

## Menstrual Pain and Associated Factors amongst Undergraduates of Ambrose Alli University Ekpoma, Edo State, Nigeria

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### Abstract

**Background:** We determined the prevalence of dysmenorrhoea and associated factors amongst undergraduates in a Nigerian university. Information on dysmenorrhoea amongst Nigerian populace is limited as it is seen as a norm and hence unreported. This is in spite of its consequences on women's socio-economic lives.

**Method:** This was a prospective questionnaire-based study. Cluster sampling technique was used and tests of statistical significance were done using Yates corrected Chi square.

**Results:** The prevalence of dysmenorrhoea in this study was 76.3%. The mean age at menarche was 13.8 years. Dysmenorrhoea occurred at menarche in 36.9% respondents. Primary and secondary dysmenorrhoea was reported by 40.6% and 16.3% respondents respectively. Fifty one point nine per cent (51.9%) had painful expectation of dysmenorrhoea. Having a sister with dysmenorrhoea did not have a statistically significant influence on expectation of dysmenorrhoea (CI 95%; P value: 0.76). Normal activity was affected by dysmenorrhoea in 35% of respondents while 68% of those with dysmenorrhoea did not seek help. Hospital admission solely for dysmenorrhoea was reported by 6.9% of respondents. Commonly associated symptoms with dysmenorrhoea were mood changes (59.4%) and pimples (53.1%).

**Conclusion:** The high proportion of women not seeking help for dysmenorrhoea in this study may reflect the attitude of the larger society to the condition. Education to improve women's knowledge of and attitude to dysmenorrhoea is recommended.

**Key Words:** Menstrual pain, menarche, dysmenorrhoea.

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### Introduction

Pelvic pain associated with menstruation is often crampy and could also be felt outside the pelvis<sup>1</sup>. Accompanying

symptoms may be gastrointestinal, neurological and at times cardiovascular<sup>1,2</sup>. Dysmenorrhoea has important socio-economic implications in terms of time loss from school or work and also from increased visits to the clinic as well as decreased performance when present<sup>2,3</sup>. Prevalent studies on dysmenorrhoea largely depend on the population studied. Reported prevalence ranges from 60% to 81.5%<sup>4,5,6</sup>.

Increased uterine tone and spasmodic contractions stimulated by prostaglandin F<sub>2α</sub><sup>3</sup> causes primary dysmenorrhoea while the secondary type is usually associated with a pelvic pathology. These include intrauterine contraceptive device, endometriosis and uterine fibroids. Membranous dysmenorrhoea, though uncommon, causes severe pain and may simulate an acute abdominal emergency<sup>7</sup>. This occurs when the whole endometrium is shed and passed as a single cast<sup>7</sup>.

Lifestyle and occupation influence the overall prevalence of dysmenorrhoea. It is worsened by smoking<sup>8,9</sup> while use of combined oral contraceptives and childbirth improve it. Also, girls whose mothers had dysmenorrhoea are more likely to suffer themselves<sup>2</sup>.

Recall of menstrual pain is influenced by factors like previous experience and the personality of the woman<sup>10</sup>. Although Wood et al reported that the current experience has more influence on recall<sup>11</sup>.

Dysmenorrhoea is a common gynaecologic problem which is misconceived as normal, hence, unreported. This study was conceived on the basis of the importance dysmenorrhoea has on socio-economic lives of women. We determined the pattern of dysmenorrhoea amongst undergraduates in Ambrose Alli University Ekpoma, Edo state Nigeria. Undergraduates were studied with the hope that they would have a good recall of dysmenorrhoea.

**Methods**

This was a prospective questionnaire based study. A structured questionnaire was distributed to the students using cluster sampling technique. Faculties of study acted as clusters of the population. Responses on the questionnaire were entered on Microsoft Excel spreadsheet with which initial prevalence analysis was done. Tests of statistical significance were done using Yates corrected chi square at 95% confidence interval with P value <0.05.

**Results**

Two hundred questionnaires were distributed out of which 160 (80%) questionnaires were returned. Majority (91.3%) of respondents were Christians and the mean age of the study population was 22.7 ± 2.8 years. Menarche occurred at a mean age of 13.8 years with a range of 10-18 years. The prevalence of dysmenorrhoea in the study was 76.3%. Dysmenorrhoea occurred in 36.9% of respondents at menarche, while 40% of respondents with painless menarche developed dysmenorrhoea at a mean of 2.46 years thereafter. Primary dysmenorrhoea in this work was reported by 40.6% while secondary dysmenorrhoea occurred in 16.3%.

Eighty three (51.9%) respondents had painful expectation of menstruation. When subdivided into respondents with or without prior knowledge of menstrual pain, of 100 respondents who had a prior knowledge of dysmenorrhoea, 60 (60%) expected a painful menstruation while 37% (20/54) of those with no prior knowledge of dysmenorrhoea also expected a painful menstruation. As shown in table1, having a sister with Dysmenorrhoea neither had a statistically significant influence on expectation of Dysmenorrhoea (CI 95%; P value: 0.76) nor on prior knowledge of Dysmenorrhoea (CI 95%; P value: 0.95). \*\*Place table 1 here please!  
 As in figure I, 35% of respondents reported effects on normal activity majority (84%) of who regularly used medications for dysmenorrhoea. Common associated symptoms with dysmenorrhoea were mood changes (59.4%), pimples (53.1%), nausea (18.1%) and vomiting (11.3%). Place Figure I here please!!

Sixty eight (42.5%) respondents reported dysmenorrhoea to be worsened either by ingestion of certain food substances or events. Reported aggravating factors were ingestion of sweet things (26.9%), sugar (3.75%) or cold water (1.25%) and partaking in strenuous exercises (5%). Sixty eight percent of respondents did not

seek help for dysmenorrhoea but 30% had consultations for menstrual pain. Previous hospital admission solely for dysmenorrhoea was reported by 6.9% of the sample population. Types of consultations were as shown in figure II. Place Figure II here please!!

Of fourteen respondents who had treatment for pelvic infection, 10(71.4%) reported dysmenorrhoea after the treatment. However, six (3.75% of the study population) of them also reported dysmenorrhoea at menarche. Also, of 27 respondents who reported previous pregnancy termination, 16 (59.3%) noted the onset of dysmenorrhoea after the procedure. Seven of the 16 (4.38% of the study population) also reported dysmenorrhoea at menarche. Therefore, approximately 4% of the study population had a poor recall of the onset of dysmenorrhoea.

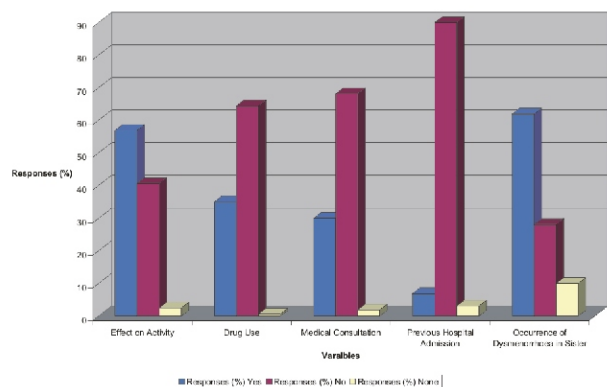


Figure 1: Responses to questions posed by respondents.

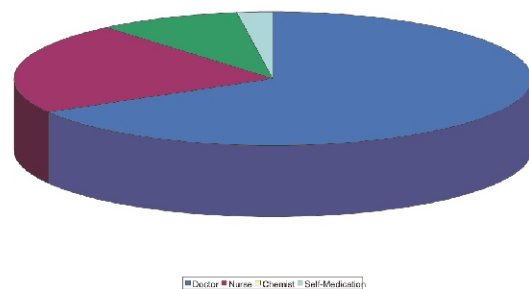


Figure 2: Pie chart showing proportion of consultations for Dysmenorrhoea

Table I: Effect of dysmenorrhoea in sister on prior knowledge and expectation of dysmenorrhoea.

	Prior Knowledge		Painful Expectation			
	Yes (n)	No (n)	Yes (n)	No (n)	Indifference (n)	No Response (n)
Sister has dysmenorrhoea	63	31	52	5	8	29
No sister has Dysmenorrhoea	30	14	24	3	5	12

## Discussion

Dysmenorrhoea, like other forms of pain, has no objective mode of assessment which accounts for the variable prevalence rates in the literature. The high prevalence rate of 76.3% we had may be due to the study population of undergraduates. This is because menstrual pain is misconceived as a norm and so, unreported. The prevalence reported in this study was similar to that amongst adolescents in Ile-Ife, Nigeria<sup>5</sup>.

The decline in the age at menarche over the past two decades reported in developed countries is now being reported in the so called low resource settings. As in the study reported by Thomas<sup>5</sup>, we recorded a mean age at menarche of 13.8 years. However, age at menarche was 13.1 years amongst female medical undergraduates at the University College Hospital, Ibadan<sup>6</sup>.

Initial menstrual cycles in young adolescents are often anovulatory, hence, painless. This explains the initial pain-free cycle at menarche reported by most respondents. Maturation of the hypothalamic-pituitary-ovarian axis, however, heralds ovulation. This makes hitherto pain-free cycles painful. This was seen in 40% of those who developed dysmenorrhoea after menarche.

Dysmenorrhoea affected normal activity in 35% of respondents. As our respondents were students, this could have led to school being missed and poor academic performance. The use of drugs by 84% of respondents whose activities were affected suggested their desire to be optimal. Although we did not seek types of drugs used for relief of symptoms, Thirza IJ et al<sup>13</sup> reported that simple analgesics were used more than Non-steroidal anti-inflammatory drugs.

In this study, the major associated symptoms with dysmenorrhoea were mood changes (59.4%) and pimples

(53.1%). The predominance of mood changes in this study may be a reflection of the ability or otherwise of the students to cope with the stress of lectures as well as their domestic chores as many lived outside the University campus, a common feature of the Nigerian University community.

Majority of respondents did not seek help. The non-health seeking behaviour in relation to dysmenorrhoea is worrisome especially as it affected normal activities in some respondents. This may be because they perceived dysmenorrhoea as their lot. Women need to be enlightened on different treatment options available. This is necessary as some of the treatment options are easily accessible and cheap.

Lifestyle influences the prevalence of dysmenorrhoea. Although, partaking in strenuous exercises or ingestion of certain food substances was reported to aggravate dysmenorrhoea, regular athletic activity has a positive influence on menstrual pain<sup>14</sup> as it may lead to anovulatory cycles which are often painless. It is likely that occasional strenuous activity which does not cause anovulation worsened dysmenorrhoea in our respondents.

The unavailability of an objective assessment of pain affects the recall of dysmenorrhoea. More so, pain description is derived from personal experiences<sup>9</sup> as well as patients' current menstrual attitude<sup>10</sup>. This may account for poor recall in 4% of the study population.

The high prevalence of dysmenorrhoea and high proportion of women who did not seek help in this study may be a reflection of the magnitude of the problem within our society. Therefore women need to be enlightened on dysmenorrhoea, the treatment options and the need to seek help.

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