rate of 48%, while the rest of the 45 female students were They have severe dysmenorrhea at a rate of 14%, and the percentages in our study were close to the rates indicated by the Egyptian study, as it found that 185 female students (65.4%) reported suffering from dysmenorrhea, and among these, 79 girls (27.9%) classified their pain as Mild, 66 girls (23.3%) classified it as moderate, and 40 girls (14.1%) classified it as severe.

- Our study did not show a relationship between a high average body mass index and the presence of dysmenorrhea among the participating female students (P = 0.122). This is in agreement with Andresh and Milsom, and Ananda Lakshmi et al. Also, no statistically significant association was shown between physical activity and dysmenorrhea (p = 0.40), in contrast to our study which found a statistically significant association between both physical activity and dysmenorrhea among female participants (p = 0.0003), which agrees with Ananda Lakshmi et al. for the Egyptian study and disagrees with the results of our study.

- Of the 96 female students seeking medical advice, 30% related to menstrual problems. In the Egyptian study, 32 female students (11.3%) reported that they consulted a doctor, pharmacist, mother, sister, or friend regarding menstrual problems.

**Ethical approval and consent to participate**

This study was approved by the Institutional Review Board (IRB) at Syrian Private University. Written consent was obtained from all participants. Participation in the study was voluntary and participants were assured that there would be no victimization of anyone who did not want to participate or who decided to withdraw after giving consent.

**Consent for publication:**

Not applicable.

**Availability of data and materials:**

All data related to this paper’s conclusion are available and stored by the authors. All data are available from the corresponding author on reasonable request.

**Competing interests:**
None of the authors have any competing interests. The authors alone are responsible for the content and writing of the article. No conflict of interest is declared.

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**References:**


