

Menstrual Pattern And Morbidity Among Nursing Science Students In A Nigerian Tertiary Institution

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ABSTRACT:

Background: The onset of Menstruation is a landmark event in the pubertal development of an adolescent girl and occurs at an average age of 11-16 years. The onset of menstruation is manifested externally as vaginal bleeding. The mean age of menarche and pattern of menstruation varies from one population to another. Disorders of menstruation remain one of the gynaecological disorders in adolescent girls. **Objective:** To determine the age of menarche, menstrual patterns and the effect of menstrual morbidity on the academic activities of Nursing Science students in a Nigerian Tertiary Institution. **Methodology:** A cross-sectional study was conducted among 420 students of Ebonyi State University, Abakaliki over a two month period (May 1 to June 30, 2014). A well structured self-administered questionnaire was distributed to them in sealed envelopes. These were answered in their privacies and returned sealed. Information about the onset of their menarche, pattern of menstruation, menstrual disturbances and how they influenced their academic activities were sought for. **Results:** The respondents' age ranged from 18-39 years, the mean age of menarche in the study is 13.4 years. The majority of the respondents achieved menarche at 13 years (51.1%). The duration of menstrual flow averages between 2-8 days with 53.17% having a 4 day menstrual flow. The cycle length ranges between 20-40 days while 66.8% had a cycle length of 28 days. About 90% of the respondents menstruated 12 times in a year. Dysmenorrhoea was the commonest menstrual disorder (36.3%). Of these, 12.75% abstained from school one or more times per cycle. About 63% of those who had pain used drugs (mainly non-steroidal anti-inflammatory drugs, NSAID) to control their pain while over 33% used other means to control their pains including the use of combined oral contraception pills. **Conclusion:** Age at menarche in this study and gynaecological morbidity resulting from menstruation are comparable to studies done in other parts of Nigeria and some other African countries. Dysmenorrhoea was the commonest cause of short term school absenteeism among the respondents and it was ameliorated with drugs.

Key-words: Menstruation, menarche, morbidity.

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INTRODUCTION:

Menstruation is the most expressive event in the reproductive history of a woman.¹ The onset of menstruation represents a landmark event in pubertal development of the adolescent girl. In fact, it is considered as one of the

most important milestones in woman's life.²

Vaginal bleeding during menstruation is a most important external manifestation of a menstrual cycle.³ Regular menstruation (*eumenorrhea*) lasts for a few days, usually 3 to 5 days, but a range of 2 to 7 days is considered normal.⁴ It starts at an average age of 11-16 years and the flow is

between 30-80 mls,⁵ occurring normally at fairly regular intervals of between 21 and 35 days or irregular, that is, occurring at varying intervals of less than 21 or more than 35 days in length; poly and oligomenorrhoea respectively.

It is a cyclic event and the occurrence of menstruation has generated different myths and superstitions in various cultures over the ages.⁶ Menstruation and the menstrual cycle are characterized by variability in volume, pattern and regularity, which at the earlier stages of the development of the adolescent girl can create emotional discomfort particularly to the poorly informed girl.⁷ Menstrual problems and pattern are becoming more prevalent and diverse now than in the past 100 years because women experiences more menstrual period in terms of duration and frequency due to early menarche, late menopause and less number of children.⁸

The mean age at menarche and menstrual pattern varies from population to population and is known to be a sensitive indicator of various characteristics of the population, including nutritional status, geographical location, environmental conditions and magnitude of socioeconomic inequalities in a society.⁹ The pattern and abnormalities are also influenced by factors as chronic disease, eating disorder, intensive physical activities and many cultural and religious believes.¹⁰

Menarche and menstrual pattern are therefore different between developed and the developing countries with menarche occurring earlier in developed than developing countries and abnormalities better managed in the developed countries.¹¹ Even in the same country, menstrual pattern and abnormality is different between rural and urban areas.¹²

Menstrual disorder may occur as amenorrhoea, menorrhagia, abnormal menstrual cycle length and dysmenorrhoea, or severe menstrual cramps and premenstrual syndrome. It may also

manifest as early or delay menarche. Nearly every woman will experience one or more of these menstrual irregularities at some time in her lifetime.¹³ Dysmenorrhoea, so subjective is the most common gynaecological complaint that affects about 30-50% of women or reproductive age¹⁴ and the commonest cause of absenteeism from school of women at a fertile age.¹⁵

Menorrhagia is also common, but blood estimation is always exaggerated with about 50% of people claiming excessive blood loss ever had it.¹⁷ Knowledge of the length and variation of the menstrual cycle is necessary for patient education and for identifying deviations from normal to guide clinical evaluation.¹⁸ So many young girls perceive events like menstrual bleeding to be emanating from the abdomen, intestines, and kidneys, or occurring as a consequence of the curse from God, sin, and disease.¹² This will affect their management and perception of the abnormalities.

Among the gynaecological problems, menstrual problems are said to be the major ones especially among adolescent females. A woman's positive disposition to menstruation often derives from pre-menarcheal preparation, education and positive early menstrual experiences.¹²⁻¹⁷ Population studies on normal and dysfunctional characteristics of menstrual cycles are scarce in Nigeria. The purpose of this study, therefore, is to determine the patterns and abnormalities of menstruation among Nursing Science Students of Ebonyi State University, Nigeria and to identify the magnitude of common menstrual disorders with a view to suggesting relevant ways of ameliorating such disorders.

MATERIALS AND METHODS:

Abakaliki is the State capital of Ebonyi State. It is located between Lat.6.3° N and Long 8.1°E. Ebonyi State University is situated within Abakaliki, the State Capital. Most of the students were from Ebonyi State, Enugu, Anambra, Abia, Imo and Delta. A few of the students were from other parts of the country and outside

especially from Cameroun. The university has 7 Faculties, one of which is the Nursing Science with a population of about 1500 students, of which 1050 are females and 450 are males. This population is spread over the 5 classes of the department from 100 -500 levels.

This was a questionnaire based study carried out at the Nursing Science department of Ebonyi State University, Abakaliki between May 1 and June 30, 2014. Approval was obtained from the Institutional Review and Ethical Committee. The study population included all female Nursing Science students from the first to the fifth year. Each class has about 50 desks and students were seated serially at the desks. The questionnaires were administered in sealed envelopes to the seated students on alternate desks after informed consents were obtained from the respondents.

The information obtained from the respondents included age at menarche, cycle length, duration of menstrual flow, common menstrual symptoms and their modes of management.

Data analysis

The data obtained were entered into the computer, the Epi-info version 3.4.1 of the center for disease and control Atlas (USA) was used for data analysis.

RESULTS:

Four hundred and twenty (n=420) questionnaires were distributed to respondents; four hundred questionnaires (400) were correctly filled and retrieved, giving a response rate of 95.2%. The respondents' age ranged between 18 and 39 years, giving the mean age of 24.8 ± 3.29 years. The majority of the respondents were Ibos (98.5%). The married and unmarried formed 18% and 88% respectively. The entire respondents were Christians. Table-1 shows the age at menarche among the respondent. The earliest age at menarche

among the respondent was 9 years (0.5%) and the latest age at menarche of the respondent was 18 years (0.3%). The majority of the respondents achieved their menarche at 13 ± 1.3 years (31.5%) and the mean age at menarche was 13.4 years. Only 5 students (1.25%) and 3 students (0.75%) had earlier and delayed menarche respectively. The rest (98%) attained menarche between the ages of 11-16 years. All the participants (100%) had menstruated.

The duration of menstrual flow of the respondents ranged between 2 and 8 days. The majority of the respondents had a 4-days menstrual flow (n=173, 43.3%) giving a mean of 4.46 ± 0.84 days. Only one respondent had hypermenorrhoea (0.3%) while the others (99.7%) had normal duration of menstrual flow between 2-7 days per cycle.

Table-3 showed that cycle length of the respondents ranges from 20 to 40 days and that the majority of the students had a cycle length of 28 days (66.8%) with an average cycle length of 28.1 ± 1.78 days. Only one student had polymenorrhoea; cycle length less than 21 days, (0.3%) and one student had oligomenorrhoea; cycle longest more than 37 days (0.3%). The remaining (n= 398, 99.5%), had a normal cycle length of 21-35 days.

The majority of the respondent (88.8%) had regular menstruation while (11.5%) had irregular menstrual either in the length of the cycle or duration of flow.

Menstrual pain (dysmenorrhoea) was commonest symptom in the study (36.25%) out of the 400 students who always had pain during menstruation; (5%) had severe pain that they always abstain from school due to menstrual pain while (12.75%) abstain from school once or more times per cycle. Out of the people that had pains, 62.5% used one or more drugs to controls pains while 32.5% used other means to control their pains including enduring the pain.

Table-5 showed the number of menstrual cycles per year among the respondents ranges from 8 to 16 times. Most

respondents, 89.8% menstruated 12 times per year with a mean of 12.02 ± 0.16 . All the respondents used sanitary pad during their menstruation. Table 6 showed the number of sanitary pads used per day during menstruation; however assessing menorrhagia by the number of sanitary pads used was difficult because of variation of sizes of pad used and the degree of soaking before the change.

Table 1: Age at menarche

Age at menarche	Frequency	%
9	2	0.5
10	3	0.8
11	14	13.5
12	73	18.3
13	126	31.5
15	55	13.8
16	14	3.5
17	2	0.5
18	1	0.3
Total	400	100

Table 2: Duration of menstrual flow per cycle

No of days	Frequency	%
2	1	0.3
3	38	9.5
4	173	43.3
5	163	40.8
6	14	3.5
7	10	2.5
8	1	0.3
Total	400	100%

Table 3: Cycle length

Cycle length	Frequency	%
20	1	0.3
21	3	0.8
23	1	0.3
24	8	2.0
25	4	1.0
26	20	5.0
27	22	5.5
28	267	66.8
29	31	7.8
30	27	6.8
31	1	0.3
32	5	1.3
34	2	0.5
35	6	1.5
40	1	0.3
Total	400	100%

DISCUSSION:

Menarche is the onset of menstruation and it is one of the most significant event in a woman's life.³ It normally occurs at a variable period of 11-16 years. The mean age at menarche in this study was 13.4 years, similar to the study done by OUI Umeora and VE Egwuatu in 2008 who reported an average age at menarche in Igbo women of the South East, Nigeria as 15 ± 2 year.⁶ This similarity may be due to same environmental location the study was done. It was also similar to the study done in Bayero University, Kano by Hadiza S Galadima et al that showed the mean age at menarche of 13.7 years.¹⁷ Both studies were carried out among undergraduates, though in the different environment, and in Brazil by Ana Caroline that showed mean age at menarche to be 13.7 years.¹⁹ This study differs from studies done in Ethiopia by Desalegn T Zegeye and colleague that found the mean age of menarche at 14.8 years.¹¹ This little difference may be related to the ages of the study group since the respondent in the latter group were secondary school girls. Another study done in the urban State of Enugu, Eastern Nigeria however, showed earlier age at menarche of 12.7 years.¹² This difference in age at menarche may be due to environmental factors since age at menarche was about 0.3 years earlier in urban than rural girls.¹¹ The mean duration of menstrual flow in this study was 4.46 days similar to findings in Ethiopia (4.31 days).

Table 4: Menstrual pain per cycle

Always	Frequency	%
Yes	145	36.25
No	225	63.75
Total	400	100

Table 5: Number cycles per year

Cycle per yr	Frequency	%
8	1	0.3
9	2	0.5
10	5	1.3
11	10	2.5
12	359	89.8
13	15	3.8
14	5	1.3
16	3	0.6
Total	400	100

Table 6: Number of pads used per day

No of pad	Frequency	%
1	31	7.8
2	186	45.8
3	125	31.3
4	27	6.8
5	5	1.0
6	4	2.3
7	9	4.0
8	16	
Total	400	100

About 2% of respondents experienced abnormal cycle length (<21 and >35) days. This was different from study done in Ethiopia where about 30% experienced abnormal cycle length²¹. This difference may be due to the age of the study population. Dysmenorrhoea, so subjective was the most common gynaecological complaint that affected about 30-50%⁵. It is the commonest cause of short term absenteeism from school in women of reproductive age. In this study, 36.25% experienced dysmenorrhoea at one time or the other in their cycles. This is similar to studies done at Enugu, Nigeria¹² and in the United States of America.²⁰ It, however differs from the study done at Kano.¹⁶ The differences may be due to menstrual irregularities and dysmenorrhoea experienced immediately after menarche since the study was done among secondary school students. 62.8% of the 145 persons that had severe pain used one or more medication to control their pain, 77.8% got the pain relief with systemic non-steroidal anti-inflammatory drugs (NSAID) while 13.8% experienced pain free cycle with

combined oral contraceptive (COC) pill. The remaining either did not seek pain relief, rather chose to suffer the pain in silence. This is a common finding in developing countries due to lack of information on ways of obtaining pain relief during menstruation. In our environment where sexuality education is regarded as a taboo, most parents do not discuss such matters with their female offspring, hence most information they got on the subject is based on discussion from their peers. Thus, they either suffer in silence or indulge in wrongful practices in order to get the much needed relief from the menstrual pains.

In this study, the ability to measure menstrual blood loss using the number of pads per day was unsuccessful because of the differences in the type of pads used and variation on how the pad was soaked before the change.

CONCLUSION:

In conclusion, most of the Nursing Students in this study have a normal menstrual pattern, dysmenorrhoea was the greatest morbidity noted in the study and it was responsible for most of the short term absenteeism from academic activities by the respondents. NSAID was the commonly used drug for menstrual pain relief. There should also be parental involvement in girl child sexual education so that menstrual morbidity can be easily managed.

Conflict of Interest: None

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