



**ORIGINAL RESEARCH PAPER**

**Medicine**

**EXPERIENCE OF MENSTRUAL IRREGULARITIES IN A RURAL AREA OF KEDAH STATE, MALAYSIA**

**KEY WORDS:** Menstrual Irregularities

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**ABSTRACT**

Menstrual irregularities are common among adolescents and reproductive-aged women. The variability in menstrual cycle characteristics and menstrual disorders are frequent. The main aim of this study was to assess the experience of menstrual irregularity in a rural area of Kedah State, Malaysia. This cross-sectional study was conducted in a rural area of Kedah state, Malaysia. A total of 53 samples were included in the study. A 9-item questionnaire with the demographic variables was administered to assess the menstrual irregularity in each female. Data analysis was done by using SPSS software. Normal menstrual interval of 21 to 35 days was seen in 86.8% of the respondents whereas 13.2% showed more than 35 days' interval denoting oligomenorrhea. Hypomenorrhea was seen in 5.7% of the respondents and 1.9% showed menorrhagia. Among the respondents, 2% experienced dysmenorrhea and 3.8% stated about spotting. To conclude, appropriate counseling should be instituted in order to address reproductive needs to prevent menstrual irregularities.

**INTRODUCTION:**

Menstrual cycle is a natural physiological anomaly that a woman's body undergoes each month during the reproductive period so as to possibly prepare the uterus for pregnancy. It signals that the hormones in the body are performing its actions well for the women to stay healthy. The onset of menstruation or menarche is the hallmark in a female's reproductive life. It normally occurs in adolescents between the age of 11 and 14 years with 20-80ml of blood loss lasting for 7 days or less with an average cycle length of 21 to 45 days<sup>1</sup>. It has been documented that a considerable female population of reproductive age experience menstruation-related health issues<sup>2,3,4</sup>. Menstrual irregularities pertains to any alterations in the amount or duration of bleeding in normal menstrual cycle and it includes menorrhagia (menstruation >7 days), hypomenorrhea (menstruation <3 days), polymenorrhea (menstrual interval <21 days), oligomenorrhea (menstrual interval >35 days), dysmenorrhea (severe abdominal pain and unable to carry out daily routine activities), metrorrhagia (spotting between menstrual cycle), and amenorrhea (menstrual interval >3 months)<sup>5,6,7</sup>. Menstrual issues not only carry an economic concern but also create a explosion from normal routine activities. The fundamental causes of menstrual irregularities are hormonal imbalance, polycystic ovarian syndrome (PCOS), infections, malignancy, trauma, obesity and some medications. The factors that affect menstruation are age, ethnicity, family history, smoking, stress, physical activity, and dietary habits<sup>8</sup>. Menstrual irregularities if left unattended leads to certain complications like acne, asthma, anaemia, osteoporosis, infertility migraine, anxiety, eating disorders and other mental health problems<sup>9,10</sup>. The prevalence of menstrual irregularities has been reported to be high in the Malaysian population<sup>9</sup>. Menstrual irregularities have an adverse impact on womans daily life by which their productivity is disrupted and the quality of life is affected. The main aim of this study was to determine the experience of menstrual irregularity in a rural area of Kedah State, Malaysia.

**METHODOLOGY:**

This study was conducted among females in a rural area of Kedah State, Malaysia in November and December 2018. A total of 53 females aged between 23 -58 years participated in this study.

**Study Design:** Cross sectional study

**Study Location:** This study was conducted in in a rural area of Kedah State, Malaysia

**Study Duration:** November and December 2018

**Sample size:** 53 females

**Sample size calculation:** All the females who were willing to participate in the study were selected

**Subjects & selection method:** Random sampling through community survey

**Inclusion Criteria:**

Married and unmarried females of 18 to 60 years of age

**Exclusion Criteria:**

- Females with major ailments like cardiovascular disease, diabetes mellitus, hypertension, anemia, psychiatric problems and endocrine disorders
- Females who are habituated to alcohol consumption, cigarette smoking, drug use
- Pregnant women
- Lactating mothers

**MATERIALS AND METHODS:**

This cross sectional study was conducted in a rural area of Kedah State, Malaysia. Hundred households were selected as community survey area. All the females who were willing to participate in the study were selected. Participants were briefed on the objective of the study through an information sheet and all of them consented to take part in the study. Anonymity and confidentiality was assured and emphasized. The participants were informed about their right to withdraw from the study at any time. A validated 9-item, multi choice, bilingual (English and Bahasa Malaya) questionnaire with closed ended questions was administered in the form of hard copies to all the participants to collect the data for assessing menstrual irregularities. The questionnaire included the demographic details such as current age, age of menarche, marital status, age of marriage, number of children, usage and type of contraception. Questions related to menstruation elucidated variations in menstrual patterns: duration, interval and regularity of the cycle, amount of blood flow, inter menstrual bleeding, pain with menstruation and family history. One researcher was on site

to assist the participants in completing the questionnaire. The time taken to complete the questionnaire was approximately 15–20 minutes. The participants were permitted to choose only one option for a question.

**Statistical analysis:** SPSS version 23 was used for data analysis. Family history, contraception used and experiences on menstruation were variables of interest in the study.

**RESULTS:**

**1. Background nature of the participants**

Total of 53 females were involved in this study with the mean age of 45.89 ±7.66 years, youngest one was 23 and the oldest one was 58. Majorities (96.2%) were married and 3.8% were unmarried females. Average age of menarche was 12.94 ±1.26 years, showing the youngest age of menarche at 10 years and oldest at 15 years of age. All the participants experienced their first menstruation (menarche) at 10 to 16 years of age. Regarding the number of children, highest percentage (30%) was seen in those who had 4 children, followed by 3 children (19%) and 5 children (17%). Those who did not have any children showed 7.5%.

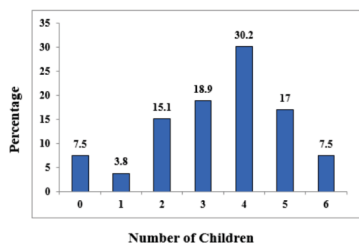


Figure 1: Background nature of participants

**2. Family History**

Regarding the family history of uterine disease, 89% did not have any family history but 9% stated that they had family history of fibroid, 1.9% for polycystic ovary syndrome and another 1.9% for hysterectomy.

**Table 1: Family history**

Family History	Frequency	Percent	Valid Percent	Cumulative Percent
Fibroid	5	9.4	9.4	9.4
Polycystic Ovary Syndrome	1	1.9	1.9	11.3
Hysterectomy	1	1.9	1.9	13.2
No History	46	86.8	86.8	100.0
<b>Total</b>	<b>53</b>	<b>100.0</b>	<b>100.0</b>	

**3. Contraception**

30% of the respondents used contraception. Oral pills were used by 62.5% of the respondents, 6% chose for injection method and the remaining 32% used other methods (traditional medicine) as preferred method for contraception.

**Table 2: Type of contraception used within 6 months**

Contraception Types	Responses		Percent Of Cases
	N	Percent	
Oral Pills	10	62.5%	62.5%
Injection	1	6.3%	6.3%
Others	5	31.3%	31.3%
<b>Total</b>	<b>16</b>	<b>100.0%</b>	<b>100.0%</b>

**4. Menstrual Experience**

**4.1. Duration of menstrual period**

Majority of respondents (92.5%) experienced normal menstrual period of 3 to 7 days. Hypomenorrhea was seen in 5.7% of the respondents and 1.9% showed menorrhagia.

**Table 3: Duration of menstrual period**

Duration of menstrual period	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 3 days (Hypomenorrhea)	3	5.7	5.7	5.7

3 to 7 days (Normal)	49	92.5	92.5	98.1
More than 7 days (Menorrhagia)	1	1.9	1.9	100.0
<b>Total</b>	<b>53</b>	<b>100.0</b>	<b>100.0</b>	

**4.2. Blood loss during menstruation and medication for heavy bleeding**

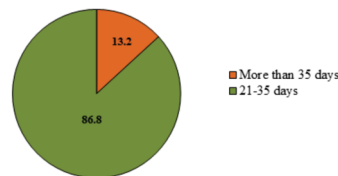
Although 96% showed normal blood loss during menstruation, 3.8% revealed their experience on menorrhagia and also stated that they were on medication for heavy menstruation.

**Table 4: Blood loss during menstruation and medication for heavy bleeding**

Blood loss during menstruation	Frequency	Percent	Valid Percent	Cumulative Percent
Menorrhagia	2	3.8	3.8	3.8
Normal	51	96.2	96.2	100.0
<b>Total</b>	<b>53</b>	<b>100.0</b>	<b>100.0</b>	

**4.3. Interval of menstrual cycle and medication used to regularize the interval**

Interval of 21 to 35 days was seen in 86.8% of the respondents whereas 13.2% showed more than 35 days' interval denoting oligomenorrhea. Except one respondent, the rest did not use any medication to regularize the interval.



**4.4. Experience on pain during menstruation**

Majority of the respondents (94%) experienced mild or moderate abdominal pain. However, 3.8% experienced severe abdominal pain but they did not use any medication to treat pain and also they were capable to do routine work. A few percentages (2%) experienced severe abdominal pain and they were treated with drug and they were not able to perform daily routine activities which denotes dysmenorrhea.

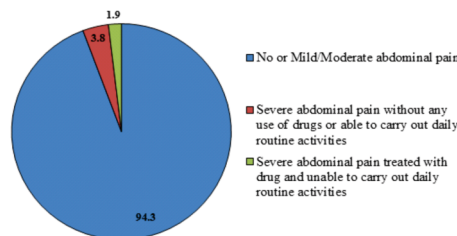


Figure 3: Experience on pain during menstruation

**4.5. Intermenstrual bleeding**

Majority did not state about the metrorrhagia (intermenstrual bleeding) but 3.8% of the respondents experienced spotting.

**Table 5: Intermenstrual bleeding**

Intermenstrual Bleeding	Frequency	Percent	Valid Percent	Cumulative Percent
No	51	96.2	96.2	96.2
Yes	2	3.8	3.8	100.0
<b>Total</b>	<b>53</b>	<b>100.0</b>	<b>100.0</b>	

**DISCUSSION:**

The present questionnaire based study attempted to explore the menstrual irregularities in a selected population in a rural area of Kedah state in Malaysia. This study is conducted in view of menstrual characteristics, such as irregularity in the menstrual cycle, premenstrual pain and discomfort, heavy menstrual discharge which may affect the general and menstrual health. Menstrual irregularities are one of the major area of concern in reproductive health as it affects a large number of women

throughout their reproductive life from adolescence to menopause.

Thus the present study was conducted to explore the menstrual characteristics among the reproductive age group females across different age groups and to find out association with menstrual patterns. Study consisted of 53 females with the mean age of 45.89±7.66 years, with the lowest age 23 and the highest 58. Our study showed menarche between 10 to 16 years of age, with the average age of menarche at 12.94 years. For most females, it occurs between the age of 10 and 16 years; however, it shows a remarkable range of variation, thus our results are in agreement with other reports<sup>11</sup>.

Maximum respondents (86.8%) showed an menstrual cycle interval of 21 to 35 days, only 13.2% showed more than 35 days interval, with 99% not using any medication to regularize the interval. Majority of respondents (92.5%) experienced normal menstrual period of 3 to 7 days. Hypomenorrhea and menorrhagia only in 5.7% and 1.9% the respondents respectively. Although 96% showed normal blood loss during menstruation, 3.8% revealed their experience on menorrhagia and also stated that they were on medication for heavy menstruation. With reference to other reports also normal range of menstrual cycles is between 21 to 35 days, with the menstrual bleeding lasting from 3-7 days except for few years after menarche<sup>11,12,13,14,15</sup>.

With reference to another study reported, 12% of the participants had >7 days of flow. Although only 3.8% individuals of our study group revealed their experience on menorrhagia and requirement of medication to control heavy menstruation, we agree that it is of concern, as heavy blood loss is associated with anemia<sup>16</sup>.

Majority of the respondents (94%) experienced mild to moderate abdominal pain during menstruation. However, 5.8% of the respondents had experienced severe abdominal pain, among them 3.8% did not need to use any medication to treat pain and also they were capable to doing routine work, but 2% of them were not able to perform daily routine work and had to use medication to relieve the pain. However, the prevalence of dysmenorrhea in our study was not matching with other reports<sup>17,18</sup>. Premenstrual syndrome and dysmenorrhea are prevalent medical disorders among adolescents and young females leading to morbidities like absentism to school and work place, prompt diagnosis and treatment of menstrual disorders which ultimately may decrease their associated morbidities.

96% of the participants were married and among them 97% were having children ranging from 5(17%), 4(30%), 3(19%). Only 10% of the population didn't have children. Although some reports state that menstrual disorders are frequent in their study population and are associated with age 35 years or older, high parity, tubal ligation<sup>19</sup> but our study is not in agreement with this.

Among the respondents, 30% had used contraceptive methods. Among those who used contraceptive methods, oral pills were used by 62.5%, injection method by 6%, and remaining 32% were using other traditional medicine, as preferred method for contraception. It is known that oral pills could be used effectively and safely to treat pain associated with endometriosis or related menstrual disorders<sup>20</sup>. But our study group was using contraceptives as family planning method. It is believed that one of the problematic effects of tubal sterilization is menstrual changes or disorders, although the results of studies in this area have been inconsistent and inconclusive, according to one of the report the physiological mechanism of ovarian dysfunction and decline may affect the menstrual and menopausal changes that result from hormonal imbalances leading to symptoms, such as flushing, sweating, breast pain, vaginal dryness, and pain associated with menstrual cycles<sup>19,21</sup>.

As positive family history of uterine disease is one of the major risk factors associated with menstrual disorders, our questionnaire included this question. Maximum percentage (89%) of the respondents did not have any positive family history of uterine

disease. Uterine fibroids are benign neoplasms of uterine smooth muscle. Although they are often asymptomatic, fibroids can cause excessive menstrual bleeding, pelvic pain, and other symptoms that seriously affect a woman's quality of life, may require medical or surgical intervention, they account for nearly 30% of all hysterectomies among women between the ages 18–44 years<sup>22</sup>. It is imperative that health care providers increase their anticipatory guidance regarding normal menstruation. This may aid in the prompt diagnosis and treatment of menstrual disorders, and decrease their associated morbidities

#### CONCLUSION AND LIMITATIONS OF THE STUDY:

Although it is very common for the first few years after menarche menstrual irregularities and dysmenorrhea, it is not addressed here since in this study lowest age was 23, may due to the lack of narrating history after many years. Based on the present findings it is not possible to make strong generalized inference, since this study is conducted in a selected village. The findings may not be representative of the menstrual characteristics in whole Malaysia. Moreover, the study is related to a rural area that is relatively with less stress, so it might not be a good representative for urban areas. Further small number of population group, which might have prevented the attainment of statistical significance, hence large scale attempt has to be done.

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