Menstrual Problems in University Students: An Electronic Mail Survey

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Abstract. Objective: To establish the prevalence of menstrual-related problems among university students. Materials and Methods: A questionnaire regarding gynecological, bleeding and family history was sent by electronic mail (e-mail) to all female students attending University College London (UCL). Results: A total of 767 students aged 18-39 years replied; 71% had a regular menstrual cycle. One in three (n=264) had received some treatment for their menstrual periods (such as the combined oral contraceptive pill or simple analgesia). Those with heavy or painful periods were more likely to feel that their menstrual problems had a substantial impact on their academic and social life; however, even among those with light periods, one in every four females felt that their life was considerably affected. Conclusion: A considerable prevalence of menstrual-related problems was demonstrated among this young healthy population. Additionally, the use of e-mail could present potential benefits as a research medium for this kind of study.

There is little information about gynecological morbidity related to menstrual problems in young populations (such as university students) and the impact it has on quality of life. Previous surveys in Northern Ireland, the United States and Sweden focused more on sexual behavior and sexually transmitted diseases than gynecological issues (1-3). Students provide an opportunity for surveying a population of young women.

Electronic mail (e-mail) can be a means of surveying a large number of people while preserving confidentiality. This medium was used to obtain demographic and gynecological information from female university students and to ascertain the effect of menstruation-related problems on their academic and social life.

Materials and Methods

A questionnaire regarding gynecological, bleeding and family history was sent by e-mail to all female students attending University College London (UCL). A total of 767 students (undergraduates and postgraduates) responded. The Local Research Ethics Committee approved this study.

The study participants completed a chart to estimate their menstrual blood loss based on the Pictorial Bleeding Assessment Chart (PBAC) (4) (Table I).

The answers to the questionnaire were entered into a Microsoft Access database and analyzed using SAS (statistical analysis software). A \( p < 0.05 \) was considered significant.

Results

Out of the 767 study participants, 59.3% (n=455) were undergraduate and 40.7% (n=312) postgraduate students. The age of this population ranged from 18 to 39 years (median: 22 years); only 7.5% were over 30 years.

The median age of menarche was 13 years (mean, 12.6 years; range, 9-22 years). Details of the responders’ menstrual cycles were obtained. A regular cycle was described by 545 responders (71.0%). In this subgroup, the median (range) menstrual cycle duration was 28 (20-42) days (bleeding: 5 [2-12] days). There were 222 women with irregular menstrual cycles whose median bleeding duration was 5.5 (2-17.5) days. The median cycle length in this subgroup was 33 (5.5-240) days; the median of their longest cycle was 41 (7-360) days. A cycle of >90 days was reported by 37 women (4.8%), 13 of whom reported a longest cycle of >120 days.

The students were asked to describe their periods as light, normal or heavy with respect to the amount of blood loss (Figure 1). Out of the women who reported regular heavy periods (n=268; 35% of the population), 69.4% (n=186) had had heavy periods since menarche, while 17.5% (n=47) were housebound for at least 1 day/month due to the intensity of the pain. Additionally, 87.7% (n=235) of this subgroup passed clots, while 55.2% (n=148) required double protection (tampon plus towel).

There was a good correlation between subjective assessment of menstrual blood loss and PBAC score (Figure 2). The cut-
off point for defining menorrhagia in the study by Higham et al. was 100 (4), while in the present study, the mean chart score was >100 only in the groups who subjectively scored their periods as normal/heavy or heavy. Figure 3 shows the students’ response when asked to classify their period pain. In total, 319 women (41.6% ) had sought medical advice for menstruation-related problems; 258 of them had consulted their general practitioner. Out of the 319 women who had sought medical assistance for their periods, 55 had not received any treatment. Out of the 264 women (34.4% of the study population) who had received treatment, 117 were prescribed the combined oral contraceptive pill, 64 received analgesia, 45 received both the pill and analgesia and 38 women were recommended other forms of treatment (i.e. progestogens). Whereas those women who had moderate or severe dysmenorrhea were not more likely to have seen a doctor than those with mild or no dysmenorrhea, those who had subjective menorrhagia were more likely to have sought medical attention than those with normal or light periods (54.6% vs. 31.7%; p=0.001).

Figures 4 and 5 illustrate the proportion of women who felt that their menstruation significantly affected their life in terms of missing lectures/social events or having an examination result adversely affected. Overall, 60.1% (161/268) of those with heavy periods felt that their quality of life was significantly affected by their periods, with a quarter (n=70) missing at least 1 lecture per month, nearly half (n=124) having an examination affected and more than half (n=146) missing a social event every month (Figure 4). Even among those who thought their periods were light in terms of menstrual bleeding (n=121; 15.8% ), more than a quarter (n=33) felt their quality of life was significantly affected during menstruation. Dysmenorrhea also had a significant effect on quality of life. However, the frequency of perceived adverse effects was noticeably large even in those with light or painfree periods with 19.6% (19/97) of those with light periods and 8.9% (11/123) of those with no period pain feeling that their life was adversely affected by their menstruation (Figure 6).

Discussion

This study demonstrated considerable gynecological morbidity related to menstrual problems, with important effects on the quality of life among young university students. A considerable percentage of women with even light/normal periods (n= 121; 26.6% ) felt that their periods had a significant effect on their
life in terms of missing lectures/social events, or having an examination result adversely affected. These data hold implications for the academic performance of female university students. Interestingly, even among women with light periods and only slight dysmenorrhea, a considerable percentage was also affected (Figures 4 and 5).

The mean age of menarche was 12.6 years (median 13 years). This was consistent with a study of 1,166 girls aged 12-16 years in Britain (5) in which the median age of menarche was 12 years and 11 months, which was independent of the geographical area, ethnicity and social class (5).
In the present study, the majority of women (n=545; 71%) had regular menstrual cycles with normal limits for number of days of bleeding and length of cycle. However, a small percentage of women had irregular cycle lengths of >90 days (n=37; 4.8%).

The subjective score of menstrual blood loss was slightly biased towards menorrhagia (mean score 3.62, with 1 being light and 5 being heavy). This may be explained by the fact that women with morbidity were more likely to answer the questionnaire. However, the median score was 3. This group therefore represented a reasonable range of subjective scores. Over one third of the responders felt that their periods were heavy and, while menorrhagia is known to be a common complaint, this is an unexpectedly high proportion. A Nigerian study found menorrhagia in 12.1% of teenage girls, however, the definition was based on measured menstrual blood loss rather than subjective assessment (6).

A high number had sought medical assistance for their menstrual problems. The Royal College of General Practitioners reported that 5% of women between 30 and 49 years visited their doctor for menorrhagia (7). Unfortunately, there are no equivalent data on younger age groups. Those women with heavy periods were more likely to have seen a doctor about their bleeding.

There was an excellent correlation between subjective and objective assessment of menstrual blood loss in our study group. This is surprising as menorrhagia is often a subjective complaint. It is unfortunate that due to the method of the study (e-mail with no attachments allowed) it was not possible to faithfully reproduce the PBAC (4). Despite this, the mean chart score was >100 (the cut-off point generally used) only in the groups with a subjective assessment of normal/heavy or heavy periods.

Dysmenorrhea is a very common complaint with a large proportion of women in our study requiring analgesia or bedrest. Similar findings have been reported among adolescents in Switzerland (8), women aged 20-24 years in New Zealand (9), students in Singapore (10) and senior high school girls in Australia (11). The studies from Singapore (10) and Australia (11) also highlighted the fact that a relatively large proportion of females felt their work was affected by their pain. There was a good correlation between heavy and painful periods; despite this, those women with painful periods were not more likely to have consulted a doctor. The two main treatments modalities for period problems were the combined oral contraceptive pill and analgesia. The vast majority who had visited a doctor had only seen their general practitioner, with only 60 women (7.8% of the group) having seen someone else (such as a gynecologist or family planning doctor).

The use of e-mail as a means of data collection may deserve more attention. In this study, the students were provided with the option of printing out the questionnaire and sending the response by post but only 34 replies (4.4%) were received this way.

In conclusion, there is significant menstrual morbidity among young students, which has a substantial impact on their academic and social life. Further studies are required to evaluate the effects of menstruation-related morbidity on academic performance and to evaluate the efficacy of any therapeutic alternatives.

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References


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