

Prevalence of Menstrual Pain among Saudi Nursing Students and Its Effect on Sickness Absenteeism

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Received 13 December 2015; accepted 31 January 2016; published 3 February 2016

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Abstract

Background: Primary menstrual pain is a well-known gynecological disorder among adult females including nursing undergraduate students. Nursing students tend not to seek medical treatment. As a result, this affects their quality of academic life and also absenteeism rate is increased. **Objectives:** To evaluate the prevalence of menstrual pain and its effect on sickness absenteeism on nursing student. **Methods:** This is a descriptive survey research design study by means of using a validated and modified questionnaire. Questionnaire information regarding menstrual pain severity, history and absenteeism were included. The research took place in the collage of nursing at the largest University in the world, Princess Nourah Bint Abdelrahman University, Riyadh, Saudi Arabia. A total of 100 single, female, unmarried undergraduate nursing students (Year 1, 2, 3, 4) were recruited by personal invitation during lectures. **Result:** The prevalence of menstrual pain was 92%. Most of the nursing students 27% had menstrual pain of moderate grade 5 - 6 and 38% of nursing students did not take pain medication for it. Lecture and collage absenteeism due to menstrual pain was present in 9% and 30% respectively. Finally, there was no significant correlation between menstrual pain and age of menarche, age and height. **Conclusion:** Menstrual pain is widely common prevalent among nursing undergraduates. As a result, it affects the quality of students' day-to-day life routine. The majority of nursing students' rarely seeks medical treatment. Providing health and patient education to improve awareness on managing menstrual period might help in avoiding students' absence from classes.

Keywords

Nursing Students, Primary Menstrual Pain, Sickness Absenteeism

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1. Introduction

Menstrual pain and also referred to as dysmenorrhea is a well-known gynecological disorder among adult females. There are two types of menstrual pain namely: primary and secondary menstrual pain. The primary menstrual pain is related to normal ovulatory cycles without pelvic pathology whereas secondary menstrual pain is “associated with pelvic pathology” [1]. The most common type of menstrual pain among undergraduate university students is the primary menstrual pain. According to French in 2008, there are many risk factors associated with primary menstrual pain such as heavy bleeding and pain during menses [2]. Moreover, mental stress was also reported as one of the main risk factors as a consequence of menstrual pain [3].

According to the literature, there are many published articles in regards to the effect of menstrual pain on student attendance grades and achievement [1] [4] [5]. Menstrual pain is common among adult undergraduate students [1] [2] [5] [6]. This deserves careful consideration as un-dealt menstrual pain may negatively affect the day to day routine and thus the quality of life. Hence, there are many researchers who report that the most common effect of menstrual pain is on the adverse effect on daily routine, which is experienced as “prolonged resting hours” and inability to cope with lectures, assignments and sometimes collage attendance [5].

In nursing undergraduate students, the most common gynecological problem was on menstrual pain. It is reported by [1] [5] that menstrual period is “highly prevalent” among female nursing students. Moreover, both researchers highlight that nursing undergraduate students do not usually seek medical treatment and as a consequence it affects their quality of academic life [1] [5]. They also, stated that, as a result of menstrual pain, absenteeism rate is increased among adult undergraduate students and this can be prevented and thus improve the quality of life [1] [5] [7].

A list of recommendation solutions to manage menstrual pain is listed by Gangwar *et al.* in 2014. This includes “mental preparation and by appropriate change in life style like de-stressing the person through relaxation exercise, yoga and breathing exercises” [1].

The choice of investigating undergraduate nursing students’ is made because these students’ are normally under huge psychological pressure without sufficient support. Menstrual pain affects student achievement, attendance and grades. However, the researches were unable to find any studies in Saudi Arabia regarding the menstrual pain and the effect of it among undergraduate students. Therefore, this research study is unique to conduct.

2. Aim and Objectives

The purpose of this study was to assess the prevalence of menstrual pain and to determine the sickness absenteeism as a result of menstrual pain among undergraduate nursing students.

3. Methods

This is a quantitative research study by using descriptive survey research.

3.1. Sample

The number of participants’ in this research study were 100 female undergraduate nursing students’ form Princess Nourah University (PNU) in Saudi Arabia. The inclusion criteria for this study were; female and single undergraduate nursing students, age range from 18 - 25 years old and without any history of pelvic pathology. While, the exclusion criteria were; participants who are less than 18 or more than 25 years old, married or those who were reported to have pelvic pathology. The nursing program at PNU is divided into 8 levels. Each academic year consist of 2 levels. In this research study, students were in their 4th year, level7. The overall grade at PNU is a GPA value of maximum 5.

3.2. Protocol

Questionnaires were distributed by face-to-face personal invitation during lectures in all different nursing students’ years. Data took place at the middle weeks of the first academic in 2015. Sample rate depended on attendance rate of the lectures. All participants were given consent form and information sheet before taking part in

the research study. In case participants felt any discomfort during completing the questionnaires; participants were allowed to withdraw freely without any pressure. Hence, no cases were reported. All participants took part in this study voluntary and were advised in case they have ethical concerns about this study that they can contact the nursing ethics committee. Ethical approval was obtained through the nursing collage ethics committees at Princess Nourah University.

3.3. Questionnaire

A validated questionnaire and Basic Information (BI) was used after gaining permission from the original authors [1]. The validated questionnaire and BI was then modified to the research aim. Face expert validity [8] for BI and the modified questionnaire was sought out before conducting the research.

The BI included demographic data in regards to weight, height and history of menstrual cycle. It also included any use of medication for menstrual pain and family history of menstrual pain. The BI total scores ranges from 0 - 44. The highest score for student level is 8. Students' grade (4 - 5) maximum score is 3. Height (180 - 190 cm) maximum score is 3 and weigh (80 - 100 kg) maximum score is 3. Maximum age score is 25. Finally, first monarch age (14 years old) highest score is 2.

The questionnaire questions related to the length of menstrual cycle, period of bleeding, history of menstrual pain and absenteeism from lectures or classes as a result of menstrual pain. The maximum score for the regularity of menstrual cycle is 1 and for the frequency of the presence of menstrual pain is also 1. The highest score for grades of menstrual pain (9 - 10 pain scale) is 4 and for experiencing strong pelvic cramping with sharp pains maximum score is 1. The highest score for using of any of self-medication experiencing period pain that is soothed by warmth and pressure is 1, using medication maximum score is 1, and sickness absenteeism maximum score is 2. The total questionnaire scoring including the BI section is from 0 - 55.

Data analysis was done by the using of Statistical Package for the Social Sciences (SPSS), version 2015. This is most widely used program for statistical analysis to social study. An expert Advice from a scientific research statistician was sought out when needed.

4. Results

4.1. The Results of the Frequency, Mean, Median and Standard Deviation

The results of this research study was as the following; the mean of student's level is 6.06, the overall grade is 1.27, the age of the students is 21.81, the weight is 50 and height is 150 summarized in **Table 1**. There was no significant correlation of menstrual pain with height, weight, menstrual regularity.

4.2. The Results of Sample Distribution

A summary of the nursing students distribution according to student's level, student's overall grade, age, height, weight and age when first period are presented in **Table 2**. As shown, the highest sample has respond to the questionnaires were from the seventh level, where as many as 53 students by 61% and were the least of the second level and the number was 2 with average of 2.3%. As it can be seen that the highest sample has respond to the questionnaires were aged 22 years by 39%, and least of the 19-year by 1%. It also is clear that the higher sample has respond to the questionnaires were weight ranging from 40 - 60 kg by up to 50%, and less sample was weighing between 20 - 40 number 1 and 1%. Moreover, higher sample has respond to the questionnaires

Table 1. Statistics of the study frequency, mean, median and standard deviation.

		Student Level	Overall Grade	Age	Weight	Height	Age when first period
N	Valid	87	99	94	100	100	100
	Missing	13	1	6	0	0	0
	Mean	6.06	1.27	21.81	1.51	1.31	0.95
	Median	7.00	1.00	22.00	1.00	1.00	1.00
	Std. Deviation	1.306	0.586	1.212	0.577	0.563	0.730

Table 2. Statistics of the study frequency, mean, median and standard deviation.

Factors	Average	Frequency
	2.3	2
	3.4	3
Student's Level	2.3	2
	31.0	27
	60.9	53
	7.1	7
Student's Overall Grade	58.6	58
	34.3	34
	1.1	1
	12.8	12
	24.5	23
Age	39.4	37
	13.8	13
	5.3	5
	3.2	3
	1.0	1
Height	71.0	71
	24.0	24
	4.0	4
	1.0	1
Weight	50.0	50
	46.0	46
	3.0	3
	29.0	29
Age when first period	47.0	47
	24.0	24

was the first menstrual period at age of 13 - 14 where as many as 47 students by 47%.

4.3. Results of the Means and Standard Deviation of Sentences Mentioned in the Questioners and Ranked by Their Means (N = 100)

The means and standard deviation of sentences mentioned in the questioners and ranked by their means (N = 100) are summarized in **Table 3**. Accordingly, the overall average for all paragraphs amounted is 0.55 and a standard deviation of 0.589. The highest paragraph received the highest average arithmetic was "Grades of menstrual pain" a mean of 1.83 and a standard deviation of 1.248, less paragraph was "Presence of menstrual pain". With an average standard of 0.08, and a standard deviation of 0.273. Moreover, there was no significant correlation of the absenteeism with the grades of menstrual pain among undergraduate nursing students'.

Table 3. Means and Standard deviation of sentences mentioned in the questioners and ranked by their means (N = 100).

Number	Sentences	Mean	Standard Deviation	Rank
1	Menstrual cycle regulating	0.20	0.404	6
2	Presence of menstrual pain.	0.08	0.273	7
3	Grades of menstrual pain.	1.83	1.248	1
4	Do experience strong pelvic cramping with sharp pains and/or nausea during your period?	0.32	0.467	4
5	Do you use any of self-medication for menstrual pain?	0.38	0.489	3
6	Do you experience period pain that is soothed by warmth and pressure, such as hugging a hot water bottle?	0.30	0.461	5
7	Sickness absenteeism (absence from the class) due to menstrual pain.	0.72	0.781	2

4.4. The Results of Regularity of Menstruation, Frequency of the Presence of Menstrual Pain and Grades of Menstrual Pain among Nursing Students

According to **Table 4**, it is obvious that 79% of the sample has respond to questionnaires and mentioned that the menstrual cycle is a regular with 80%. Interestingly, the majority of the sample 92% of those who responded to the questionnaire mentioned that the menstrual pain is preset **Table 5**. The highest sample chose 5 - 6 as a grade of menstrual pain were they reached number of 27 with an average of 27% **Table 6**.

4.5. The Results of Experiencing Menstrual Pain Signs & Symptoms, Self-Medication and Sickness Absenteeism Results among Nursing Students

The majority of nursing students 67% of participant has experienced strong pelvic cramping with sharp pains and/or nausea during their period **Table 7**. Moreover, the majority of participants with an average of 61% use self-medication for menstrual pain **Table 8**. An exact number of, 70 participants with average of 70 soothed menstrual pain by warmth and pressure, such as hugging a hot water bottle **Table 9**. Finally, 46% of the participants live normal day to day life routine even with the menstrual pain, and don't need to get absent of college or classes (**Table 10**).

5. Discussion

Menstrual pain is the most common gynecological problem in adult females. There are many side effects of menstrual pain and the most common one is on causing mental stress among nursing undergraduate students' and thus effecting the quality of life and day to day routine. Interestingly, a prevalence of a total of 92% of those who responded to the questionnaire mentioned that the menstrual pain is present. Nursing students in our study reported experiencing menstrual pain. While, other studies on the prevalence of menstrual pain among students reported 85.1% [1], 67.5% [6] and 62.02% [9].

The mean age of menarche was 13.50 years while other study was 13.88 years [1]. Menstrual pain grades are categorized as the following 3 - 4 as mild 5 - 6 as moderate and 7 - 10 as severe. In this study, the highest grade among nursing students had menstrual pain selected 5 - 6 as a grade of menstrual pain was they reached number of 27 with an average of 27% **Table 6**. Therefore, this indicates that nursing students in our research suffers moderates grade of menstrual pain. In the other hand, this result was not similar to the study by [1] as the majority of the students' experienced moderate grade of menstrual pain.

There was no significant correlation between the first age of menstrual period and menstrual pain. Similarly, a recent study reported the same results [1]. In the other hand, other studies [6], and [9] reported the opposite.

This research reports that 46% of menstrual pain nursing students have a normal day to day routine life, and only 19% reported class and 30% lecture and college absenteeism.

A recent study done in India [1] reported that over than 76% of undergraduate medical students seek medical treatment. In our research, nursing undergraduate students around 61% administrate medication self-prescription to relive menstrual pain. Interestingly, the majority of 70 participants with average of 70% of the undergraduate nursing students took no medication for pain and menstrual pain was soothed by the application of warmth

Table 4. Frequency of the regularity of menstrual cycle among nursing students'.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular	79	79.0	79.8	79.8
	Irregular	20	20.0	20.2	100.0
	Total	99	99.0	100.0	
Missing	9	1	1.0		
Total		100	100.0		

Table 5. Frequency of the presence of menstrual pain among nursing students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Present	92	92.0	92.0	92.0
	Absent	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

Table 6. Grades of menstrual pain among nursing students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 2	18	18.0	18.0	18.0
	3 - 4	23	23.0	23.0	41.0
	5 - 6	27	27.0	27.0	68.0
	7 - 8	22	22.0	22.0	90.0
	9 - 10	10	10.0	10.0	100.0
	Total	100	100.0	100.0	

Table 7. Percentage of experiencing strong pelvic cramping with sharp pains and/or nausea during your period among nursing students'.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	67	67.0	68.4	68.4
	No	31	31.0	31.6	100.0
	Total	98	98.0	100.0	
Missing	9	2	2.0		
Total		100	100.0		

Table 8. Percentage of using of any of self-medication for menstrual pain among nursing students'.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	61	61.0	61.6	61.6
	No	38	38.0	38.4	100.0
	Total	99	99.0	100.0	
Missing	9	1	1.0		
Total		100	100.0		

Table 9. Percentage of experiencing period pain that is soothed by warmth and pressure, such as hugging a hot water bottle nursing students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	70	70.0	70.0	70.0
	No	30	30.0	30.0	100.0
	Total	100	100.0	100.0	

Table 10. Percentage of Sickness absenteeism (absence from the class) due to menstrual pain among nursing students'.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal daily life	46	46.0	48.4	48.4
	College absenteeism	30	30.0	31.6	80.0
	Class absenteeism	19	19.0	20.0	100.0
	Total	95	95.0	100.0	
Missing	9	5	5.0		
Total		100	100.0		

and pressure, such as hugging a hot water bottle. Less than half of the sample 46% of the participants live normal day to day life routine even with the menstrual pain, and didn't need to get absent of college or classes. A study done by [10] reported that, over half of the participants in their study reported absenteeism from collage. Improving students nursing knowledge and awareness can lead to changing attitudes and behaviors' [11]. This can be done through improving the knowledge and awareness on menstrual pain management.

There was no significant correlation of menstrual pain with height, weight, menstrual regularity. Other studies reported similar findings [1] [6].

6. Conclusions and Implication

Menstrual pain is a common problem among female nursing undergraduate students and it is the main cause for students to be absents from college and attending classes. Therefore, students might miss attending classes and thus effect their overall achievements and grades.

Female adult health education and health promotion on managing menstrual pain might help in avoiding students absents from classes. It would also be beneficial to conduct the health education on the natural sources for managing menstrual pain among undergraduate students.

Health education on menstrual problem by health care providers can help prevent absenteeism.

To enhance the reliability and the validity of this research findings, adding a qualitative research arm with one-to-one and focus groups interviews' might enhance this research study.

Conflicts of Interest

There is no conflict of interest.

Acknowledgements

The authors would like to thank the Collage of Nursing represented by the Dean Dr. Hana Al-Sobayel and the Vice Dean of Academic Affairs Dr. Sana Hawamdeh, Princess Nourah University, for motivating both their students and staff to engage in a world class academic research.

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