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Awareness of Menstrual Abnormalities among Female Nursing Students at the University of Sulaimani

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ABSTRACT

Background: The menstrual cycle, which occurs on a monthly basis from menarche to menopause and facilitates fertilization and conception, is a normal function in the female reproductive system. A 28-day cycle is the typical length. Any variations from the typical menstrual cycle in terms of frequency, irregularity of onset, duration of flow, or volume of blood are referred to as menstrual abnormalities. **Aim:** The current study set out to evaluate nursing students' awareness regarding menstrual abnormalities. **Materials and Methods:** In a descriptive study of the quantitative method, the sample of 100 female students was conducted at the University of Sulaimani/Nursing College from January 15 to May 30, 2024. A questionnaire format was created according to the aim of the study and delivered by a team of six experts, consisting of three parts. Part one: sociodemographic characteristics of students. Part two: Menstrual patterns of students. Part three. Awareness of students regarding menstrual abnormalities. Data were collected by direct interviews with the students. Statistical Package for the Social Science version 22 was used for analyzing the data. The frequency, percentage, and Chi-square test were used. **Results:** Results of the present study indicated that the highest percentage of participants were in the age group (20–24); they mostly dwelled in dormitory. Financial state for the majority was sufficient and the vast majority were unmarried. The majority of participants experienced painful menstruation which affected their academic performance. Moreover, only one-fifth of participants had a high awareness regarding menstrual abnormalities. Finally, the study showed that there was a significant association between the group age of students and their awareness regarding menstrual abnormalities. **Conclusion and Recommendations:** The research concludes that the majority of participants demonstrated low awareness of menstrual abnormalities. Information, education, and awareness programs need to be strengthened to spread awareness regarding menstrual abnormalities.

Index Terms: Menstruation, Menstrual Abnormalities, Nursing Students' Awareness, Dysmenorrhea

1. INTRODUCTION

The menstrual cycle is the monthly set of changes that a woman's body undergoes in preparation for pregnancy. Hormones stimulate the uterine lining to thicken with additional tissue and blood. In the event that ovulation takes place but the egg is not fertilized, the uterine lining sheds through the vaginal opening. A menstrual period is defined as the flow of blood and tissue from the uterine lining. A typical menstrual cycle might occur every 21–35 days and continue for 2 to 7 days [1].

A complicated interplay of hormones produced by the pituitary, ovaries, and hypothalamus controls the menstrual cycle. Ovulation separates the luteal and follicular phases of the menstrual cycle. Cycle length and regularity are seen as indicators of reproductive health and endocrine function [2].

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A typical female's menstrual flow can last anywhere from 1 day to 8 days, although it often lasts 3–5 days. The blood loss might vary greatly, from a few spots to 80 mL, with an average of 30 mL. Blood loss exceeding 80 mL is deemed abnormal. The thickness of the endometrium, blood problems, clotting disorders, and medications are some of the variables that can impact blood flow [3].

Any variations from the typical menstrual cycle in terms of frequency, irregularity of onset, duration of flow, or volume of blood are referred to as menstrual abnormalities. Menstrual cycles are abnormal in 14–25% of women; this indicates that periods are heavier or lighter than typical, lasting longer than 35 days or <21 days. Menstrual abnormalities can happen at any age. Women under the age of 23 are the most likely to experience menstrual abnormalities, even though it is normal for women to have irregular periods at some points in their lives. Girls often experience irregular cycles for several years after menarche. Even healthy cycles in adult women can vary by a few days from month to month. Periods may occur every 3 weeks in some women and every 5 weeks in others. Flow also varies and can be heavy or light. Skipping a period and then having a heavy flow may occur; this is most likely due to missed ovulation rather than a miscarriage [1].

Menstrual disorders include disorders such as pre-menstrual syndrome (PMS), polymenorrhea, oligomenorrhea, hypomenorrhea, menorrhagia, metrorrhagia, dysmenorrhea, and amenorrhea. Menorrhagia (heavy flow), hypomenorrhea (light flow), polymenorrhea (frequent flow), oligomenorrhea (infrequent flow), and dysmenorrhea (painful flow) are common menstrual illnesses. Premenstrual syndrome, dysmenorrhea, and excessive uterine bleeding are the three most common menstrual problems in teenagers. Women may have misconceptions that what they are experiencing is normal, they may not seek medical advice unless it is directly related to pregnancy or conception [4].

Menstrual abnormalities are treated differently depending on the type of disorder and lifestyle considerations (e.g., whether a woman plans to become pregnant). Menstrual abnormalities caused by anovulatory bleeding (missing, infrequent, and irregular periods) can be treated with oral contraceptives, cyclic progestin, therapies for an underlying illness that is the source of the menstruation issue, such as nutritional therapy for eating disorders and psychotherapy. Treatment for ovulatory bleeding-related menstrual abnormalities (heavy or extended menstrual bleeding include The implantation of an intrauterine device that releases hormones and the usage of nonsteroidal anti-inflammatory drugs or different pharmaceuticals (e.g., progestin and tranexamic acid) [5].

One of the most frequent reasons women visit family doctors and gynecologists is menstrual disorders. It may have a substantial impact on women's health and result in serious health issues like osteoporosis, Type 2 diabetes, infertility, and cardiovascular disease. An abnormal menstrual cycle is associated with numerous risk factors. According to a Korean study involving 4788 women, there was a high correlation between abnormal menstruation and significant variables such as body mass index, subjective stress level, and smoking status. Furthermore, there is evidence that mental health issues such as anxiety and sadness are associated with a higher chance of abnormal menstrual cycles [6].

Menstrual disorders or abnormalities and their effects on physical and mental health are a major issue for women. More than 75% of them have some menstrual-related issues. Alterations in the typical menstrual cycles could have an impact on their overall health and mental state. Furthermore, it is commonly known that these disruptions affect social and physical activity. Concurrently, it has been discovered that menstrual issues are associated with lifestyle factors such as stress, physical activity, smoking, alcohol consumption, obesity, and exercise. In light of this, global research shows that girls are far more likely than boys to experience mental and emotional problems and behavioral issues [7].

1.1. Aim of the Study

This study was set out to determine the menstrual abnormalities experienced by female college students and their awareness. This information will be useful in modifying health promotion and education activities for young females in this environment with a view to improving reproductive health services. It is critical to encourage students about menstrual abnormalities to reduce the impact of these abnormalities on their lives, particularly their academic performance during regular sessions. Recognizing and treating menstruation disorders is an important step toward improving overall health and well-being. It is also vital that authorities focus on various programs to raise awareness for all ladies in society.

2. MATERIALS AND METHODS

2.1. Design

A descriptive quantitative study was chosen for 100 nursing girl students in the University of Sulaimani to assess student's

awareness regarding menstrual abnormalities from period January 2024 to May 2024. The data collection started on 20th January and finished on 15th February 2024.

2.2. Study Sample

A non-probability sampling approach was used in this study to choose a convenience sample of 100 female students in Nursing College/Sulaimaniyah University over a 1-month period. Those who were interested to participate were included.

2.3. Inclusion and Exclusion Criteria

For the purpose of the study, students had to fulfill the following criteria: Students who are female, enrolled in nursing programs at the College of Nursing at Sulaymaniyah and students who willingly consent to participate in the study. Students who were not enrolled in nursing programs at the designated universities, male nursing students, and those who did not give their voluntary consent to participate were not allowed to participate.

2.4. Data Tools

Direct interviews were done with study participants to gather data. After gaining agreement, a team of six trained researchers delivered the questionnaire to individuals using convenient sampling. A questionnaire format was created through a massive review of the literature. A specially designed questionnaire was used. It consists of three sections that cover sociodemographic information, menstrual pattern information, and students' awareness regarding menstrual abnormalities. The sociodemographic information included 6 questions. It consisted of information about the (age, residency, socio-economic status, mothers' education, and marital status). The menstrual pattern includes 12 questions, consisting of information about (the age of menarche, duration of flow, amount of flow, length of cycle, painful menstruation, premenstrual syndrome, experienced amenorrhea, blood clot during menstruation bleeding, dysmenorrhea interfering with academic performance, use of medications, consulted any physician, and taking treatment). The last part contained students' awareness and included 8 questions that asked for some information regarding menstrual abnormalities. A pilot research was conducted among 10 samples to test its validity. After data collection, the data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22. Frequency, percentage, and Chi-square tests were used to evaluate any significant association between variables. The $P < 0.05$ is considered significant.

2.5. Validity and Reliability of the Study Instrument

The study tool for evaluating female nursing students' awareness regarding menstrual abnormality in nursing college should be subjected to expert evaluation, content, and face validity pilot testing in order to assure validity. Factor analysis can be used to demonstrate construct validity, whereas criterion validity is the process of comparing findings to pre-established measures. Test–retest methodology should be used to evaluate reliability in order to acquire a Pearson's correlation coefficient, or $r = 0.83$. Ten female students participated in a pilot study of the questionnaire, which was deemed viable. Together, these actions guarantee that the instrument assesses the intended perceptions in an accurate and consistent manner.

2.6. Data Collection

Data were gathered by conducting interviews with the sample using a specially designed questionnaire. The procedure for gathering data was carried out on 20th January 2024 to 15th February 2024. It took to 15 min for each student to be interviewed. Verbal consent was sought and the approval of the students to participate in the current study was secured. The interview took place one-on-one.

2.7. Data Analysis

The SPSS for Windows, version 22.0, was used to analyze the data. Frequency, percentage, and Chi-square tests were used to evaluate any significant association between variables. A $P = 0.05$ was used as the cutoff for statistical significance and 0.001 for high statistical significance.

3. RESULTS

Table 1 shows the sociodemographic characteristics of the study sample. 72% of the participants were aged 20–24. When it comes to student participation, grades one and two have the same percentage, representing 23% for each grade, whereas grades three and four, separately have a 27% participation rate. The majority of students (73%) are residents in the dormitory. Financial state of 89% was sufficient. Nearly half of the students' mothers were educated in primary or secondary schools, representing 45%. Regrettably, 36% of the students' mothers were not literate. 85% of the participants were unmarried, only 13% were married, and only 2% were divorced.

Table 2 demonstrates the menstrual patterns of the participants. According to the current results, 85% of students get menarche at age (12–14) years old. Regarding

TABLE 1: Sociodemographic characteristics of the study sample

Sociodemographic characteristic		Frequency	%
Age groups	<20 years	25	25.0
	20–24 years	72	72.0
	≥25 years	3	3.0
Grade	1st grade	23	23.0
	2nd grade	23	23.0
	3rd grade	27	27.0
	4th grade	27	27.0
Residency	With family	27	27.0
	Dormitory	73	73.0
Financial state	Insufficient	7	7.0
	Sufficient	89	89.0
	Highly sufficient	4	4.0
Mothers education	Illiterate	36	36.0
	Primary or secondary educated	45	45.0
	Under graduated	12	12.0
	Post graduated	7	7.0
Marital status	Unmarried	85	85.0
	Married	13	13.0
	Divorced	2	2.0
Total		100	100

TABLE 2: The menstrual patterns of the study sample

Menstrual patterns	Frequency	%
Age of menarche (years)		
≤11 years	7	7.0
12–14 years	85	85.0
≥15 years	8	8.0
Duration of flow (days)		
≤2 days	6	6.0
3–7 days	83	83.0
≥8 days	11	11.0
Amount of flow (pads/day)		
Hypominorrhea (≤2)	16	16.0
Normal flow (3–5)	75	75.0
Menorrhagia (≥6)	9	9.0
Length of cycle (days)		
≤20	36	36.0
21–35 normal	52	52.0
≥36 oligo menorrhea	12	12.0
Do you have a painful menstruation (dysmenorrhea)?		
Yes	73	73.0
No	27	27.0
Do you experience PMS (premenstrual syndrome)?		
Yes	55	55.0
No	45	45.0
Have you experience amenorrhea (absence of menstruation)?		
Yes	38	38.0
No	62	62.0
Do you have blood clots during menstruation bleeding?		
Yes	61	61.0
No	39	39.0
Does dysmenorrhea interfered with academic performance?		
Yes	48	48.0
No	52	52.0
Do you use any medication (painkiller) to relief dysmenorrhea?		
Yes	40	40.0
No	60	60.0
Have you consulted any physician on your menstrual problems?		
Yes	45	45.0
No	55	55.0
What type of treatment have you used?		
Medication	38	38.0
Surgery	3	3.0
Exercise	8	8.0
Other	6	6.0
None	45	45.0
Total	100	100

duration of flow, 83% of students had a normal duration (3–7 days) of flow. The amount of flow of 75% of participants was normal as they changed 3–5 pads per day. Half of the participants (52%) had a normal length of the cycle which was (21–35 days). Moreover, 73% of participants had dysmenorrhea which was the most common menstrual abnormality among the study samples. Dysmenorrhea affected the academic performance of 48%, making 40% of students to use a medication (painkiller) to relief dysmenorrhea. In addition, more than half (55%) of the participants had premenstrual syndrome. Nearly one-third (38%) of the students experienced amenorrhea during their reproductive life, whereas 61% experienced having blood clots with menstrual bleeding. Finally, 45% of the participated students consulted physicians on their menstrual problems, and 38% used medication as treatment.

Table 3 presents student's awareness regarding menstrual abnormalities. The vast majority (78%) had no awareness about normal timing of menarche, 74% had no awareness about normal amount of menstrual bleeding, 87% had no awareness about normal duration of normal menstruation blood flow. Unfortunately, 90% of students mentioned that severe cramps during menstruation is normal which clearly shows their poor awareness regarding this issue. The same of having blood clots with menstrual bleeding which represents 70%. In addition, 88% had no awareness that the absence of menstruation for more than 3 months is abnormal. This result supports the general observation that most students have a low-to-moderate awareness of irregular menstruation. Finally, half of the students (51%) mentioned that the severe PMS is considered abnormal.

TABLE 3: Student's awareness regarding menstrual abnormalities of the sample

Student's awareness regarding menstrual abnormalities	Frequency	%
Normal timing of menarche should be at the age of (12–13) years?		
Yes	22	22.0
No	78	78.0
Menstrual bleeding more than 6 pad changes per day is considered as heavy bleeding?		
Yes	26	26.0
No	74	74.0
Duration of normal menstruation blood flow is between 21 and 35 days?		
Yes	13	13.0
No	87	87.0
Sever cramps during menstruation is abnormal?		
Yes	10	10.0
No	90	90.0
Having blood clots with menstrual bleeding is abnormal?		
Yes	30	30.0
No	70	70.0
Experiencing severe PMS (severe premenstrual syndrome) considered abnormal?		
Yes	51	51.0
No	49	49.0
Absence of menstruation for more than 3 months is abnormal?		
Yes	12	12.0
No	88	88.0
Total	100	100

TABLE 4: Overall student's awareness regarding menstrual abnormalities

Variable	*n*=100	
	F	%
Low awareness	41	41.0
Moderate awareness	40	40.0
High awareness	19	19.0

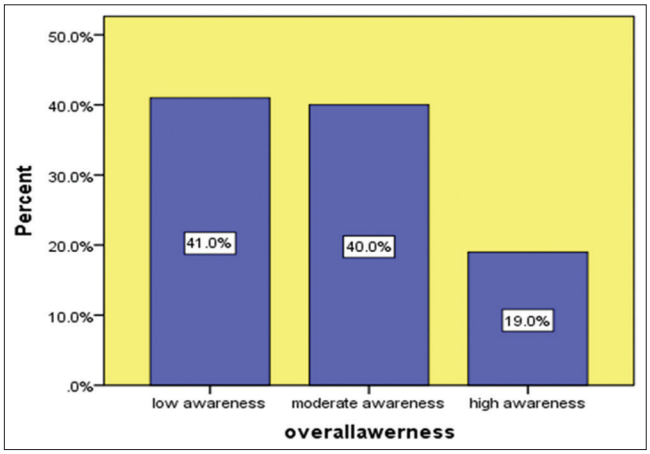

Fig. 1. Overall Student's awareness regarding menstrual abnormalities among the students.

Table 4 displays the overall awareness of students regarding menstrual abnormalities. According to the present study, 41% had a low awareness, 40% had a moderated awareness, whereas only 19% had a high awareness regarding menstrual abnormalities, see Figure 1.

Table 5 indicates the association between sociodemographic characteristics of participants and overall student's awareness regarding menstrual abnormalities. According to the results, there was no association between socio-demographic characteristics and overall student's awareness regarding menstrual abnormalities except of having a significant association between the group age of students and their awareness regarding menstrual abnormalities of $P = 0.005$.

4. DISCUSSION OF THE RESULTS

Our study aimed to explore the nursing students' awareness regarding menstrual abnormalities in the university of Sulaimani. The results support assessing students' awareness and making critical decisions to improve their awareness.

According to the presented results, the vast majority of participants were in the age group (20–24) years old, representing 72%. The group age of students in a study conducted by Manna *et al.*, 2023 [8], ranged between (17–24) years which nearly matches the present results. Regarding the grade of students, grades one and two have the same percentage of participation which represents 23% for each grade, the same is true for grades three and four which representing 27% for each grade, whereas the majority of participants in Manna and Jainendran study, 2023, belonged to 1st and 3rd years [8]. The majority of students (73%) are residents in the dormitory.

The financial state of 89% of the students was sufficient. Our results disagree with the results conducted Manna, Jainendran, 87.7% of participants belonged to the upper socioeconomic class [8]. Nearly half of the students' mothers' education was primary or secondary education which represents 45%, while unfortunately, 36% of students' mothers were illiterate. Tis results show that mothers' education plays a great role in students awareness about menstrual abnormalities, the

TABLE 5: Association between socio-demographic characteristics and overall Student's awareness regarding menstrual abnormalities among the students

Variables	*n*=100						Total	
	Low		Moderate		High			
	F	%	F	%	F	%	F	%
Age groups								
<20 years	17	68.0	6	24.0	2	8.0	25	25.0
20–24 years	22	30.6	34	47.2	16	22.2	72	72.0
≥25 years	2	66.7	0	0	1	33.3	3	3.0
P=0.005	Significant		FET=12.539				df=4	
Grade								
1st grade	16	69.6	5	21.7	2	8.7	23	23.0
2nd grade	10	43.5	9	39.1	4	17.4	23	23.0
3rd grade	8	29.6	12	44.4	7	25.9	27	27.0
4th grade	7	25.9	14	51.9	6	22.2	27	27.0
P=0.059	Not significant		x^2=12.109				df=6	
Residency								
With family	14	51.9	9	33.3	4	14.8	27	27.0
Dormitory	27	37.0	31	42.5	15	20.5	73	73.0
P=0.428	Not significant		x^2=1.814				df=2	
Financial status								
Insufficient	4	57.1	0	0	3	42.9	7	7.0
Sufficient	35	39.3	40	44.9	14	15.7	89	89.0
Highly sufficient	2	50.0	0	0	2	50.0	4	4.0
P=0.029	Not significant		x^2=10.149				df=4	
Mother education								
Illiterate	10	27.8	16	44.4	10	27.9	36	36.0
Primary or secondary	21	46.7	18	40.0	6	13.3	45	45.0
Undergraduates	6	50.0	3	25.0	3	25.0	12	12.0
Post graduate	4	57.1	3	42.9	0	0	7	7.0
P=0.307	Not significant		x^2=7.214				df=6	
Marital status								
Unmarried	35	41.2	34	40.0	16	18.8	85	85.0
Married	6	46.2	5	38.5	2	15.4	13	13.0
Divorced	0	0	1	50.0	1	50.0	2	2.0
P=0.824	Not significant		x^2=2.065				df=4	

FET: Fisher-exact-test, x^2: Chi-square, DF: Degrees of freedom

higher the mother's education higher the daughter knowledge and awreness.

Most of the participating students (85%) were unmarried, also in a study performed (Shrestha *et al.*, 2022). [9] Most participants (85.9%) were unmarried, the same results of the study conducted by Igbokwe And John-Akinola, 2021. The majority of the respondents (97.5%) were single, which matches the results of the present study.

Regarding the menstrual patterns of participants, 85% of students get menarche at age (12–14) years old. 77% of the sample study conducted by Shrestha *et al.*, 2022, became menarche at 12–14 years old which agrees with the results of our study [9]. The same results were done by Manna *et al.*, 2023, where the age of menarche for most participants was 12–14 years [8].

In the present study, 83% of students had a normal duration (3–7 days) of flow, in comparison with (Shrestha *et al.*, 2022) [9] study nearly two-thirds of samples (65.9%) had a 3–5 days duration of menstrual blood flow. The amount of blood flow of 75% of participants was normal as they changed 3–5 pads per day while participants in a study conducted by Shrestha *et al.*, 2022, changed 3–5 pads/day was of prevalence 57% [9]. Kanti *et al.*, 2020, investigated that Heavy menstrual bleeding can cause iron-deficiency anemia, which is among the leading causes of years lived with disability in low-income and middle-income countries [10].

Our study agrees with the results of Manna *et al.*, 2023 study, where about 67.4% of students had moderate blood flow [8]. Half of the participants (52%) had a normal length of cycle which was (21–35 days), while in Shrestha *et al.*, 2022 [9] study, 68.8%of participants had a normal length

of cycle which is somehow higher than the results of the present study. In a recent study conducted by Bahadori *et al.*, 2023 [11], 82.3% of participants had normal lenghth of the menstrual cycle which is higher than the present results. Moreover, (73%) of participants had dysmenorrhea which was the most common menstrual abnormality among the study samples. Dysmenorrhea affected the academic performance of 48% of them making 40% of students use a medication (painkiller) to relieve dysmenorrhea, the same results of (Manna *et al.*, 2023) [8] study, dysmenorrhea was the most prevalent gynecological issue which represented (84.0%), while in a study that conducted by Esimai and Esan, 2010, Dysmenorrhea was present in 62.5% of their study sample [12]. Quarter of the study done by Cousins and Saunders, 2023,participants missed time at college due to painful periods [13].

More than half (55%) of the participants had premenstrual syndrome, our study agrees with the results of Manna *et al.*, where the participants experienced pre-menstrual symptoms with a prevalence of 68.4% [8]. Tiranini *et al.*, similarly explored that the majority of the participants gave a history of premenstrual symptoms. According to a recent meta-analysis, premenstrual symptoms are very common, affecting about half of women of reproductive age worldwide [14].

Nearly one-third (38%) of the students experienced amenorrhea during their reproductive life, whereas 61% experienced having blood clots with menstrual bleeding. Almost half 45% of the participating students consulted a physician on their menstrual problems 38% of them used medication as treatment, whereas 16.6% of participants in a study done by Manna *et al.*, 2023, used analgesics while 45% of students did not use any type of treatment [8]. In contrast, in a study conducted by Esimai and Esan, 2010, A few students (10.5%) decided to seek help for menstrual abnormalities [12]. Kanti *et al.*, 2020, had found that dysmenorrhea was the most common menstrual abnormality. Medication was being taken mostly for dysmenorrhea [10]. The same with Bahadori *et al.*, 2023, in their study, 73.7% of students experienced a history of dysmenorrhea which made 26.2% to take medication [11]. Many individuals experience irregularities in their cycles, but due to a lack of awareness or fear of social stigma, they may not seek the necessary medical care. The physiological increase in prostaglandins during the period plays a significant role in primary dysmenorrhea. Prostaglandins, act by stimulating the contraction of uterine muscles to reduce the blood flow which is responsible for uterine hypoxia that induces painful cramping [15].

Results about Student's awareness regarding menstrual abnormalities explored that the vast majority (78%) of students had no awareness about the normal timing of menarche, 74% had no awareness about the normal amount of menstrual bleeding, 87% had no awareness about normal duration of normal menstruation blood flow. Unfortunately, 90% of students mentioned that severe cramps during menstruation are normal which clearly shows their poor awareness regarding the situation. The same of having blood clots with menstrual bleeding which represents 70%. In addition, 88% of the study sample had no awareness that the Absence of menstruation for more than 3 months is abnormal. Finally, half of the students (51%) mentioned that severe PMS is considered abnormal. According to the present study, 41% of the study sample had a low awareness, 40% had a moderated awareness, and only 19% had a high awareness regarding menstrual abnormality. Nearly, the same results of a study done by Esimai and Esan, 2010, the student's awareness of menstrual abnormalities was poor in the prevalence of (29%) [12]. On the contrary, almost all (98.9%) of the respondents were aware of menstrual disorders in a study conducted by Igbokwe and John-Akinola 2021, [16]. Mittiku 2022, conducted a study, that showed that more than one-third of the college students in Debre Berhan town have experienced menstrual irregularity. Menstrual abnormalities should not be ignored, and greater awareness is essential to improve women's reproductive health. By fostering open discussions, promoting education, and encouraging timely medical consultations, we can reduce the stigma around menstruation and ensure that all women can manage their health confidently.

According to the results, there was no association between socio-demographic characteristics and overall student awareness regarding menstrual abnormalities except for a significant association between group age of students and their awareness regarding menstrual abnormalities. This reason may be due to the absence of relationships, such as sample homogeneity or awareness complexity. The same, Esimai and Esan, performed a study, and their results showed that the awareness of students of menstrual abnormalities was significantly influenced by their age [12]. Most of the parameters did not show a significant association so a larger study or multicentric study is required.

5. CONCLUSION

In conclusion, many of the students had a low awareness regarding menstrual abnormalities, recommends the need for educational programs for college students, and secondary

and high school students in addition to parent education, work toward breaking the stigma surrounding menstruation, particularly in societies or communities where menstruation is considered a taboo topic. Schools, communities, and media can collaborate to reduce embarrassment around discussing menstruation to elevate awareness regarding menstrual abnormalities. Furthermore, there was a significant association between the group age of students and their awareness regarding menstrual abnormalities. Menstrual pain and its effect on academic performance are mentioned, which gives the study a significant new dimension. It emphasizes how menstrual irregularities have practical repercussions, particularly when discomfort prompts drug use and reduces academic performance. This feature supports the claim that menstruation health should receive greater attention in both the medical and academic spheres. Recognizing and addressing menstrual abnormalities is a crucial step toward better overall health and well-being. It is also critical to enhance authorities to focus on some programs for raising awareness for all females in society.

6. ACKNOWLEDGMENT

Gratitude is extended to all of the study participants for their participation.

7. ETHICAL CONSIDERATIONS

The scientific and ethics committees of the College of Nursing at the University of Sulaimani approved the study proposal. Before collecting data, formal authorization was obtained from health and government authorities, the study sample was provided explanation about the purpose of the study and informed consent was obtained. The participation was voluntary, and participants had right to withdraw at any time during data collection period.

8. CONFLICTS OF INTERESTS

The author affirms that they have no conflicts of interest.

9. FUNDING

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