

Assess the Effect of Menstrual Symptoms on a Daily Activities among Assiut Nursing Secondary School Students

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Abstract

Background: Menstruation is a natural phenomenon. The vast majority of women suffer from discomfort and some level of pain through their menstrual cycle, which can significantly affect their daily activities. **This study aimed to** assess the effect of menstrual symptoms on a daily activities among Assiut nursing secondary school students. **Subjects and Methods:** A Descriptive research design was conducted. **Setting:** This research was carried out in Assiut nursing secondary school female students at Al-Eman General Hospital in Assiut City. **Sample:** A convenient sample of All available nursing secondary school students (190-all levels) were including in this study **Data collection tools:** Data were collected by an interview questionnaire comprised of four parts: **Part (1):** Personal data **Part(2):** 7 questions regarding Menstrual data **Part (3):** 5 questions regarding Daily activities **Part (4):** 5 questions regarding Managements of menstrual symptoms **Results:** The results of the current study illustrated that 96.3% of the students have menstrual symptoms; the most frequent symptom (80.4%) was dysmenorrhea. While 53.2% have changed on their daily activities in a form of withdraw from social activities (58.4%). The students management of their symptoms by using hot bathes (84.7%) and (77.9%) using hot herbal drinks. **Conclusion:** The vast majority of the students have menstrual symptoms, more than half of them have changed on daily activities. **Recommendation:** Empower female adolescents with adequate knowledge about menstruation, its symptoms and management, daily activities.

Keywords: Daily Activities & Menstrual Symptoms.

Introduction

Every woman experiences the natural occurrence of menstruation during her period of reproduction. **Stock, et al., (2022).**

The majority of women endure some level of pain and discomfort during their menstrual cycles, which may significantly impact their daily activities. **(Sharp, et al., (2022)).**

The menarche is one of the primary physiological changes that occur during adolescents, and it is often associated with irregular menstrual cycle symptoms, menorrhagia and dysmenorrhea. **Bahrami, et al., (2022)** Many girls commonly endure dysmenorrhea, recurring cramps, and lower abdomen pain during their menstrual cycle. **Sangeetha, (2022)**

During the menstrual cycle, breast tenderness, diarrhea, back pain, vomiting, and fluid retention are the most common physical discomforts. **Meneghesso, et al., (2022)**

Many girls may experience a variety of pain kinds, such as burning, sharp, dull, nauseous, shooting pain. Additionally, dysmenorrhea can occur a few days before or after menstruation, and it typically subsides once the menstrual cycle finished.

Drabble, et al., (2021).

The daily activities of girls fluctuates throughout their menstrual cycle, resulting in decrease in mental state during and several days prior to the period. **Kreuzfeld, et al., (2022)** this effect includes sickness absenteeism, reduced day-to-existence activities, & failure to communicate with companions, resulting in lack of their daily activities **Dhanalakshmi, (2021).** The daily activities affected on a several elements, like physical health, mental and psychological well-being, social relationships and environmental conditions. **Ren, et al., (2022)**

Significance of the study:

The menstrual symptoms cause a periodic complex physical, mental and behavioral changes, and the severity interferes with daily activity or social relationship.

Badrasawi, et al., (2021).

According to UNICEF estimates, 1 in 10 African girls at school age don't attend class while they are menstruating. **Michael, et al., (2020)** Similarly, World Bank statistics indicated that students have been absent from school 4 days every 4 weeks because of menstruation. **Azevedo, et al., (2021).**

A study of secondary school students in Zagazig City, Sharqia governorate, Egypt, found that 51.3% of them did not practice proper menstrual hygiene. Also, a study in the Qaliubia Governorate in Benha, Egypt, found that 65.7% of the students in the study showed a general prevalence of RTI symptoms as a result of poor hygiene habits. **Mohamed, (2018)**

Study of students daily activities is highly important and has therefore attracted the attention of several researchers of this field. **Berkman, & Wilson (2021)**. So, this research conducted to assess the effect of menstrual symptoms on a daily activities among Assuit nursing secondary school students.

The Aim of this study:

Was to assess the effect of menstrual symptoms on a daily activities among Assuit nursing secondary school students through the following objectives:

1. Assess menstrual symptoms
2. Assess students managements for these symptoms
3. Assess changes on a daily activities

Research question:

What are the effects of menstrual symptoms on a daily activities among Assuit nursing secondary school students?

Subjects and Methods

Subjects and methods of this study divided into four designs technical, operational, administrative and statistical designs.

Technical design:

It involved research design, setting, sample and tools of the study.

Research design:

Descriptive research design was conducted for this study.

Setting

The study was conducted at Assuit Nursing Secondary School female at Al-Eman General Hospital, Assuit city. The school founded in the third floor of the hospital (clinics buildings), it was composed of six classes two for first year student, two for second year students and the last two for third year students.

Sample Type:

A convenience sample was recruited for this study.

Sample size:

A sample of all available nursing secondary school students (190 nursing female students) was included in the study. This was collected from all studying years from first to third year.

Inclusion criteria:

All female nursing secondary school students studying at Assuit Nursing Secondary School female Students at Al-Eman General Hospital accepted to participated in the study.

Exclusion criteria:

Students who refused to participate in the study

Tool of data collection:

A structured interviewing questionnaire was used in this study:

This tool was designed and utilized by the researcher based on literature review and consulting expertise in this area, it was structured to include the following parts:

Part 1: Personal data as: age, residence, fathers' education, fathers' occupation, mothers' education, mothers' occupation.

Part 2: Menstrual data that involved age of menarche, menstrual regularity, duration, and interval. Also past experience of menstrual symptoms, (types and frequency) and history of taking medications for these symptoms.

Part 3: Daily activities as questions about attendance at school, performing household activities, visiting the (Holy places, relatives and friends during menses), physical activities (walking, exercises), and changing in any daily activity during menstruation.

Part 4: Managements for symptoms: Taking herbal drinks, applying heating bag or bathes to relieve pain, take medications and type of medication.

Tool Validity:

Tools of the study were reviewed by three panel experts- from the Obstetrics& Gynecological Nursing department, Faculty of Nursing at Assiut University to test the face and content validity to make sure that the tools accurately measures what supposed to measure . Modifications of the tools were done according to the panel judgment on clarity of sentences, appropriateness of content and sequence of items.

Tool Reliability:

Reliability for tools was applied by the researcher for testing the internal consistency of the tools. Reliability was assessed using Cranach's alpha test. It was measured by using reliability item deprived from scale and analyzes that found in SPSS program. It was reported as 0.715.

Administrative design:

Permission was obtained from the director of Secondary School female at Al-Eman General Hospital.

Operational design:

The design involved description of the preparatory phase, pilot study and filed work.

Preparatory phase:

The researcher reviewed the related literature of the current study local, international, using text books, articles, and significant magazines, the tools were prepared based on this literature and standard scale, they were reviewed for validation by experts in obstetrics and gynecology.

Pilot study:

After preparatory of the questionnaire it was pre-tested on 10% of cases that consider 19 female students to identify the validity and reliability of the study tools. Subjects included in the pilot study were included in the study as there were no major modifications in the study tools.

Field work:

Data collection of the study took about 3 months started from the beginning of February 2023, and completed by the end of April 2023. It involved the following:

Procedures:

- An official permission was obtained from the authorized person to carry out the study.
- The researcher admitted to the Secondary School female at Al-Eman General Hospital, and met the school's manager.
- The researcher explained nature and purpose of the study to the manager and showed to her an obtained official permission.
- The Data were collected two days a week , Monday and Thursday , from 11 am to 12 pm at break time in the classroom
- The number of group were 10, and the number of students in each group were 19 students.
- Based on the classes' availability and studying and after schedule after excluding the days of exams and quizzes, the researcher interviewed with each class from all six classes, greeting the students, and identified them by herself, the nature and purpose of the study was explained to female students attended at that day, and then oral permission for voluntary participation was obtained. This took a time from 5-10 minutes.
- The researcher distributed the questionnaire (Arabic copy) to all student presented in the class.
- The researcher explained to all students in the class all items (Personal data, menstrual data, daily activities, managements for symptoms, and menstrual hygiene) involved in the questionnaire, and how to fill it. And repeated this with each class.
- The researcher asked every student to read the questionnaire and answer questions carefully, and could ask for any items in the questionnaire if not understood to them. Filling the questionnaire took a time from 15- 20 minutes.
- The researcher collected all filled questionnaire from all students.
- The researcher thanked all students participated in the study
- Then instruction and counseling were introduced from the researcher regarding menstruation and its hygiene.
- Give instructions & handouts for the students

Ethical considerations:

- An official permission was obtained from Secondary School female at Al-Eman General Hospital.
- As well as an ethical approval on the ethical committee of Faculty of Nursing at Assuit University.
- An informed oral consent was obtained from each student before inclusion in the study sample and after explanation of the study aim in simple and clear manner.
- Clear and simple clarification of the study nature and its expected outcomes was explained.
- Each participant was informed that she had the right to withdraw from the study at any time she wants.
- Nature of the study did not cause any harm or pain for the entire sample.
- Confidentiality and privacy were put into consideration regarding the collected data

Statistical analysis:

The collected data was organized, categorized, coded, tabulated and analyzed using the Statistical Package for Social Sciences (SPSS) version 26. Data was presented in tables and figures using numbers, percentages, means, standard deviation and Pearson test was used in order to find an association between two qualitative variables. Statistical significant was considered at P-value < 0.05.

Results

Table (1): Distribution of the studied nursing students according to their personal data (N=190):

socio demographic characteristics	N	%
Age/ years		
▪ 15 years	27	14.2
▪ 16 years	60	31.5
▪ 17 years	63	33.2
▪ 18 years	40	21.1
Age Range (Mean±SD)	15-18 (16.61±.97)	
Residence		
▪ Urban	129	67.9
▪ Rural	61	32.1
Mother's education		
▪ Illiterate	25	13.2
▪ Read & write	22	11.6
▪ Basic education	11	5.8
▪ Secondary education	84	44.2
▪ University education	48	25.2
Mothers' occupation		
▪ Housewife	143	75.3
▪ Employee	47	24.7
Fathers' education level		
▪ Illiterate	0	0.0
▪ Read & write	19	10.0
▪ Basic education	18	9.5
▪ Secondary education	80	42.1
• University education	73	38.4
Fathers' occupation		
▪ Farmer	14	7.4
▪ Employee	112	58.9
▪ Not work	7	3.7
▪ Others	57	30.0

Table (2): Distribution of the studied nursing students according to their menstrual data (N=190):

Menstrual data	N	%
Age of menarche		
▪ <12 years	16	8.5
▪ 12-15 years	169	88.9
▪ >15 years	5	2.6
menstrual duration/ days		
▪ < 3 days	8	4.2
▪ 3-7 days	176	92.6
▪ > 7 days	6	3.2
Mean±SD	4.06±1.20	
Menstrual interval/ days		
▪ < 21 day	8	4.2
▪ 21-35 day	163	85.8
▪ > 35 day	19	10.0
Mean±SD	29.41±4.16	
Types of menstrual symptoms		
▪ No symptoms	7	3.7
▪ Dysmenorrhea	153	80.4
▪ Vomiting	3	1.6
▪ Muscle pain	21	11.1
▪ Headache	6	3.2
Frequency of menstrual symptoms		
▪ No symptoms	10	5.3
▪ Every month	152	80.0
▪ With stress only	19	10.0
▪ Interrupted symptoms (irregular)	9	4.7
Taking medications		
▪ Yes	50	26.3
▪ No	140	73.7

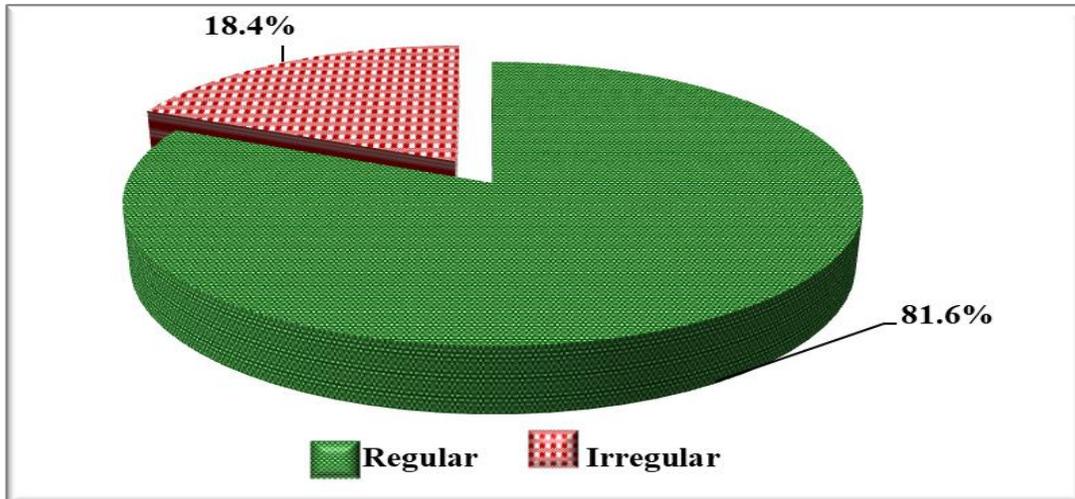


Figure (1): Distribution of the studied nursing students according to their menstrual regularity (Rhythm) (N=190):

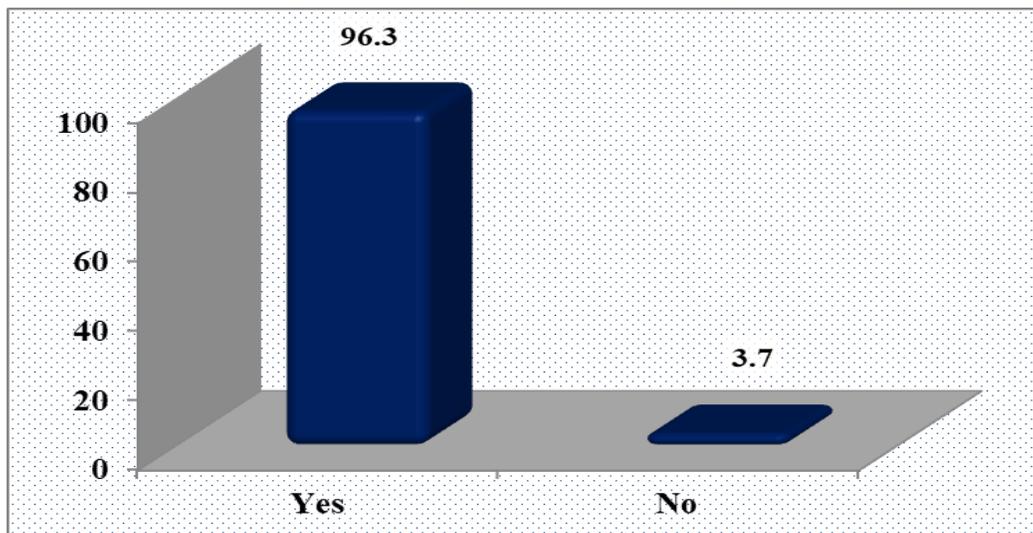


Figure (2): Distribution of the studied nursing students according to their experience of menstrual symptoms (N=190):

Table (3): Distribution of the studied nursing students according to their changing in routine daily activities (N=190):

Daily activities	N	%
Attending school		
▪ Yes	186	97.9
▪ No	4	2.1
Household activities		
▪ Yes	155	81.6
▪ No	35	18.4
Visiting Holy places, friends and relatives during menstruation		
▪ Yes	79	41.6
▪ No	111	58.4
Physical activities (walking ,exercises)		
▪ Yes	136	71.6
▪ No	54	28.4
Do any of your daily activities change with menstruation?		
▪ Yes	101	53.2
▪ No	89	46.8

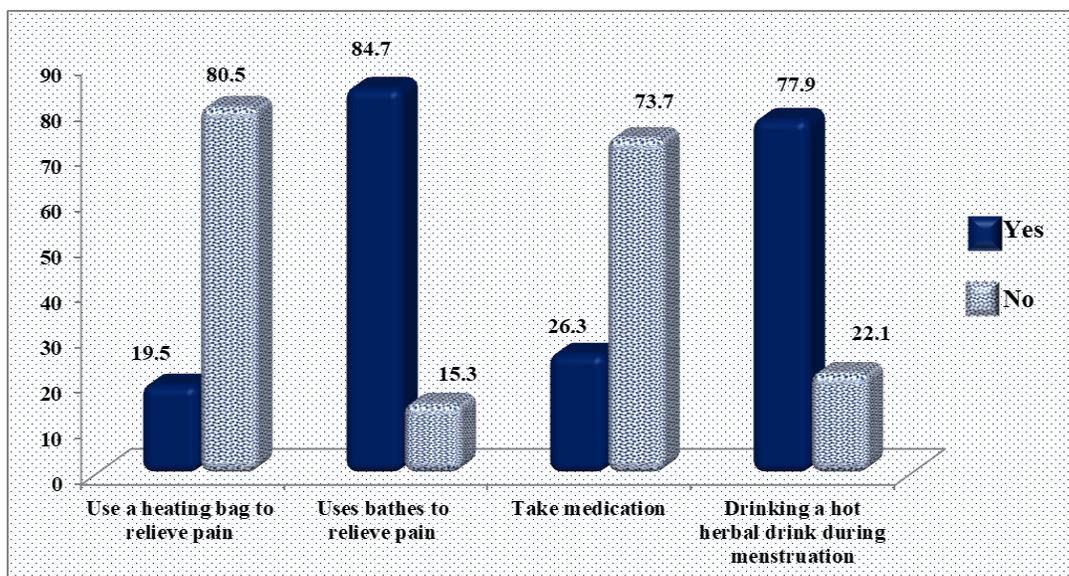


Figure (3): Distribution of the studied nursing students according to their managements of menstrual symptoms (N=190):

Table (4): Relationship between the studied nursing students experience of menstrual symptoms and their routine daily activities (N=190):

Daily activities	Experience of menstrual symptoms				p-value
	Yes (183)		No (7)		
	N	%	N	%	
Attending school					0.925
▪ Yes	179	97.9	7	100.0	
▪ No	4	2.1	0	0.0	
Household activities					0.200
▪ Yes	148	80.9	7	100.0	
▪ No	35	19.1	0	0.0	
Visiting Holy places, friends and relatives during menstruation					0.477
▪ Yes	77	42.1	2	28.6	
▪ No	106	57.9	5	71.4	
Physical activities (walking, exercises)					0.002**
▪ Yes	131	71.6	5	71.4	
▪ No	52	28.4	2	28.6	
Do any of your daily activities change with menstruation?					0.004**
▪ Yes	101	55.2	0	0.0	
▪ No	82	44.8	7	100.0	

(*) Statistical significant difference (p-value < 0.05)

(**) Highly statistical significant difference (p-value < 0.01)

Table (1): Reveals the studied nursing students’ socio demographic characteristics. It was cleared that mean and SD of their age was 16.61±.97 years and about 67.9% of the studied nursing students lived in urban areas. Regarding their mothers’ data, about 44.2% and 75.3% of them had a secondary level of education and were housewives respectively. Concerning their fathers’ data, about 42.1% and 58.9% of them had a secondary level of education and were employed respectively.

Table (2): Clarifies that the studied nursing students’ (88.9%) their menarche started at age between 12-15 years, about 92.6% of them their menstruation takes a duration from 3-7 days and interval from 21-35 days among 85.8%. Concerning menstrual symptoms, it was reported that 80.4% of them had dysmenorrhea and 80.0% of symptoms repeated every month. About 26.3% of the studied nursing students took medications to manage their menstrual symptoms.

Figure (1): Shows that 81.6% of the studied nursing students had regular menstruation.

Figure (2): Reveals that 96.3% of the studied nursing students had experiences of menstrual symptoms.

Table (3): Clarifies that 53.2% of the studied nursing students' had changed in daily activities in a form of withdraw from social activities (58.4%).

Figure (3): Shows Distribution of the studied nursing students according to their managements of menstrual symptoms. Students management of their symptoms were hot bathes (84.7%) and hot herbal drinks (77.9%).

Table (4): Shows relationship between the studied nursing students experienced menstrual symptoms to their routine daily activities. About 44.8% of them who experienced menstrual symptoms had changed on their daily activities in a form of withdraw from social activities (57.9%).

Discussion

Menstrual Symptoms (MS) is a common gynecological disorder that typically manifests as behavioral and physical symptoms that appear a few days before menstruation and disappear after menstruation. Students typically ignore the symptoms, which has an impact on their activities. (Al-Shahrani et al., 2021). So this study assess the effect of menstrual symptoms on daily activities among Assuit nursing secondary school students.

Concerning experiences of menstrual symptoms, the present study revealed that the vast majority of the studied nursing students had past experiences of menstrual symptoms. Similar findings reported by Emem & Hassan, 2017, who carried out their study in Egypt to identify the correlation between quality of life and dysmenorrhea, they reported that the great majority of the studied nursing schools students had symptoms combined with menstruation. . Also Abdel-salam et al., 2018, who performed their study in Saudi Arabia to assess the prevalence, determinants, impact and treatment of dysmenorrhea among female students at Jouf University, they showed that the great majority of the studied female students had menstrual symptoms. Theses similarity revealed that menstrual symptoms were a common frequent among females that should be taken in to considerations its effect on their daily activities.

Regarding daily activities of the studied nursing students, actual study cleared that more than half of them didn't visit Holy places, friends and relatives during menstruation. Also more than half of them their daily activities had changed with menstruation.

Also Schoep et al, 2019 who carried out their study to obtain a nation-wide overview of menstrual symptoms and their impact on everyday activities, and found that during female menstrual period, near to two fifths of all femal reported not to be able to perform all their regular daily activities. Slightly less

than one half of them told their family that menstrual symptoms were the reason for the transfer of tasks. And Škapare et al, 2022, who applied their study to assess the presence of interfering menstrual symptoms and their impact on daily activities, and showed that almost half of the respondents' symptoms had a particular effect on daily activities and more than two thirds had interrupted their everyday tasks. About one third of them unable to perform their duties and their responsibilities to others. This similarity showed the obvious effect of menstrual symptoms on performance of female daily activities and duties.

Concerning to menstruation and its effect on social activities Prince & Annison, 2023, who performed their study explores the impact of menstruation and premenstrual syndrome (PMS) on habitual participants in adventurous activities through the voices of female, and illustrated that the majority of female noted that their participation is affected by menstruation/PMS. Also Sundari et al., 2022, who performed their study to identify the psychosocial problems of adolescent girls during menstruation, and reported that more than one third had social problem when they were menstruated. This similarity showed that the female need for raise awareness regarding menstrual information and culture to aid them to adapted with changes and be familiar with it.

Pointed to managements of menstrual symptoms, existing findings shows that the great majority of students used hot bathes to relieve pain while less than one fifth of them used heating bags. More than one quarter of the studied nursing students took pharmacological treatment to relieve pain.

In agreement with previous findings, Ali et al., 2018, who implemented their study to evaluate the effect of health education program on menstrual practices among secondary school girls, they showed that less than one fifth of the studied students applied heat bag for pain relief, the majority of them took pharmacological treatment to relief the pain, this agreement support the importance of providing counseling to all female students regarding safe and effective management measures to relieve menstrual pain.

Near to previous findings, Yousef et al., 2018, who carried out their study to assess how menstrual education intervention affects institutionalized adolescent girls' performance, they showed that more than a third of the studies girls took medication during their menstruation.

Disagreed with previous findings, Alsaleem, 2018, who implemented their study in Saudi Arabia to assess the prevalence of dysmenorrhea and associated menstrual symptoms and their self-management techniques among female university students, he

reported that slightly less than two thirds of the studied students used pharmacological treatment to manage menstrual pain,. Differences may be back to changes in the study settings, customs, and cultures of the studied sample.

Also **Goda et al., 2020b**, who demonstrated their study in Egypt to determine the prevalence of dysmenorrhea among secondary girl students, they found that more than one half of the studied girls took analgesics to manage menstrual pain and less percent of them applied hot compresses on their abdomen or took a hot shower. This is the cause for vital need to publish the other natural measures to manage menstrual pain among girls.

As regards drinking a hot herbal drinks during menstruation, present study illustrates that, more than two thirds of the studied nursing students drank a hot herbal drinks during menstruation,. The same opinion was reported by **Arafa et al., 2018**, who applied their study in Egypt to investigate the prevalence, and patterns of dysmenorrhea and premenstrual syndrome (PMS) amongst girls, they illustrated that slightly less than three fifths of the studied girls had a herbal fluids to manage menstrual pain. Also **Abdel-salam et al., 2018** reported that lightly more than three fifths of female university students had a herbal fluids to manage menstrual pain. On the other side **Ali et al., 2018**, reported that slightly more than two fifths of the students in the study took herbal drinks to alleviate menstrual pain.

This similarity enhanced the need to increase females' awareness regarding benefits of hot and herbal fluids in alleviating menstrual pain through counseling campaign.

Concerning relation between the studied nursing students experience of menstrual symptoms and to their daily activities, present study clarified a highly statistical significant relation between experience of menstrual symptoms and physical activities and activities change with menstruation at p-value <0.01. While there was no statistical significant differences between experience of menstrual symptoms and attending school, household activities, and visiting Holy places, friends & relatives at p-value >0.05.

Regarding the studied nursing students' menstrual data, actual study reports that the great majority of them their menarche started at age from (12-15) years and had interval from (21-35 day), the vast majority of them their menstruation take a duration from (3-7 days). Concerning menstrual symptoms, it was reported that more than three quarters of them had colic and their symptoms repeated every month. More than one quarter of the studied nursing students took medications for their menstrual symptoms.

On the same line **Mostafa et al., 2023**, who performed their study to evaluate the effectiveness of

emotional freedom technique for reducing primary dysmenorrhea intensity among female students, they illustrated that nearly three quarters of the female students whose menarche age were studied. Were ≥ 12 years, more than two thirds of them their menstrual cycle ranged between 1-<35 days, the great majority of them had menstrual duration between 1-7days.

Also **Emem & Hassan, 2017**, found that nearly three fifths of the nursing students assessed had age of menarche ranged from (10-13) years, less than two thirds of them had a Menstrual duration ranging from (4-5) days and the vast majority of them their menstrual duration ranged from (21-33) days.

Also **Mahdi & Khairi, 2020**, clarified that more than three quarters of the studied female students had age of menarche ranged from (12-16) years, and the great majority of them had duration of menstruation ranged from (4-7) days.

Pointed to menstrual regularity, present study shows that the great majority of the studied nursing students had regular menstruation and less than one fifth of them had irregular menstruation. Similar findings reported by **Raju, 2019**, who carried out their study to determine the effect of menstrual symptoms on academic performance among nursing students, he cleared that less than three quarters of the studied students had regular menstruation and more than one quarter of them had irregular menstruation.

Also **Soliman et al., 2022**, who applied their study In order to evaluate the impact of premenstrual syndrome on the quality lifestyles of female students pursuing adolescent nursing, they showed that nearly three quarters of nursing female students had regular menstruation and While (**Hu et al., 2019**), found that more than two thirds of the studied female university students had regular menstruation. This slightly difference back to applying the study on young females & in different setting which may affect on beginning and regularity of menstruations.

As regard the studied nursing students' socio demographic characteristics. The present study clears that mean and SD of their age was $16.61 \pm .97$ years, slightly more than two thirds of them lived in urban areas. More than two fifths and slightly more than three quarters of their mothers had a secondary 28 level of education and were housewives respectively concerning their fathers' data, about more than two fifths and more than two thirds of them had a secondary level of education and were employee respectively.

The same findings reported by **Goda et al., 2020a**, who reported that more than one third of the studied students had age from 17-19 years, more than three fifths of them were from Urban areas. Concerning mothers' data, slightly less one third of them had a

secondary school and more than three quarters of them were housewives. As regard fathers' data, less than two fifths of them had a secondary school and more one half of them were employed. From the researcher point of view, Agreement here I related to working on the same setting (Assuit) and similar sample (among secondary girl Students) in both studies.

The differences may be related to the difference in the respondents' personal data in the study from different geographic areas.

Conclusion:

Based on the results of the current study The vast majority of the students have menstrual symptoms , more than half of them have changed on daily activities.

Hot bathing and hot herbal drinks were the most common management methods used.

Recommendation

In the light of the current study findings, the following recommendations are suggested:

- Using media channels and TV shows regarding menstrual symptoms to improve awareness among all reproductive age group.
- Applying instructional curriculum should be include subjects about menstruation its symptoms, its management and daily activities.
- Future studies should focus on the Assess The Effect of Menstrual Symptoms on a Daily Activities Among Assuit Nursing Secondary School Students
- Empower female adolescents with adequate knowledge about menstruation, its symptoms, its management and daily activities.

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