

# Field survey of symptoms and indications of Menstruation

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## Summary

A field survey was conducted among ٢٠٩٧ female unmarried, university-students, age from ١٩ to ٢٢, from all levels of the society were interviewed from three Colleges.

It appears that headache, lower abdominal ache, backache, temper, and digestive upsets are regular symptoms during the first five days precede the onset of menstruation. The pain increases gradually, but disappears in most cases by the fifth day according to their own statement.

It appears, also, that the bleeding varies throughout the cycle. The commonest is the bleeding of the first and last two days (٣١,٦%); psychological factors cause the irregularity of the cycle (٥٧%). Side effects appear like diarrhea (١٢,٦%), fainting (١٢,٦%), and temporary paralysis (١,٩%).

Elder sisters were the mean source of information about the period followed by mothers. Only small percentage of the girls showed abnormal periods. The mean age of menarche was ١٢-١٣ years old

Self-medications was practiced by the majority of the girls

**Key words:** menstruation, survey, ١٩-٢٢ years old, university, headache

## Introduction

Menstruation is the most normal thing in the life of ordinary women, yet a lot of men are puzzled by it. The comprehension of this sensitive period in a woman's life helps her through it without serious physical, nervous, or psychological consequences, which might affect her domestic and social behavior. Studies indicate that almost ٨٠% women suffer the effects of menstrual discomforts [١].

Every month, a woman's ovaries release one egg into her uterus. This egg stays there, waiting to be fertilized, and after a few days, is discharged from the uterus along with its tissue lining, but when the egg doesn't get fertilized, and is expelled from the body with a bloody vaginal discharge, this is called the menstrual flow (or menstruation). As this blood, tissue and the egg flow out from the vagina, they cause some physical discomfort but most of the pain associated with the menstrual flow is largely hormone related [٢].

The aim of this study is to show that girls (even in closed conservative society) have some understanding concerning this important phenomenon in their lives.

## Methods

The sample for this field survey was chosen within a feminine society. ٢٠٩٧ female unmarried, university-students, age from ١٩ to ٢٢, from all levels of the society were interviewed from three Colleges. College of Education for girls, University of Kufa, Holy Najaf City (a closed traditional city) and College of Arts and College of Economics (University of Baghdad) (Table ١).

A questionnaire was prepared with the help of two gynecologists, regarding the symptoms and indicators of menstruation to the girl experience. The questionnaires were distributed by hand to girls-students in the three universities and asked to be answered immediately. ٧٩% answered all the tables, while ١١% answered part of the questionnaire, and only ١٠% refused to answer.

The replies were analyzed statistically by the author as percentages.

## Results

### Age

Most girls start to menstruate between ages ١٠ and ١٥ years, while only ٣,٢% starts the cycle after ١٥ (Table ٢)..

### First Knowledge

٧٤,١% of the girls knew about the cycle – for the first time- through their family, some through their mother, but mostly through their eldest sisters. Only ١٩,٩% have their first knowledge from friends, and only ٦,٠% through their teacher in secondary school (Table ٣).

### Regulatory of the menstrual cycle

The regularity of the cycle differs from girl to girl. It was regular in ٣٧,٤% of girls and irregular in ١,٣%, but the majority (٦١,٣%) suffers from the instability of the cycle through the years (Table ٤). According to girls' belief, the irregularity was caused by psychological factors (٥٦,٨%), exhaustion (١٥,١%), or other factors (١٢,٤%). ١٥,٧% answered (Do not know) for the reason of the irregularity of the cycle (table ٥).

Most girls (٦٩%) claimed that their cycle improved by regular exercise and hormone therapy

### Preceding Symptoms

A girl approaching the cycle (٣-٧ days before it) experiences attacks of anxiety (٩٩,١%), inability to concentrate (٩٥,١%) or hear sounds (٩٢,٥%) and angry outbursts (٩٥,٠%).

Nausea (٩٩,١%), headache (٩٥,٣%), different types of bellyache (٩٤,٣%) and sometimes diarrhea (٨٦,٣%) are common symptoms proceeding the menstrual period.

Some girls experience bloating, also (٦٧,٩%) accompanied by breast tenderness (٧٨,١%) and changes in vagina (٧٨,٣%) and oily secretions in ear (٧٦,٥%). Acne may break out (٣٦,١%).

### Symptoms of Menstruation

The most common symptoms during menstruation are

**Headache** (١٠٠%) seems to be suffered by all girls

#### Stress

Nervous and psychological signs such as outbursts (٩٩,٠%), anxiety (٩١,٥%), temper (٨٤,٢%), refusal to discuss subjects (٦١,٢%), despondency (٤٦,١%), weeping, (٣٩,٣%), inability to concentrate (٨٤,٣%) or to hear sounds (٥٥,٥%), social withdrew (٦٦,٤%) are common (table ٧)..

#### Bellyache

Digestive upsets such as diarrhea, nausea, vomiting etc) remain stable throughout the cycle. It is interesting to note that the percentage of diarrhea and fainting were identical. It might be that the fainting is a result of a weakness and giddiness caused by diarrhea with bleeding during the cycle (Table ٧).

#### Cramps and Paralysis

Cramps were occurred before and during the period and ٧٦,٤% of the girls complained strongly from them.

٧,٣٤% of the girls reported a temporary paralysis in the right leg after the beginning of the bleeding, while ٢,٣١% of the girls reported a right leg paralysis on the ٤th day after the end of bleeding. All cases (٩٠,٦٥%) accompanied by fainting and great pain. Normal state restored after ٦-٨ hours.

#### Bleeding through menstrual cycle

Bleeding occurs in ٣١,٦% of the girls during the first and last two days of the cycle. It stops between ٣rd and ٥th day. Only few drop some times. In ٢٤,١% of girls, bleeding continues in the first three days, while a continuous bleeding in the first four days is common in ١٧% of the girls. Three groups at ٧% bleed in the first two days only; in the first five days, and in the first six days. A continuous bleeding for the whole seven days happened to ٠,٦٣% of the girls (Table ٨)

#### Color of blood

Light bleeding with dark and light colored blood is the commonest (٢٩%); followed by heavy dark colored bleeding (٢٧,٢%), then light dark colored bleeding (٢٤,٧%) and light colored bleeding (٤,٥%) (Table ٨)

#### Tranquilizers used during menstrual cycle

All girls, in general, did not use any kind of tranquilizers or drugs to ease the periodical pain. If the pain is acute, some of them use natural tranquilizers such as herbs (٥,٧%), or simple artificial tranquilizers (٦٣,٨%) such as Paracetamol

( $40.0\%$ ), Aspirin ( $13.2\%$ ), or other tranquilizers ( $10.6\%$ ).  $30.5\%$  use medicine described by physician to delay the cycle during the period of examination (Table 10)

$60\%$  of girls claimed that their personal experience taught them the kind of tranquilizers they use, while  $35\%$  claimed they were introduced to them by family ( $25\%$ ) and friends ( $10\%$ ). In all, the survey finds a high level of health consciousness among the girls (Data not shown).

### **End of the period**

$72\%$  of girls regard the disappearance of acne as a certain indication of the cycle's end (Table 1).

### **Continuity of the period**

$93.21$  of the girls have regular periods, while only  $1.26\%$  claimed that their cycle came every  $3-4$  months, while  $1.9\%$  claimed their cycle came  $3-4$  /month.

### **Discussion**

Backache and bellyache and other discomforting symptoms were dismissed in the past as female drivel, fuss over a pain that is an imagination, but science has now established that discomforts and pain during the menstrual flow are not psychological, but physical caused by dramatically fluctuating hormone levels in the body [3,4]. The pain occurred during the first five days of the menstrual period due to the contraction of the muscles of the uterus which activated by prostaglandins hormone and after 14 days, the hormonal level changes to prepare for the release of the next egg [5]. The hormone levels of both estrogen and progesterone keep rising till about four days before the next period, and then, if fertilization has not taken place, they fall. This sudden change causes more irritation and emotional imbalance in a woman [6]

Most girls undergo emotional and behavioral changes, which include depression, aggressiveness, confusion, irritability and mood swings which agree with what other surveys stated [7, 8], and also craving for certain foods (like chocolate, salt, sugary foods, etc.) doubled during menstruation [9].

Nausea, gas in the abdomen, indigestion, diarrhea, etc. are the other symptoms which most girls suffer during menstruation

Some girls have irregular menstrual period which they believe is caused by stress, gain or loss of weight, heavy exercises or malfunction of some hormones and many girls believe stress is the first cause of irregular periods, which is a reasonable assumption since fatigue, worry, or anxiety can cause unbalanced hormones, which agree with other surveys [10].

Usually, a girl gets her period about two years after her breasts start to develop, and tenderness of breast is a common symptoms proceeding and during menstruation [١١] .

Vagina discharges fluid (sort of like mucus) that a girl might see or feel on her underwear. This discharge usually begins about ٦ months to a year before a girl gets her first period [١٢, ١٣].

٦٥% stated that menstruation was moderately to severally painful and their daily activity was affected which agreed with a survey done with ١٦ years old in New Zealand [١٤]. In that survey, ٣٠% seek a health professional about their period which agrees with our survey.

All girls in this survey suffered and complained from headache, while in a survey run in ١٩٩٥, the researchers found that only a small portion of their participants (٧٤ women) suffer from headache [١٥]. The women in that survey are older a little from (٢٢-٢٩) from our survey's members .

Heavy flow or clots during menstruation cause stretching of the small opening of the cervix which leads to mild or sometimes intense abdominal pain[١٦].

Cramps can be occurred due to a congestion of mucus in the fallopian tubes may cause swelling and pain which occur a few days before the ovulation, as mucus is excreted before ovulation or may be due to the small amount of blood released at ovulation when the ovarian follicle gets ruptured while releasing an egg, which also causes the tearing of a small blood vessel [١٢].

The brown discharge after period [٦] or before the beginning of the next periods [٢] because when the blood is a little old, it becomes dark brown in color and the mucous membrane (endometrium) which lines the uterus thickens so that a fertilized egg can attach itself to this lining will disintegrates and is thrown out of the body in the form of menstrual blood. These endometrial tissues have different layers and are completely shed during menstruation. However, sometimes due to some reason, certain parts of the uterine lining may not be able to shed completely. Due to this, the woman may experience dark spots [١٣].

In certain cases, dark brown vaginal discharge is a sign of pelvic inflammatory disease due to the infection on the ovaries, uterus lining, fallopian tubes, cervix and the vagina, or caused by cervical cancer.

The girls, even they know that they cannot stop their menstrual cycle, but they can decrease its effects by avoiding stress, regular exercises and abstaining from stimulants such as coffee, tea, cola or cocoa. The use of herbs to relief pain is so common among them and herbs mostly used are *Matricaria recutita*

(German chamomile ), saffron, Bael (Aegle marmelos) and fenugreek (Trigonella foenum-graecum). This agreed with a survey on ethno-medicinal plants used for menstrual disorders in Kerala, India [١٧].

Table ١. Distribution of girl-students among colleges

Year	Kufa University/ College of Education	University of Baghdad	
		College of Economics	College of Arts
١ <sup>st</sup> year	١٢٢	١٣٤	٢١٢
٢ <sup>nd</sup> year	١٠٢	١٣٤	٢١٢
٣ <sup>rd</sup> year	١٠٢	١٣٦	٢٧٤
٤ <sup>th</sup> year	١٦١	١٩٠	٢٦٠

Table ٢. The beginning of the cycle in girl-students

Age (year)	%
١٠	٢٣,٨
١١	٨,١
١٢	٢٦,٩
١٣	٢٣,٩
١٤	٦,٣
١٥	٨,٨
After ١٥	٣,٢

Table ٣: First Knowledge about Menstruation

First Knowledge		Percentage %
Family	mother	٢٤,٦
	Elder sisters	٤٩,٥
Friends		١٩,٩
Teacher (Secondary school)		٦

Table ٤: Regularity of menstruation

Regular	٣٧,٤%
Irregular	١,٣%
Regular sometimes and Irregular other times	٦١,٣%

Table ٥: Causes of Irregularity of menstruation according to girls' opinion

Causes	Percentage %
Stress	٥٦,٨
Do not know	١٤,٣

Exhaustion	١٥,١
Gaining or losing weight	٤,٤
Hormonal effects	٢,٢
Low atmospheric pressure	٢,٢
Eating sore food	١,٤
Inflammation of reproductive system	١,٤
Drinking cold liquids	٠,٧
Anemia	٠,٦
Sports	٠,٥
Bathing	٠,٤

Table ٦. Preceding symptom according to the experiment of the girl.

Symptoms	Percentage %
Acne	
Acne in certain places	٣٦,١
Acne in everywhere	٢٨,٥
Stress	
Angry outbursts	٩٥,٠
Temper, quarrelsome	٧٢,١
Anxiety	٩٩,١
Disinclination to discuss a certain subject	٧٣,٥
Desire to weep	٦٥,٣
Despondency	٨٣,١
Inability to concentrate	٩٥,١
Incapability to hear sounds	٩٢,٥
Social withdraw-	٦٧,٧
Bloating	٦٧,٩
Bellyache	
Lower abdominal ache	٩٤,٣
Indigestion	٨٥,٢
diarrhea	٨٦,٣
Gas in the abdomen	٤٥,٠
craving for certain foods	٣١,٢
Oily secretion	
Ear waxy secretion increases	٧٦,٥
Hair oily secretion increases	٦٥,٣
Speedy growth of hair	٨٥,٣
Breast tenderness	

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Enlargement of breast	٧٨,١
Itchy and enlarged breast	٧٢,٥
Headache	٩٥,٣
Nausea	٩٩,١
Vagina	
Unpleasant odor from vagina	٨٦,١
White, thick, mucous secretions from vagina	٣٤,٥
Itchy vagina	٤٧,٨
Legs ache	٥٥,٩
Lower backache	٦٣,٣

Table ٧: Symptoms during menstruation

Symptoms	Percentage %
Headache	١٠٠,٠
Acne	
Acne in certain places	٥٦,١
Acne in everywhere	٢٣,٩
Stress	
Angry outbursts	٩٩,٠
Temper, quarrelsome	٨٤,٢
anxiety	٩٩,٥
Disinclination to discuss a certain subject	٦١,٢
Desire to weep	٥٩,٣
Despondency	٤٦,١
Inability to concentrate	٨٤,٣
Incapability to hear sounds	٥٥,٥
Social withdraw-	٣٧,٨
Bloating	٦٦,٤
Abdominal problems	
Lower abdominal ache	٦١,٣
Indigestion	٩٩,٢
diarrhea	٩٦,١
Gas in the abdomen	٣٥,٠
Craving for certain foods	٦٣,٣
Oily secretion	
Ear waxy secretion increases	٨٦,٧
Hair oily secretion increases	٩٩,٩
Speedy growth of hair	٨٥,٣

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Breast	
Enlargement of breast	٦٤.٤
Itchy and enlarged breast	٢٣.١
Nausea	٩٩,١
Cramps	٧٦,٤
Vagina	
Unpleasant odor from vagina	٣٦,١
White, thick, mucous secretions from vagina	٤٥,٥
Itchy vagina	٢٧,٩
Legs ache	٤٣,٥
Lower backache	٧٣,٨
Paralysis in one leg for ٢h in the first day	٧,٣٤

Table ٨: Days of bleeding during menstruation

Days of bleeding	Percentage %
First two days , then stops	٧,٦
First and last two days only	٣١,٦
First three days then stops	٢٤,١
First four days then stops	١٧,٨
First five days then stops	٧,٦
First six days then stops	٧,٠
The whole seven days	٤,٣

Table ٩. Sort of bleeding and the color of the blood

Sort of bleeding and color of the blood	
Heavy bleeding with a dark red color	٧٢,٢
Heavy bleeding with a light red color	٤,٥
light bleeding with a dark red color	٢٤,٧
Light bleeding with a light red color	٧,٦
Light bleeding with a dark/light red color	٢٩,١
No answers	٦,٩

Table ١٠. Continuity of the period

Type of period	Percentage %
Regular	٩٣,٢١
Cycle comes every ٣-٤ months	١,٢٦
Cycle comes ٣-٤ times a month	١,٩
No answers	٣,٦٣

Table ١١: Medications taking to ease the pain of menstruation

Type of Tranquilizers	Percentage %
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<b>Self-prescribed medicine</b>	
Natural Tranquilizers (herbs)	٥,٧
Artificial Tranquilizers	٦٣,٨
Paracetamol	٤٠,٠
Aspirin	١٣,٢
Paxedal	٥,١
Novgaline	٠,٦
Abrasmitic	٠,٦
Others	٤,٣
<b>Medicine described by physician</b>	
	٣٠,٥

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#### بحث ميداني حول اعراض ومؤشرات الدورة الشهرية

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#### الملخص

أجري مسح الميداني لـ ٢٠٩٧ طالبة غير متزوجة، تتراوح أعمارهن بين ١٩ و ٢٢ عاما ينتمين إلى جميع مستويات المجتمع وإلى ثلاث كليات، ويبدو أن الصداع، وآلام أسفل البطن، وآلم في الظهر، وتغير في المزاج، واضطرابات في الجهاز الهضمي هي أعراض عادية ترافق الأيام الخمسة الأولى التي تسبق نزول الحيض، وحسب رأي الفتيات، فإن الألم يزداد تدريجيا، ولكن يختفي في معظم الحالات في اليوم الخامس قبل الدورة الشهرية، وتعاني معظم الفتيات خلال الدورة الشهرية من نزيف الدم في اليومين الأول والأخير (٣١,٦٪)، كما تتسبب العوامل النفسية حسب رايهن في عدم انتظام الدورة الشهرية (٥٧٪)، وتظهر آثار جانبية مثل الإسهال (١٢,٦٪)، والاعماء (١٢,٦٪)، وشلل مؤقت (١,٩٪) خلال فترة الدورة.

حسبالغالبية العظمى من الفتيات، بدأت الدورة لديهن ما بين ١٢-١٣ من العمر، كانت الأخوات الأكبر مصدر اساس للمعلومات عن الدورة الشهرية تليهن الأمهات، وأظهرت نسبة صغيرة فقط من الفتيات فترات دورة غير طبيعية.