

## **Prevalence of menstrual disturbances among female students of fourth and fifth classes of curative medicine faculty (KUMS)**

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### **Abstract**

In a normal condition, menstrual cycle days are 21-34 days with 80cc normal bleeding and alterations from these parameters are called menstrual disturbances or problems.

**Goal:** The main objective of this research was prevalence of menstrual disturbances among students of fourth and fifth classes of curative medicine faculty (KUMS).

**Method:** This study employed a descriptive cross-sectional design. It was done during 3 months (September, October and November of 2017) in Obstetric & Gynecology Department. Participants were from fourth and fifth classes of curative medicine faculty (KUMS).

**Results:** A total of 86 female students from fourth and fifth classes of curative medicine faculty (KUMS) participated in this research. The mean age of study participants was 22.71 1.0066 (SD) years with a range of 21-25 years age. The prevalence of menstrual disturbance was 84.88%. The peak of incidence (80.82%) was during ages less than 23 years. Students with early menarche (11-13 years) had a greater percentage (56.16%). The majority of students (71.23%) had 5-7 days menstruation and students with 21-30 days menstruation cycle were at a greater risk of menstrual disturbances (71.23%).

In 79.45% of cases, participants had regular menstrual cycle and only 20.54% had irregular menstrual cycle. Overall, hypermenorrhea was prevalent in 32.87%, Oligo-menorrhea in 31.50%, hypo-menorrhea in 23.28%, poly-menorrhea in 20.54%, meno-metrorrhagia in 8.21% and menorrhagia and metrorrhagia in 10.95%.

**Conclusion:** This study has shown that menstrual disturbances are highly prevalent (84.88%) in students with 21-25 years of age, and in the most cases, hyper-menorrhea was dominantly prevalent in female students. Considering the high prevalence of menstrual disturbances, we could give them a better life experience, diagnosing and treating it earlier and increase their content and quality of life during the youth.

**Key words:** menstrual disturbances, prevalence, medical students.

**Preface:**

Menstrual disturbances is one of the most common, most significant and most complex problems and clinical difficulties of gynecology section, which the common causes are stress, infertility, chronic disease, disorders of some endocrine glands such as thyroid, pituitary, hypothalamus and the female students faced them repeatedly.

This disturbance needs proper investigation because it may arise from one natural cycle and/or show any important pathology that threatens the pregnancy and female health.

Thus, menstrual disturbances are important because young women may experience irregular menstruation cycles due to different reasons such as psychological conditions (moral conditions), socio-economic situation, physical activity and variety of dietary regime, and these factors may be the main reason for seeking of gynecology doctor.

It is necessary to say that this disturbance may affect significantly young female moral and their daily social activity. Considering this issue in this research we decided to present (explain) the percentage of these disturbances and reasonable methods for solving this problem in the society.

The results of this study can specify the main problems of female students, developing reasonable solution way for solving it, to reduce the tension of young girls during the educational period.

**Objective of research:** Main objective of this study is the prevalence of menstrual disturbances in fourth and fifth classes' female students of curative medicine faculty of Kabul medical University.

**Literature review:** Menstrual disturbances is a natural phenomenon that occurs throughout the childbearing age in females and is direct flowing of uterus blood to vagina and as it is clear this occurs with specific rhythm and regular time intervals and can be related to well-being of the person, the importance of the order in which menstruation cycles occurs is to the extent that they are mentioned as one of the vital sign of women.

Average number of monthly menstruation cycle days are 21-34 days in regular situation and averagely natural bleeding volume is 35ml and is limited between 5-80cc. If changes occurred it is called menstrual disturbances and occurs when that:

- 1- There is irregular bleeding such as poly menorrhoea, oligo-menorrhoea and amenorrhoea.
- 2- The amount and duration of bleeding is abnormal e.g., hypermenorrhoea, hypomenorrhoea, menorrhagia, metrorrhagia and menometrorrhagia.

Menstruation disturbances are among the most common gynecologic diseases that has been seen with a large percentage over 20-24 years of age, and then it decreases.

This disturbance not only affects girls, but affects family, society and public economy too. Menstrual disturbances includes of abnormality in duration of menstruation cycle,

polymenorrhea (menstruation cycle which occurs with less than 21 days interval), oligomenorrhea (prolong time between two cycles of menstruation more than 35 days), hypermenorrhea (regular bleeding of menstruation with more than 150cc), hypomenorrhea (regular bleeding of menstruation with less than 6cc), menorrhagia (regular menstruation bleeding with a great amount and prolong duration more than 10 days), metrorrhagia (irregular menstrual bleeding between two menstruation cycles) and menometrorrhagia (irregular menstrual bleeding with a large amount and long lasting that occurred recurrently), that these disturbances are the root causes of anxiety for girls and their families. بررسی menstruation disturbances between the ages of 18-24 years are important because young girls may experience some kinds of irregular cycles for a variety of reasons, such as mental conditions, socio-economic situation, physical activity and dietary, and leading to referring some of them to doctors. While most of them use limited number of medicines or holistic drugs. There are several reasons which causing menstrual disturbances and the commonest are stress and anovulation, chronic diseases, disorders of some endocrine glands like, thyroid, pituitary, hypothalamus, hormonal imbalance, trauma, obesity, infections, cancers, leiomyoma and organic disorders.

Main complication of menstrual disturbances includes of anemia, infertility and osteoporosis.

Menstrual disturbances can be a common problem in developed and developing countries. In developing countries majority of women are faced to threatening disease. Therefore, this demonstrates that menstrual disturbance is a small health problem and for this reason the prevalence of its disabilities are more in developing rather than developed countries.

Prevalence of menstrual disturbances in young women with rapid physical and mental growth is reported about 87%. While in a study of Naveed S and his colleagues' which was performed in the year of 2013 at pharmacy faculty of Jinnah university of Karachi Pakistan has shown prevalence of menstrual disturbances about 82%.

The study that N. Naseh and colleagues have done at the Iranian Birjand medical University, have shown menstrual disturbances 65.3 percent.

The research that Symphorosa SC Chan completed in maternity department of Hongkong University of china, reported the prevalence of menstrual disturbances about 77.9 percent.

In the study done by BILKISH NABILAL PATAVEGAR and colleagues in the 2015 year at department of community medicine Hamdard Institute of Medical Sciences & Research, Jamia Hamdard, New Delhi of India, reported the prevalence of menstrual disturbances 72 percent.

The study that MA Parker and his colleagues completed in Australian National University Medical School in 2009 found that the prevalence of menstrual disturbances is about 73 percent.

Also a study that N. Karout and colleagues completed in the year of 2012 in Islamic University of Lebanon, has reported the prevalence of menstrual disturbances about 80.7 percent.

In a systematic review done by Sioba`n D and colleagues in epidemiology department of Ann University of united states of America Michigan shown the prevalence of menstrual disturbances 56 percent in Gambia and 22% in Philippine.

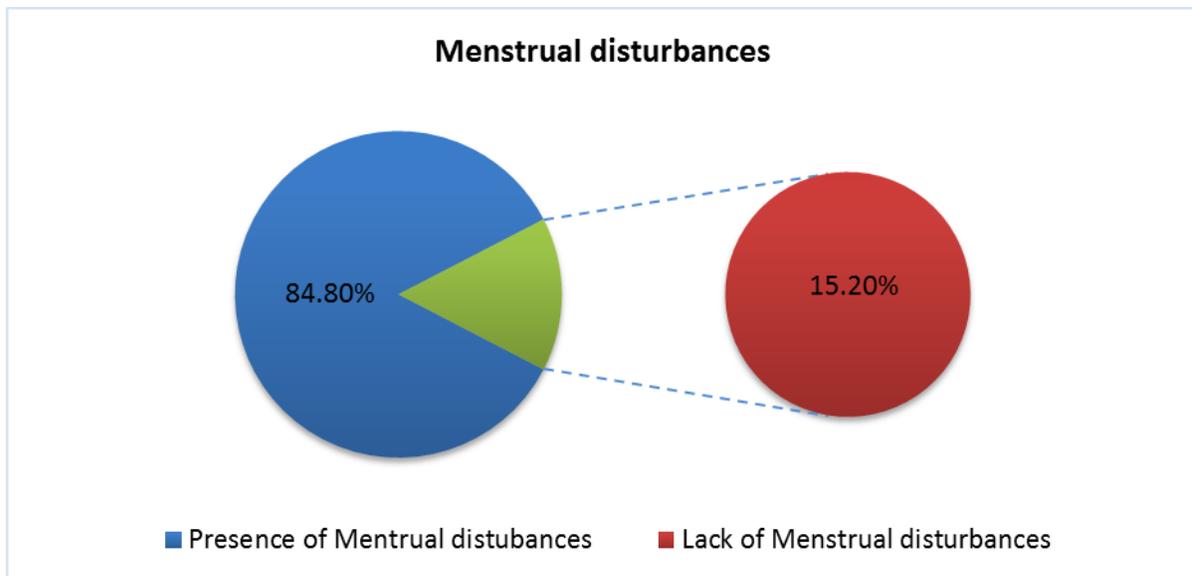
Therefore, based on this information we can say that the prevalence of menstrual disturbances in the world is not the same and different in different regions and even in different areas of a country.

**Method of research:** This research has studied as descriptive cross sectional study during the three months of 1396 in maternity department. Number of sample size participants included fourth and fifth grade female students of curative faculty Kabul medical University.

At first the already prepared consent form distributed to students, out of 88 students 86 of them prepared for interview and those students that due to some reasons didn't have any interest for attending in the study excluded from this research and they were 2 students. Information collected by questioner that the main variable of menstrual disturbances (oligo menorrhoea, Amenorrhoea, hyper menorrhoea, hypo menorrhoea, menorrhagia, metrorrhagia and menometrorrhagia) and the associated variable were gestational age, menarche age, duration of menstruation cycles, regularity and prolongation of menstrual bleeding. The collected data analyzed by SPSS software and prepared as charts and tables and compared with medical literature and properly discussed.

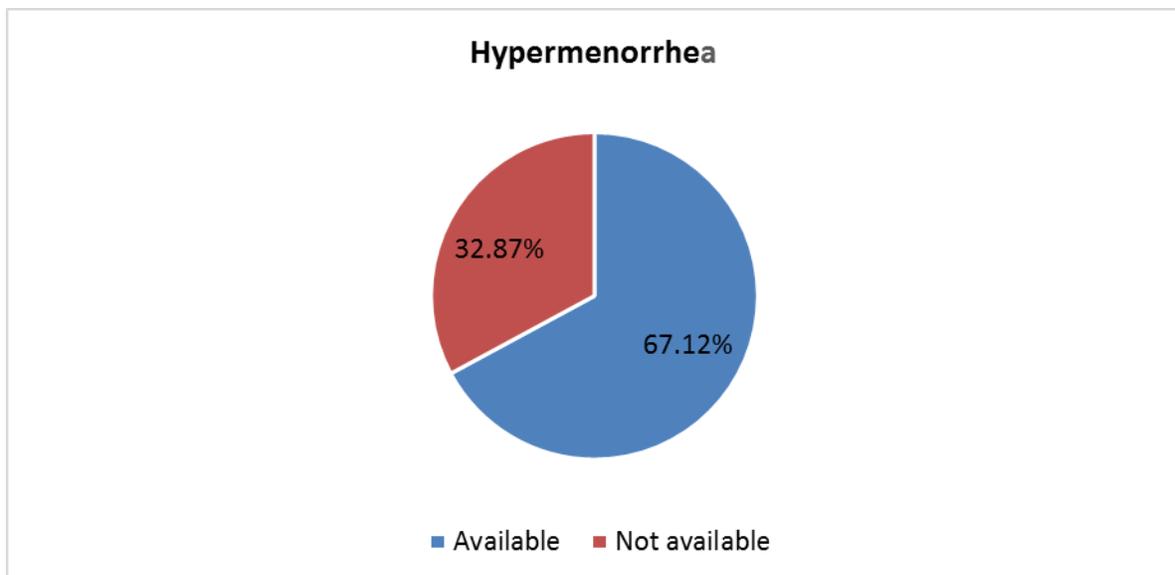
### **Results:**

This research was conducted in female students of fourth and fifth grade curative faculty of Kabul medical University during the three months (Sunbula, Mezan and Aqrab) of 1396. During this period 86 female students were studied, out of a total of 86 students under study of them 73 which accounts 84.8 percent had menstrual disturbances, and the average age is  $22.71 \pm 1.0066$  ( $\pm$ SD) years and the age range is 21-25 years old. In this research the students studied according to the type of menstrual disturbances, student's age, duration of cycle, regularity of cycle, duration of menstruation bleeding and menarche age, these findings described by charts and tables.



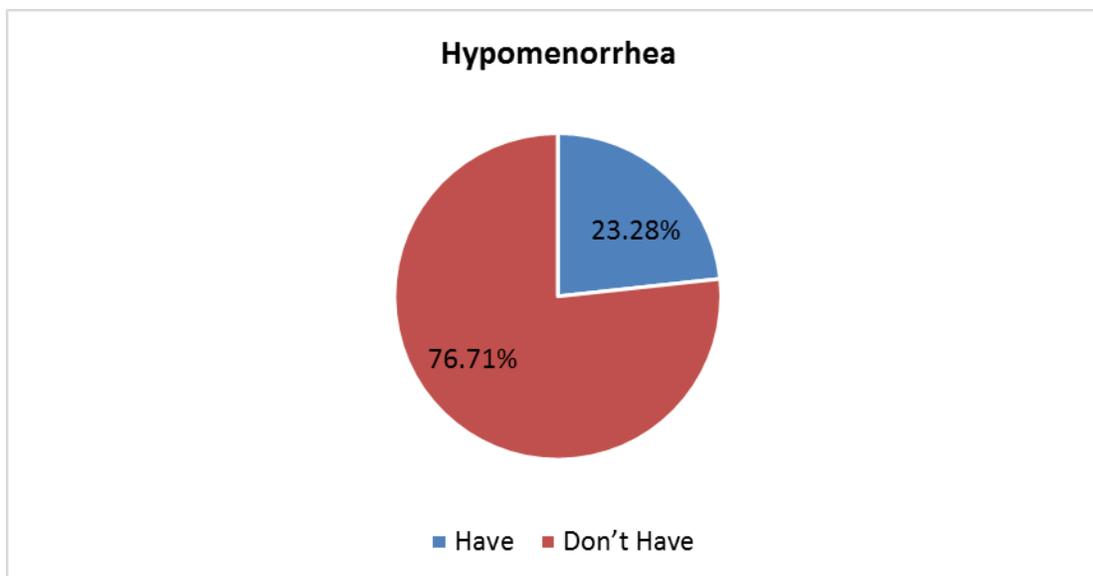
**Chart (1), Percentage of menstrual disturbances cases**

According to above chart of the total under study students (86 student) 73 students which are (84.8 percent) have menstrual disturbances and other 13 students that is (15.2 percent) didn't have menstrual disturbances.



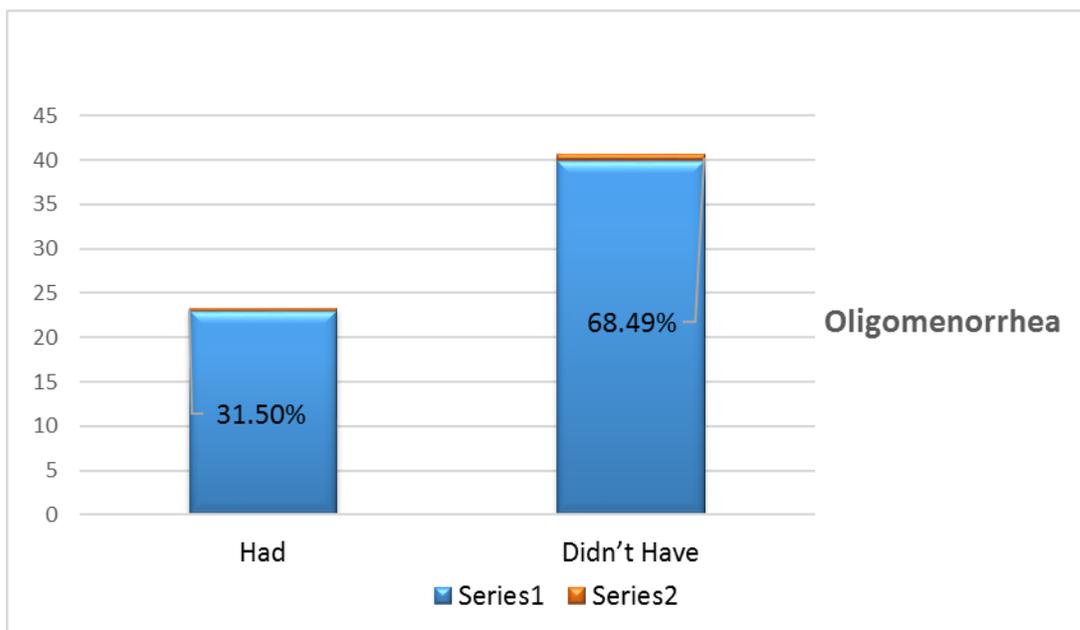
**Chart (2), Percentage of hyper menorrhoea cases**

According to the above chart out of the total of 73 students with menstrual disturbances 24 students that accounts (32.87 percent) observed hypermenorrhoea.



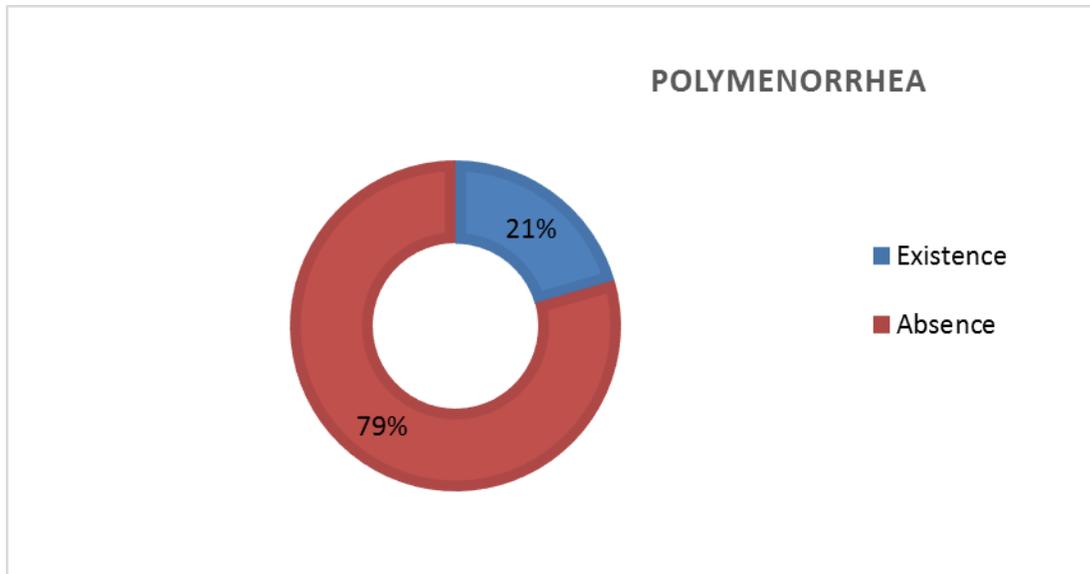
**Chart (3), Percentage of hypo menorrhoea cases**

As it has shown in the above graph there are 17 students (23.28 percent) with hypo menorrhoea.



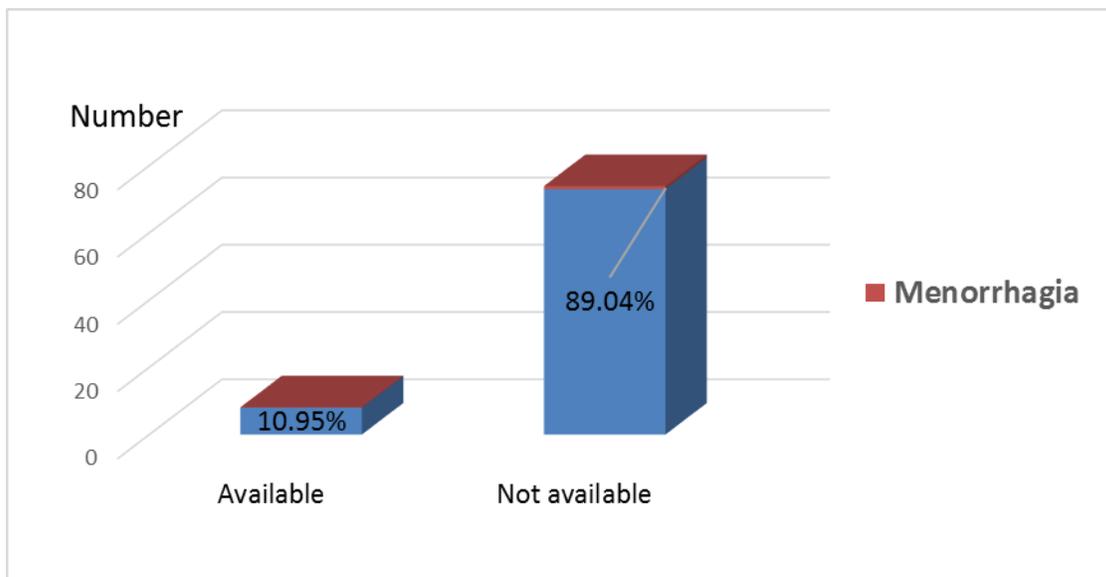
**Graph (4), Percentage of Oligo menorrhoea cases**

Above graph shows oligo menorrhoea cases in fourth and fifth female students' of curative faculty of the Kabul Medical University, out of the total 73 students 23 persons that accounts 31.50 percent suffering of oligo menorrhoea during the menstruation.



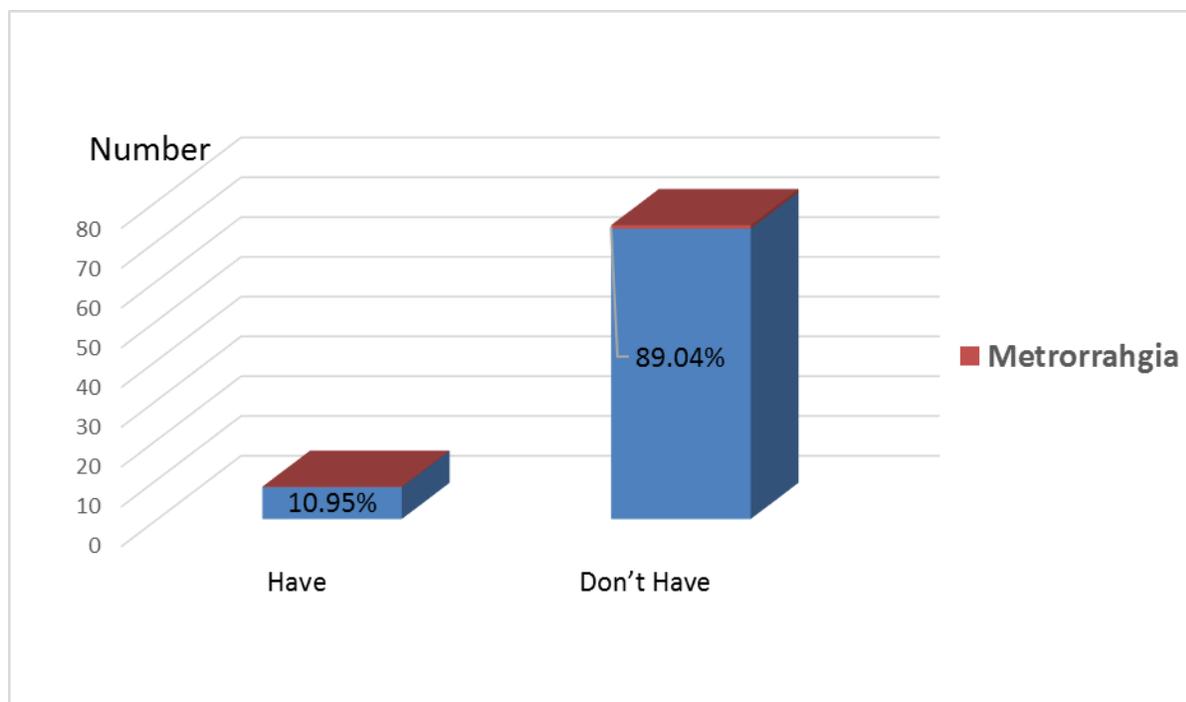
**Chart (5), Percentage of poly menorrhagia cases**

According to the above chart out of the 73 students under study in 15 students that accounts 20, 54 percent observed poly menorrhagia.

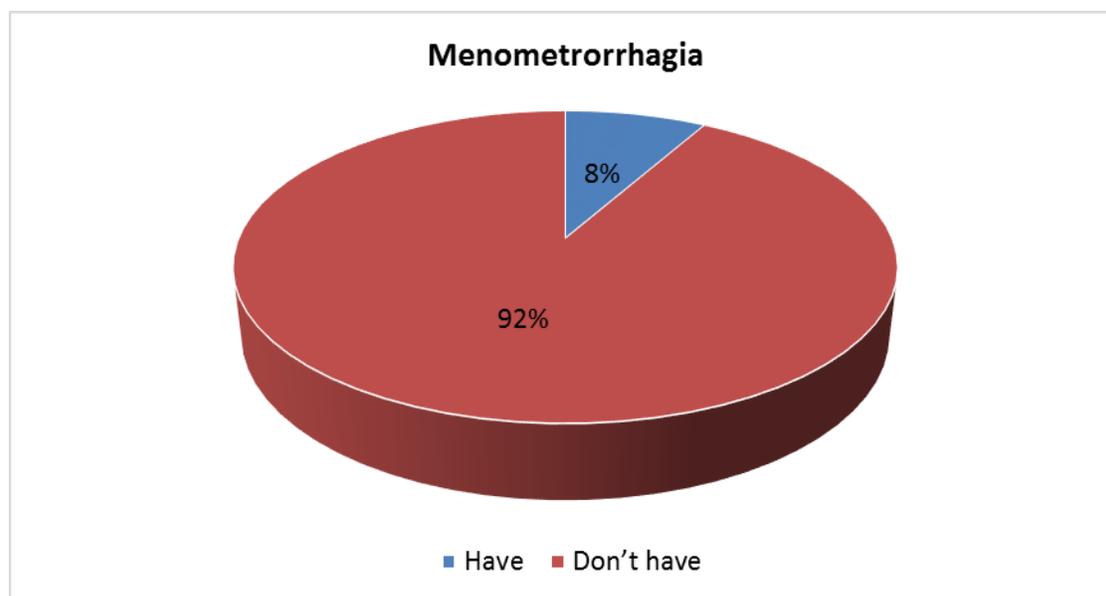


**Chart (6), Percentage of menorrhagia cases**

According to the above graph results menorrhagia cases seen about 10.95 percent in students with menstrual disturbances.

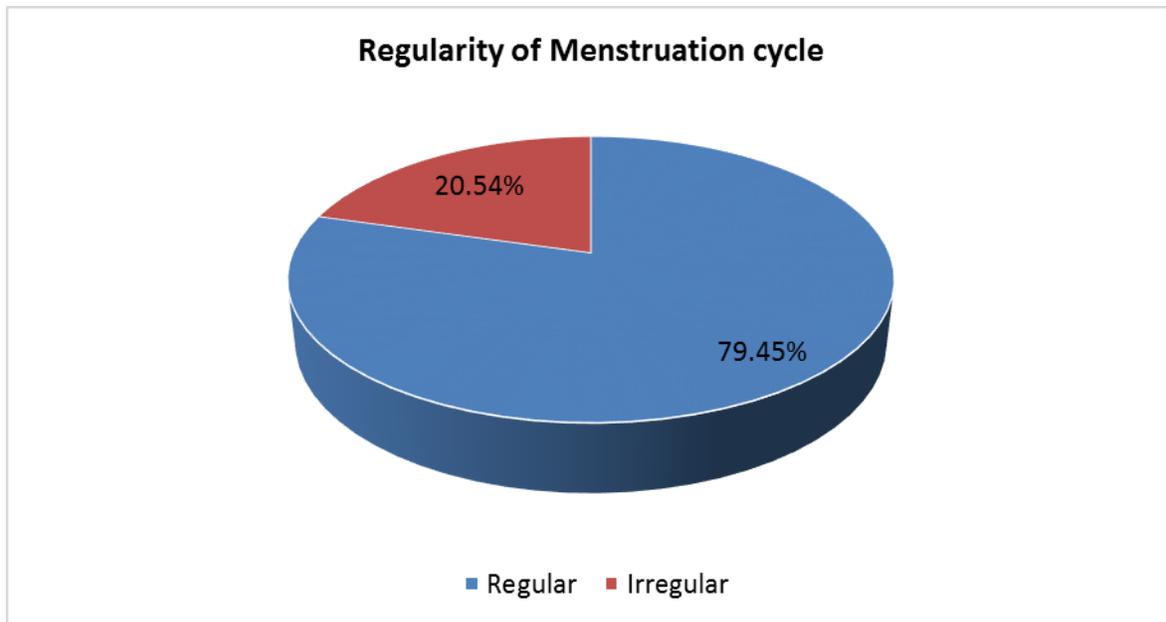


Above graph shows the cases of metrorrhagia in female students of the fourth and fifth grade medicine faculty of Kabul medical University, which accounts 8 students (10.95 percent).



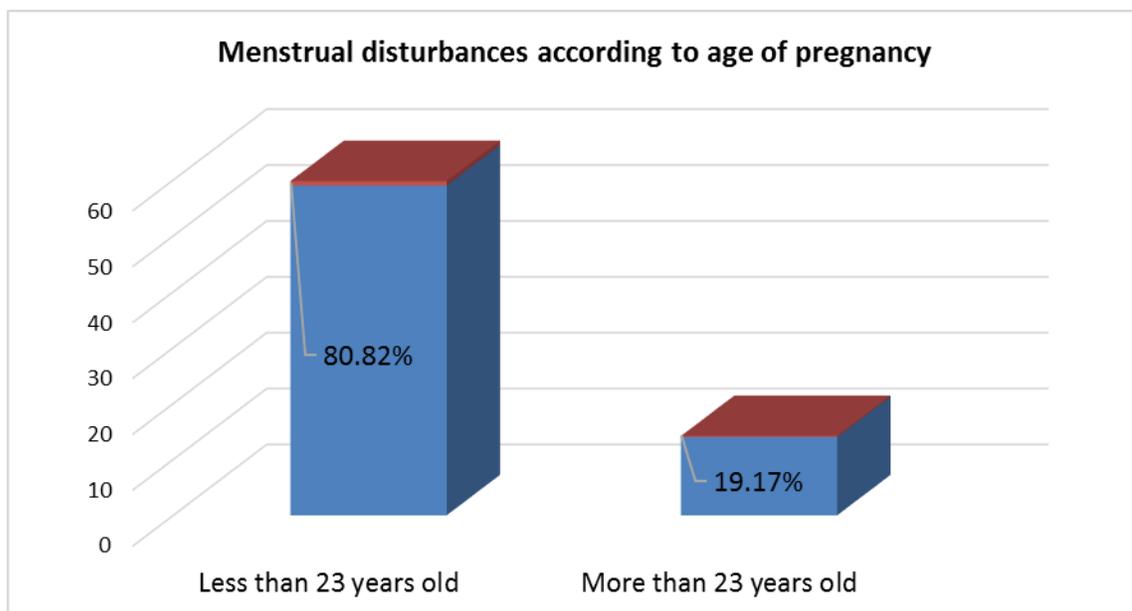
**Chart (8), Percentage of menometrorrhagia cases**

According to the above chart out of the total number of 73 female students of fourth and fifth grade Kabul medical faculty with menstrual disturbances menometrorrhagia observed in 6 students (8.21 percent).



**Chart (9), Percentage of regularity of menstruation cycle in menstruation cycle disturbances**

As it has shown in the chart, out of 73 menstrual disturbance cases under study, 58 cases that accounts 79.45 percent had regular menstruation cycle.



**Chart (10), Percentage of menstrual disturbances according to student age**

As it is seen in the chart (10) out of the 73 female students under the study most common cases of menstrual disorders (80.82 percent) are below the age of 23 years.

**Table (1), percentage of menstrual disturbance cases according to Menarche age**

Menarche age	Number	Percentage
11-13 years old	41	56.16
14-16 years old	32	43.83
Total	73	100

Based on the results of above table menstrual disturbances are more (56.16 percent) in students with early menarche (11-13 years).

**Table (2), number and percentage of menstrual disturbance cases according to duration of menstruation cycle**

Length of Menstruation cycle	Number	Percentage
Less than 21 days	8	10.95
21-30 days	52	71.23
More than 30 days	13	17.80
Total	73	100

The table shows menstrual disturbance cases according to length of menstruation cycle that most of the cases (71.23 percent) seen in students with 21-30 days menstruation cycle.

**Table (3), percentage of menstrual disturbances considering the دوام menstruation cycle**

Duration of menstruation cycle	Number	Percentage
3-4 days	21	28.76
5-7 days	52	71.23
Total	73	100

The table shows the menstrual disturbance cases with fourth and fifth grade female student of curative faculty Kabul Medical University considering duration of menstruation cycle, that most of the cases (71.23 percent) has seen in students with 5-7 days menstruation cycle.

**Discussion:** This research was conducted in female students of fourth and fifth grade curative faculty of Kabul medical University during the three months (Sunbula, Mezan and

Aqrab) of 1396. During this period 86 female students were studied, out of a total of 86 students under study of them 73 which accounts 84.88 percent were menstrual disturbances, and this study sometimes is in concordance and or contradicted with other researches.

As in the study, the average age is  $22.71 \pm 1.0066$  ( $\pm$ SD) years and the age range is 21-25 years old. The study of Naveed S and his colleagues' which was performed in pharmacy faculty of Jinnah university of Karachi Pakistan has shown prevalence of menstrual disturbances about 82%.

The study that N. Naseh and colleagues have done at the Iranian Birjand medical University, have shown menstrual disturbances 65.3 percent.

The research that Symphorosa SC Chan completed in maternity department of Hongkong University of China, reported the prevalence of menstrual disturbances about 77.9 percent.

In the study done by BILKISH NABILAL PATAVEGAR and colleagues in the 2015 year at Jamia Hamdard, New Delhi of India reported the prevalence of menstrual disturbances 71.5 percent.

Also in a study by Nisreen Aref and his colleagues in maternity department of Taif Medical College, KSA in Saudi Arabia, have shown menstrual disturbances 92.5 percent.

In a study conducted by Mosaad Abdel Hameed and colleagues in maternity department of Alsahel Teaching Hospital of Egypt, the prevalence of menstrual disturbances has shown 73 percent.

The study that MA Parker and his colleagues completed in Australian National University Medical School in 2009 found that the prevalence of menstrual disturbances is about 73 percent.

Also a study that N. Karout and colleagues completed in the year of 2012 in Lebanon, has reported the prevalence of menstrual disturbances about 80.7 percent.

In a systematic review done by Sioba`n D and colleagues in epidemiology department of Ann University of united states of America Michigan shown the prevalence of menstrual disturbances 56 percent in Gambia and 22% in Philippine.

As it is seen the prevalence of menstrual disturbances globally is not the same (is not the same in all of the world) but it is different broadly in different regions of the world even in different areas of a country, that the possible reasons are mental condition (stress), socio-economic situation, physical activity and variety of dietary.

Based on the type of menstrual disturbances in this study it is seen that hypermenorrhea (32.87 percent) hypomenorrhea (23.28 percent), oligomenorrhea (31.50 percent),

polymenorrhea (20.54 percent), menorrhagia (10.95 percent), metrorrhagia(10.95 percent) and menometrorrhagia (.8.21 percent) found and hypermenorrhea forms the most cases. This study is not compiled with research did by N. Naseh and his colleagues in Birjand Medical University of Iran, because in this study most of the cases of menstrual disturbances is due to menometrorrhagia (15.8 percent). Also another research which was done by Sherly Deborah G and his colleagues in the year of 2017 in Tamil Nadu of India most of the cases of menstrual disturbances formed by menorrhagia (19.4 percent). In our country the reasons of menstrual disturbance students may be stress, chronic diseases, disorders of some endocrine glands such as thyroid, pituitary, hypothalamus, hormonal imbalance, trauma, obesity, infections, uterus leiomyoma and organic disorders.

Based on the regularity of menstruation cycle in the research achieved that out of the 73 cases of menstrual disturbances under study 58 cases which were 79.45 percent had regular menstruation cycle. This study is in close concordance with the research conducted in students of Bahir Dar University of Ethiopia in the 2014 year because in this study most of the students (53, 8 percent) had regular menstruation cycle too.

According to the age in the study seen that (19.17 percent) of these students were over than 23 years old and 80.82 percent of them were lower than 23 years old with the most cases of menstrual disturbance in the less than 23 years old and it is in concordance with the global study done by Najwa Karout in 2015 in Ibn Sina National College for Medical Sciences, Jeddah Saudi Arabi. Because in the mentioned study also most of the cases were less than 23 years old.

According to the menarche age in this study dysmenorrhea cases in the students that have early menarche (11-13 years) seen higher that this study is in concordance with the study which performed by Reham Raafat Elnagar and colleagues at Mansoura University of Egypt in the 2017, because in the mentioned study most of the menstrual disturbance cases (68.2 percent) also seen with students had early menarche (11-13 years).

Based on the length of menstruation cycle observed that (71.23 percent) of the students had 21-30 days, (17.80 percent) more than 30 days and (10.95 percent) less than 21 days menstruation cycle. This study is in close concordance with the study done in Bahir Dar University students of Ethiopia in 2014, because in this study the menstrual disturbances were higher in 21-30 days (81.3 percent) cycles too.

Considering the duration of the menstruation cycle in this research menstrual disturbance cases (71.23 percent) seen in the students with 5-7 days cycle, that this study is in concordance with the research conducted by Nirmala Jaget Lakkawar and colleagues in Baharth medical University students on India, because in the mentioned study the menstrual disturbance cases also seen in the students with 5-7 days cycle.

**Limitations:** As some of the students didn't attend in this research, therefor the number or sample size was small in this research and belonged to one place the results may be different in other Universities of the country. If the research perform in a considerable population variations in the percentage of researches will be observed.

**Conclusion:** The current study revealed that the menstrual disturbances are highly prevalent (84.88 percent) in the girls with age range of 21-25 years. Overall, the most usual disturbance that observed in female students was hypermenorrhea and this factor can affect life quality of female students and eventually leading to iron deficiency and anemia that timely treatment can help to prevent the establishing of anemia.

**Suggestions:** As menstrual disturbances are effective factor on daily and future life of girls therefor it is suggested to:

- Establishment of health facilities for raising awareness level of girls, all girls should be checked by gynecologist during the young period to reduce the problems which will be occur in the future.

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