

Adolescents' Feelings About Menarche in Mosul Schools¹

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ABSTRACT

Background: Negative feelings at menarche among adolescent girls is one of the common public health problems worldwide today, resulting in physical and psychological harmful health effects among them.

Objective: to assess adolescents' feelings about menarche in Mosul schools.

Materials and Methods: A cross-sectional study design was performed from the 8th of September 2022 to the 11th of June 2023. The data were obtained through questionnaires that were self-administered to assess emotional responses regarding menarche by using the Expected/Experienced Emotions Related to Menarche Scale. The study sample selected by purposive sampling approach and consist of 750 female adolescents aged 12-17 years and studying in seven intermediate and secondary schools girls in Mosul, Iraq. SPSS software version 26 was used to analyse the data acquired in this study.

Results: The majority of girls (58.9%) are between 14 and 15 years of age. 50.1 per cent of female adolescents have family members that range from (5-8). More than half of adolescents (61.3%) answered "I was ashamed," and 54.3 per cent of them answered "I felt sick when they experienced their menarche."

Conclusions: The current study concludes More than half of intermediate school girls in Mosul, Iraq are right-side residents and filling in the age group of 14–15 years. The majority of female adolescents have negative emotional responses when they experience their first menstruation in the present study.

Recommendations: The study recommended directing the Iraqi Ministry of Education to add the subject of menstruation to a special curriculum in the fifth grade of elementary schools girls in Mosul, where the ages of adolescent girls are appropriate to receive menstrual information before puberty.

Keywords: *Adolescents; Information; menarche*

INTRODUCTION

Adolescence is a period during which one experiences rapid physical and psychological development, with each stage being characterized by specific signs of growth and change (Datta & Tiwari, 2022).

During early adolescence (ages 10–14), children are starting to form a sense of their own identity, and the physical and emotional changes that come with puberty can be confusing and stressful (Landis, 2020).

During middle adolescence (years 15–17), teenagers become more independent, more conscious of their own talents and shortcomings, and more self-aware, challenging conventional norms and figuring out where they fit in the world (McCammon et al., 2022).

Finally, during late adolescence (ages 18–19), young people are starting to make decisions that will affect their lives for years to come, from professional choices to relationships. Adolescence will be experienced differently by each person; therefore, it's critical to create a nurturing environment for teenagers throughout this time of development and change (Tetering et al., 2020).

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Adolescents have the ability to be a nation's engine for social and economic advancement. Adolescents can be empowered to become active members of their societies and economies with the correct investments in education, healthcare, and other crucial sectors (Gaur et al., 2021).

As girls approach puberty, they experience a variety of physical and emotional changes. This could imply putting on weight, growing taller, and developing breasts. Girls will also start to go through their period at the same time as these bodily changes (Mendle et al., 2019). Menstrual cycle is a sign of a girl's sexual development and ability to conceive. Girls should learn about menstruation and how to manage it so that it does not affect their daily lives (Hennegan et al., 2019).

Each year, roughly 10 percent of women globally undergo exposure to infections in the genitals as a result of a lack of knowledge about menstrual hygiene and related issues. Poor menstrual hygiene is one of the major risk factors contributing to the prevalence of reproductive tract infections. It is critical to educate adolescent girls about proper menstrual hygiene in order to reduce the risk of reproductive tract infections (YÜKSEKOL et al., 2020).

Finally, educating young women about the value of self-care and the many lifestyle modifications that may lessen menstrual symptoms will help them understand and maintain their bodies. These activities can assist young women in better managing their periods and accepting them as a natural part of life. This can be accomplished through campaigns, seminars, and other forms of education (Amgoth & Reddy, 2019).

METHODS

Study Design:

A cross-sectional study design is an appropriate choice for studying the emotional response of adolescents in relation to their information and emotional response regarding menarche in Mosul schools. This design involves collecting data from the 8th of September 2022 to the 11th of June 2023.

Setting of the Study:

The seven intermediate and secondary schools selected were three on the left side and four on the right side of the Tigris River, which divides Mosul City into two sides. The schools chosen were AL-Risala Girls' Secondary School,; Al-Fadhila Girls' Secondary School,; Al-Hijratin Girls' Secondary School,; and Al-Mamoun Girls' Intermediate School, on the right side of Mosul city. Al-Shaheed Saleh Girls' Intermediate School,; Aisha Girls' Intermediate School; and Al-Duha Girls' Secondary School, are on the left side of Mosul city.

Sample of the Study:

Sample size : The sample for this study was selected from a population of adolescent students attending schools in Mosul. The size of the sample is calculated as the formula $n = (Z^2 * p * (1-p)) / d^2$, where Z is the standard normal deviation (1.96 for a 95% confidence interval) and p is the anticipated proportion of the population that has a particular trait. (assumed to be 0.5), and d is the desired level of precision (0.05). This resulted in a sample size of 750 students.

Sample selection: The researchers in this study used the two types of sampling (probability and non-probability) in two stages. The first stage of the sample using the probability sample (Systematic sampling) to select seven schools. The second stage using non-probability (Purposive) sample in selecting the student from the selected class.

Inclusion and Exclusion Criteria:

Students between the ages of 12 and 17 who attend a government school in Mosul are allowed to take part in the study. Students who have reached menarche and are menstruating were included in the study, as were students who attend a non-governmental school in Mosul. Students who have not reached menarche were excluded.

Data Collection Tool:

Data Collection: The data were obtained through questionnaire that was self-administered and delivered to a purposively selected sample of students. The questionnaire were designed to assess the emotional response of adolescents regarding menarche by using The Expected/Experienced Emotions Related to Menarche Scale as well as their level of information and understanding of the topic. A questionnaire was designed in Arabic and then translated into English. The questionnaire was composed of four parts

The Expected/Experienced Emotions Related to Menarche Scale (EEMMS) is a tool used to measure the emotional response of individuals regarding menarche, which is the onset of menstruation. The scale assesses both expected emotions, which are the emotions that an individual believes they will experience upon reaching menarche, and experienced emotions, which are the emotions that an individual actually experiences upon reaching menarche. (Nakić Radoš et al., 2017).

Part One: Focus on Socio-Demographic Data

This part of the questionnaire contains seven (7) items, including student age, academic stage, residence, family members, elder sister.

Part two: Focus on Adolescents' feelings regarding Menarche.

This part of the questionnaire contains 16 items related to the student's emotional response to menarche, including the level of embarrassment or shame felt during menarche, the level of fear or anxiety experienced before or during menarche, and the level of comfort and self-confidence experienced during menarche

Data Collection Methods:

The researcher visited the seven schools in Mosul after obtaining approval from the General Directorate of Nineveh Education, then selected teachers from each participating school to assist with data collection, explained the study and its instruments to the assisting teachers and participating students, and obtained written consent from the participating student to participate in the study. The data were obtained through questionnaire that was self-administered and delivered to a purposively selected sample of students. The data collection process was conducted over a period of 4 hours per day, for 3 days per week. This method allowed for the collection of information about the emotional response and knowledge of adolescent students regarding menarche in Mosul schools.

Validity:

The validity of the study's instruments (questionnaires) was established through content validation. This process involved having ten (10) experts, working in different fields, review the content of the questionnaires and provide feedback. The questionnaires were then modified according to their comments and verified by expert reviewers or committees to confirm their validity.

Statistical Data Analysis:

The data collected in this study were analyzed using SPSS version 26. The data were summarized using descriptive statistics like frequencies, percentages, and the test of Chi-square. and give a general summary of the study's findings. For categorical variables, a non-parametrical Chi-square test with a p-value was used to compare for possible significant differences between the level of information and selected study variables and examine the statistical significance of any observed relationships. P-values of less than 0.05 were considered significant for all statistical analyses. A statistician was hired to ensure that the statistical analysis was conducted accurately and correctly.

RESULTS

Table (1): Socio-Demographic Characteristics Results for the Sample (Students and Mothers) in the Study

Item	Estimate	Freq.	%	χ^2	Sig.
Age of Student	12-13	157	20.9	221.256	0.000**
	14-15	442	58.9		
	16-17	151	20.1		
Academic Stage	1st Intermediate	250	33.3	0.000	1.000
	2nd Intermediate	250	33.3		
	3rd Intermediate	250	33.3		
Residence	Right Side	437	58.3	20.501	0.000**
	Left Side	313	41.7		
Family Members	1-4	207	27.6	98.456	0.000**
	5-8	376	50.1		
	8 & Above	167	22.3		
Elder Sister	Present	425	56.7	13.333	0.000**
	Not Present	325	43.3		

Table (2): Statistical Information about positive feelings during Menarche Results for Samples in the Study.

Item	Estimate	Freq.	%	χ^2	Sig.
I found it a Normal Event	Yes	227	30.3	116.821	0.000**
	No	523	69.7		
I Felt Feminine	Yes	218	29.1	131.461	0.000**
	No	532	70.9		
I Felt Mature	Yes	203	27.1	157.781	0.000**
	No	547	72.9		
I Felt Relieved	Yes	140	18.7	294.533	0.000**
	No	610	81.3		
I Felt Healthy	Yes	120	16.0	346.800	0.000**
	No	630	84.0		
I was Excited	Yes	90	12.0	433.200	0.000**
	No	660	88.0		
I was Happy	Yes	94	12.5	421.125	0.000**
	No	656	87.5		
I was Proud	Yes	103	13.7	394.581	0.000**
	No	647	86.3		

Table (3) Statistical Information about Negative feelings during Menarche Results for Samples in the Study.

Item	Estimate	Freq.	%	χ^2	Sig.
I was Ashamed	Yes	460	61.3	38.533	0.000**
	No	290	38.7		
I Felt Sick	Yes	407	54.3	5.461	0.019**
	No	343	45.7		
I was Scared	Yes	356	47.5	1.925	0.165
	No	394	52.5		
I was Surprised	Yes	286	38.1	42.245	0.000**
	No	464	61.9		

I was Worried	Yes	296	39.5	33.285	0.000**
	No	454	60.5		
I was Angry	Yes	247	32.9	87.381	0.000**
	No	503	67.1		
I was Sad	Yes	204	27.2	155.952	0.000**
	No	546	72.8		
I was Unpleasant	Yes	142	18.9	289.541	0.000**
	No	608	81.1		

DISCUSSION

The present study comprises 750 adolescent girls ages 12–17 studying in senior intermediate schools in Mosul city. The maximum number of girls is between 14 and 15 years of age. 50.1 percent of female adolescents have family members that range from (5-8). A similar study, conducted by Bhusal in Dang District, Nepal, showed that 70.4 percent of participants have family members that range from 5-8 (Bhusal et al., 2020). More than half of adolescents (58.3%) live in the right-side area of Mosul city, compared to the left-side area. Because the number of schools in the right-side area is greater than those in the left-side area of Mosul city. According to this study, The majority of the females had a range of negative emotions when their first period occurred. About (61.3%) are ashamed, and (54.3%) of them felt sick. These negative reactions to menarche were corroborated by a study conducted in Northeast Ethiopia by Tegegne and colleagues, which found that more than half of the adolescents who participated experienced various psychological traumas and had adverse emotions, including shame in (42.86%) of the girls, anger and anxiety in 31.65% of the girls, and irritability or disgust in 16.92% of the girls (Tegegne & Sisay, 2014). Menarche, or the start of menstruation, happens during a crucial developmental stage when adolescent girls cope with and struggle with self-image, personality, and pressure from their peers. As a result, they may experience fear and anxiety during this time. The worry and anxiety that some of the girls were experiencing could also be interpreted as a sign of their misunderstanding. Before they reach menarche, many young girls have either little or no information about menstruation. This frequently results in anxiety and other uncomfortable feelings related to menstruation. Being unprepared and soiled could result in them being mocked by others or could be a result of societal taboos and misconceptions about menstruation. In opposition to a study by (Radoš et al., 2017) that concluded the majority of participants (2.97%) faced positive emotions. Differences in the study were due to girls' information and preparation about menses before their menarche. This suggests that there is a time of adjustment to menstruation during which girls feel uncomfortable talking about their periods, asking questions about them, and not wanting other people to know they are menstruating. So learning about menstruation may help them overcome this period with more positive feelings.

CONCLUSIONS

The current study concludes More than half of intermediate school girls in Mosul, Iraq are right-side residents and filling in the age group of 14–15 years .The majority of female adolescents have negative emotional responses when they experience their first menstruation in the present study

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

The ethical considerations of this research were carefully taken into account before gathering any kind of data. The Scientific and Ethical Commission of Higher Studies of the College of Nursing/University of Mosul provided initial permission, according to Administrative Order No. (74) dated October 10, 2021. additional approval was obtained from the Education Directorate of the Nineveh Government. All participants had to provide written informed consent prior to being allowed to enter health facilities and schools to collect samples.

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AUTHOR'S CONTRIBUTIONS

Study concept; Writing the original draft; Data collection; Data analysis and Reviewing the final edition by all authors.

DISCLOSURE STATEMENT:

The authors report no conflict of interest.

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