

*Full Length Research Paper*

# Appraisal of menstrual awareness and pattern among female secondary school students in Lagos

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Attention has been drawn to attitude to menstruation which vary from culture to culture, symptoms and management of menstruation. The aims of this study were to investigate the menstrual awareness of female secondary school students and correlations between such factors as menarcheal age, frequency of menstruation, presence of pain during period (Dysmenorrhoea), degree of incapacitations due to pain and other factors. A structured self-administered questionnaire was given to 300 female secondary school students in 2 randomly selected secondary schools in 2 Local Government Areas of Lagos State which are in the middle class area of Lagos State. The students were well informed and consent duly obtained. All the participants were nulliparous (Para 0 + 0) and between ages 9 - 19 years. All the questionnaires were adequately filled and the data obtained was analysed using SPSS. The influence of family values on the source of information on menstruation was significant as 87% of respondents obtained it from "mummy and sister". On the grading of severity of dysmenorrhoea, 65% responded as moderate-severe but 61.8% claimed that pain was not disturbing activity and only 25.4% used medication for pain. About 50.2% had secondary dysmenorrhoea whilst 48.6% obtained information about medication from family members. From this study, a negative correlation was found to exist between age at menarche, menstrual pain disturbing activity and medication for pain. We found that the family values are important factors in menstruation as shown by the fact that 97.3% of respondents obtained information about menstruation from the family while, 50.2% of the girls obtained their information on medications for menstrual pain from family members-mothers, sisters and father in descending order.

**Key words:** Menstruation, awareness, menarcheal age, dysmenorrhoea, attitude, medication.

## INTRODUCTION

A woman's first menstruation is termed menarche and it is an important maturity indicator used to assess the developmental status of a pubertal female (Blondell et al., 1999; Cameron and Nadgdee, 1996). Puberty can be defined as a process that leads to physical and sexual maturation involving the development of secondary sexual characteristics, growth changes in body composition and physiological maturation. Menstruation though a normal process has been surrounded by myths and superstitions which caused attitudinal changes from one culture to another (Cameron and Nadgdee, 1996; Arkutu, 1995). However, in modern times, menstruation has been

viewed with remarkable openness.

It has been established that menarche is influenced by such factors as socioeconomic class, sports and genetic factors (Diegton et al 1993). Studies have shown that the age at menarche has been decreasing generally in many countries with a mean age at menarche ranging from 12 to 13 years in the majority of developed countries (Padez and Rocha, 2003). However, over the past few decades, this trend seems to have reached a plateau or even reversed in most parts of Europe and other developed countries. It has been postulated that this might be due to either the effect of a ceasing improvement of environmental factors /infrastructure facilities or the impact of reaching the genetically determined limits of normal menarcheal age for those populations (Diegton et al 1993; Hauspie et al 1996; Padez, 2007).

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Furthermore, the age at menarche has been found to differ in different countries (Lee and Kulin, 2001). There is a paucity of information about menstrual awareness and pattern in Nigeria and a study to assess the age of menarche, its perception and menstrual characteristics in the most populous African nation was considered worthwhile as it could elicit racial, genetic, geographical and socio-cultural peculiarities.

In this study, we investigated the menstrual awareness of female secondary school students who are single and nulliparous [Para0 + 0] and correlations between such factors as menarcheal age, frequency of period, presence of pain during period (Dysmenorrhoea), disability due to pain and other factors.

## SUBJECTS AND METHODS

After obtaining Research and Ethics committee approval, a self-administered questionnaire was given to 300 female secondary school students in 2 randomly selected secondary schools in 2 Local Government Areas of Lagos State, in the middle class area of Lagos metropolis. The School Authorities and Students were well informed and consent was duly obtained. All the participants were single, nulliparous (Para 0 + 0) and between ages 9 - 19 years.

Questions were asked regarding menarcheal age, source of information on menstruation, duration of menstruation (blood flow) and frequency of menstrual flow; whether there is associated pain which was further graded as mild, moderate or severe using the visual analogue scale.

Menstrual pain was further stratified by its impairment of daily activity and what medication was used? The source of information about medication for pain was also asked for.

The data obtained were collated and analysed using the SPSS package version 11. Multivariate regression was used to compare the various fields to analyse relationships.

## RESULTS

All participants responded positively giving a return rate of hundred percent. Most of the students (62.4%) attained menarche between 12 - 13 years. However, a little over one-fifth (20.9%) of the study group attained menarche below the age of 12 years (Table 1).

Majority of the students (97.3%) obtained information about menstruation mainly from family members-Mother and sisters (Table 2).

Of the three hundred respondents, 266 [88.2%] menstruated monthly while 34 [11.8%] had other menstrual patterns (Table 1).

Analysis by duration of menstrual flow is shown in Table 1 where 86.8% of the respondents bled from 3 - 5 days.

Majority of the respondents (83.7%) claimed to experience menstrual pain as shown in Table 3.

When further stratified by the degree of perceived menstrual pain, 66% fell into the moderate-severe group (Table 3). However, this disturbed daily activity in only 38.2% of the respondents.

**Table 1.** Showing percentage distribution of age at menarche, frequency of menstruation and duration of flow.

Age in Years	Numbers	Percentage
<10year	8	2.8
10 - 11+	63	20.9
12 - 13+	187	62.4
14 - 15+	37	12.2
16 - 17+	3	1.0
>18	2	0.7

  

Frequency of menstruation	Numbers	Percentage
Monthly	265	88.2
Twice Monthly	23	7.7
Bimonthly	4	1.4
Others	8	2.7

  

Duration of flow in days	Numbers	Percentage
<3	4	1.0
3 - 4	117	39.2
5	143	47.6
6 - 7	28	9.4
>8	8	2.8

**Table 2.** Showing source of information distribution

Source of Information on menstruation	Numbers	Percentage
Mother	193	64.3
Sister	68	22.8
Father	31	10.2
Schoolteacher	4	1.4
Radio/Television	3	1.0
Friends	1	0.3

Only 38.2% said that pain disturbed activity as shown in Table 3. Most of the respondent (74.6%) used no drug to relieve the pain (Table 3).

Family members (50.2%) were mainly the source of information as to treatment of menstrual pain (Table 4). Distribution of menstrual pain by its onset relative to menstrual cycle is shown in Table 4.

Correlation matrix (Table 5) shows the correlation of the various parameters studied with each other where significant positive correlations were identified between Age at menarche and Factors studied.

## DISCUSSIONS

This study was carried out in Lagos, an urban city in Nigeria (South-west Nigeria). In 1976, Oduntan et al. (1976) posited that the age at menarche for urban girls in

**Table 3.** Showing distribution of pain (Dysmenorrhoea), pain grade, level of disturbance of activity and medication usage

Distribution of Pain	Numbers	Percentage
Painful	251	83.7
Not Painful	46	15.3
Not sure	3	1.0

  

Pain Grade	Numbers	Percentage
Mild	55	18.2
Moderate	129	43.1
Severe	69	22.9
Not Applicable	47	15.8

  

Pain disturbing activity	Numbers	Percentage
No	185	61.8
Yes	115	38.2

  

Medication for Pain	Numbers	Percentage
No drug	224	74.6
Non-analgesics	30	10.1
Analgesics	46	15.3

**Table 4.** Distribution of source of information on medication for pain.

Source of Information about medication for pain	Numbers	Percentage
Not applicable	71	23.7
Parents	125	41.5
Sisters	26	8.7
Doctor	46	15.3
Pharmacist	26	8.7
Friends	6	2.1

Nigeria was 13.7 years. Ikaroha et al. (2005) also reported a mean age at menarche of 13.89 years for the urban secondary school girls in Rivers State of Nigeria (South-south Nigeria) Jack et al (2005) reported a mean age of 13.6 years for secondary school girls in Maiduguri (North-East Nigeria). Whilst, Moronkolu and Uzegbu (2006) in Ibadan (South-west Nigeria) gave 14 years as the mean age at menarche amongst female Nursing Students in Ibadan. From this study, the mean age at menarche is 12.80 years and there is a notable decline with a third of the study group reaching menarche at 10 - 11 years (Table 1). These findings are similar to what obtained by other authors (Lin et al., 1992; Ikaroha et al., 2005; Moronkolu and Uzegbu, 2006; Wlaheh et al., 2007).

We found a significant positive correlation between age at menarche, source of information about menstruation and frequency of menstruation ( $p < 0.005$ ) as reflected in

**Table 5.** Distribution by time of onset of pain.

Time of onset of pain	Numbers	Percentage
Day period starts	179	59.8
2 - 3days to period	80	26.8
7days to period	18	5.8
2 - 3 in period	23	7.6

Table 6. Most of the girls obtained menstrual information from family members especially their mothers (Table 2). This signifies that girls who had an intimate mother-child relationship with educative information on menstruation coped adequately well with menstruation and its attendant symptoms.

From this study, we realized that the lower the age of menarche, the higher the incidence of painful menstruation which often disturbed normal activity requiring medication as demonstrated exclusively by the negative correlation existing between age at menarche, pain disturbing activity and medication for pain ( $p < 0.005$ ). Thus, younger girls suffer more from painful periods probably because of their anatomical make up.

We found that the family values are important factors in menstruation as shown by the fact that 97.3% of respondents obtained information about menstruation while, 50.2% of the girls obtained their information on medications for menstrual pain from their family members-mothers, sisters and father in descending order.

Moreover, the influence of the family value can be seen in the negative correlation between source of information about menstruation and painful period (Dysmenorrhoea) and medication for pain as shown in Table 6. Whilst, 83.7% complained of dysmenorrhoea of which only 25.4% used any form of medication for pain despite the fact that the dysmenorrhoea was moderate to severe in intensity (66.0%).

Again 38.2% of our respondents reported that pain during the period disturbed activity, 33.9% of these did not use any medication for pain. This group was amongst those that obtained information about medication for menstrual pain from close relatives. This showed the role of cultural attitude in matters of menstruation (Cronje and Kritzing, 1991; Arkutu, 1995; Cameron and Nadgdee, 1996; Wlaheh et al., 2007).

In many cultures including Nigeria, pain is seen as a necessary part of menstruation and girls are brought up with this notion especially if the mother/or sister had experienced painful menstrual periods in her lifetime.

## Conclusion

The role of the family especially mothers in reproductive education of the very young girls is emphasized and early education on reproductive health at both primary and

**Table 6.** Correlation matrix.

Parameter	Actual age	Age at menarche	Source of menstrual information	Blood flow duration	Frequency of period	Painful period	Pain grade	Pain disturbing activity	Pain medication	Pain medication information	Pain onset
Actual age	1	.390**	-0.004	0	-0.061	.183**	0.101	0.071	0.075	-0.18	0.018
Age at menarche		1	.139*	0.019	.121*	0.083	0.08	-0.007	-0.018	0.027	0.039
Source of menstrual information			1	-0.001	0.089	-0.043	0.006	0.022	-0.003	-0.011	0.102
Blood flow duration				1	.165**	0.078	.221**	.197**	.184**	0.089	0.091
Frequency of period					1	0.015	0.017	.135*	0.066	.150*	.280**
Painful period						1	.532**	.300**	.214**	.206**	.370**
Pain grade							1	.356**	.299**	.266**	.278**
Pain disturbing activity								1	.584**	.238**	0.093
Pain medication									1	.294**	0.062
Pain medication information										1	.234**
Pain onset											1

\*\*Correlation is significant at 0.1 level (2 tailed), \*Correlation is significant at 0.05 level (2 tailed).

secondary school level is highly desirable to enable girls cope adequately with symptoms of menstruation.

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