Assessment and Evaluation of Knowledge and Impact of Dysmenorrhea Among Nursing Students in Punjab

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Abstract

Primary dysmenorrhoea is defined as painful menses in women with normal pelvic anatomy, usually beginning during adolescence. It is characterized by crampy pelvic pain beginning shortly before or at the onset of menses and lasting 1 to 3 days. It is a common cause for sickness, absenteeism from classes and work by the female student community. The main aim of the study was to assess knowledge and impact of dysmenorrhoea among students. This was a descriptive study conducted at Swift Institute of Nursing, Ghaggar Sarai, Rajpura. A sample of 100 students was selected by proportionate random sampling. The tools used for data collection were structured knowledge questionnaire, Verbal Rating Scale and Impact scale. The findings showed that (48%) of students were having good knowledge and (41%), (08%) and (03%) of students were having average, very good and poor knowledge regarding dysmenorrhoea and its treatment respectively. The findings also revealed that (56%) of students were moderately affected from dysmenorrhoea whereas (39%) and (05%) of students were affected mildly and severely from dysmenorrhoea respectively. There was a significant association of knowledge of dysmenorrhoea and its treatment with course of Nursing. The study concluded that none of the students was unaffected from dysmenorrhoea.

Key Words: Knowledge, Impact, Dysmenorrhoea, Nursing students

Introduction

Adolescence is a transitional stage of physical and psychological human development that generally occurs during the period from puberty to legal adulthood (age of majority). The period of adolescence is most closely associated with the teenage years, though its physical, psychological and cultural expressions may begin earlier and end later.[1]

Menstruation is the shedding of uterine lining i.e. endometrium. It occurs on a regular basis in sexually reproductive females. Regular menstruation also called eumenorrhea lasts for few days, usually 3-5 days, but anywhere from 2-8 days is considered to be normal. The average menstrual cycle is 28 days long from the first day of one menstrual period to the first day of the next. A normal menstrual cycle is typically between 21-35 days between menstrual periods. The first experience of a menstrual period during puberty is called menarche. The average age of menarche is 13, but menarche can typically occur between ages 8 and 18. The average blood loss during menstruation is 35 milliliters with 10-80 ml considered normal.[2]

Dysmenorrhoea, or painful menstruation, is defined as painful cramps that begin a few hours before the onset of bleeding and may persist for hours or days. Dysmenorrhoea may be either primary, when there is no identifiable cause, or secondary to organic pelvic diseases. Primary dysmenorrhoea occurs typically between 17 and 22 years of age while secondary dysmenorrhoea is more common in older women. Dysmenorrhoea is commonly associated with systemic symptoms like lower back pain, nausea, vomiting, diarrhea, fatigue and headache. The cause of primary dysmenorrhoea has

yet to be established. It has been attributed to uterine contractions with ischemia and production of prostaglandin. Based on the patient's history, it is important to differentiate between dysmenorrhoea and premenstrual syndrome (PMS). PMS starts before the menstrual cycle and stops shortly after menstrual flow begins. The symptoms associated with PMS are more likely to be abdominal bloating and breast heaviness rather than lower abdominal cramps.[3]

Although not a serious medical problem, dysmenorrhoea is usually meant to describe a woman with menstrual symptoms severe enough to keep her from functioning for a day or two each month. Many teens don't suffer from dysmenorrhoea, as their uterus is still growing, and yet they may get it several years after their first period begins. Symptoms may begin one to two days before menses, peak on the first day of flow, and subside during that day or over several days. The pain is typically described as dull, aching, cramping and often radiates to the lower back.[4]

An article in Indian journal of community medicine showed that the prevalence of dysmenorrhoea is 54% (53% in girls in urban areas and 56% in girls in rural areas).[5]

Many adolescents consider dysmenorrhoea to be a normal part of the menstrual cycle and thus fail to report their pain to their physicians. The consequences of untreated primary dysmenorrhoea range from school absenteeism to disruption of relationships with family and friends. The risk factors reported in the literature for dysmenorrhoea are: age <20, null parity, higher/upper socioeconomic status, heavy menses, attempts to lose weight, physical activity, smoking, disruption of social networks, depression and anxiety.[2]

Several studies have shown that adolescents with dysmenorrhoea report that it effects their academic performance, social and sports activities.

A cross-sectional study was conducted to determine the prevalence of dysmenorrhea, impact on school attendance, academic performance, social activities and knowledge of treatment among Thai female adolescents and it was concluded that the prevalence of dysmenorrheal were 84.2% and only 15.8% experienced no dysmenorrhoea. The most common symptoms were stomach cramp (78%), backache (58.9%) and mood change (56.9%).[6]

A population based survey was conducted and it was concluded that out of total 2262 women who participated, more than half reported dysmenorrhoea among whom moderate to severe dysmenorrhoea was reported by 755 women. There was a linear association of severity of pain and impact with the onset of pain.[7]

Many studies have been conducted which conclude that dysmenorrhoea is a very common problem among adolescent girls and they experience a number of physical and emotional symptoms associated with dysmenorrhoea. Adolescent girls almost always silently suffer from dysmenorrhoea and the discomfort associated with it due to lack of knowledge about reproductive health. It is probable that this also affect their academic performance. So this has aroused interest to conduct this study to assess knowledge of students regarding dysmenorrhea and its impact on their lives.

Objectives

1. To assess knowledge of students regarding dysmenorrhea and its treatment.

2. To evaluate impact of dysmenorrhea among students of selected nursing college.

3. To find out association of knowledge with selected demographic variables among students of selected nursing college.

4. To prepare and validate an informational pamphlet for students regarding dysmenorrhea and its treatment.

Material and Methods

The research approach adopted for the study was Quantitative, Non-experimental research approach using "descriptive design". Research variables in the study were knowledge and impact.

The study was conducted in Swift Institute of Nursing, Ghaggar Sarai, Rajpura and a sample of 100 nursing students was selected using Proportionate stratified random sampling. There were a total of 281 female students studying in four different courses at Swift Institute of Nursing. First of all, strata and the proportion of female students studying in different courses were determined. The proportions of female students in each stratum were 50 in B.Sc. (N), 38 in GNM (N), 10 in Post Basic B.Sc. (N) and 02 in M.Sc. (N). The names of each student were written on slips and the slips were placed in four different bowls according to four strata and were mixed well. Then, according to the defined proportion in each stratum, the slips were picked up randomly from each bowl and the selected slips bearing the names of the students were the subjects for the study.

Formal administrative permission was obtained from the Principal of Swift Institute of Nursing Ghaggar Sarai, Rajpura. Data for the final study was collected on 25-5-2012. Confidentiality was assured to obtain good response. To obtain cooperation of the patients, the purpose of the study was explained and a written consent to participate in the study was taken from the nursing students.

The tools developed and used for data collection were Performa for identification and demographic data, Performa for structured knowledge questionnaire and a Performa of three point scale containing 15 items to assess the impact of dysmenorrhea. In VRS 4 adjectives were taken ranging from no pain to severe pain and 0 score on VRS indicated no pain, scores between 1-3 indicated mild pain ,scores between 4-6 indicated moderate pain and scores between 7-10 indicated severe pain. The structured knowledge questionnaire comprised of 20 questions regarding knowledge of dysmenorrhoea and its treatment. The test items were objective type. Each item has a single correct answer. Every correct answer was awarded a score of one point and every wrong answer was assigned zero score. Thus, the maximum score was 20 on the structured knowledge questionnaire. A three point scale was developed to assess the impact of dysmenorrhoea. Fifteen statements in the impact scale represented a specific aspect related to activities of daily living to seek the degree of agreement of response with the statement. Each participant was asked to give her opinion for each statement. The responses were quantified by giving scores. The students were asked to indicate their degree of agreements by checking one of three response categories: Always, Sometimes, Never. The maximum score was 45 and minimum score was 15. The technique used for data collection was "Paper Pen".

The content validity of the developed tools was obtained by submitting tools to eleven experts in the field of Obstetric and Midwifery Nursing, Medical-Surgical Nursing, Child Health Nursing, Community Health Nursing and Mental Health Nursing. The reliability coefficient for the knowledge test and impact scale was calculated using Split-half method (Spearman brown prophecy). The results were 0.72 and 0.9 respectively.

After selecting the study sample on the basis of inclusion criteria, the structured knowledge questionnaire were administered to the participants and they took about 15 minutes to complete the questionnaire. After 15 minutes questionnaire were taken back and an informational pamphlet regarding dysmenorrhoea was given to every participant.

Results

Sample Characteristics

Out of total 100 subjects under study, more than half (52%) were in the age group of 16-20 years. In contrast to this, subjects in the age group more than 30 years were only (1%) of the total sample. Half of the subjects were from B.Sc. Nursing (50%) and only (2%) were from M.Sc. Nursing. Majority of subjects (80%) were from nuclear family and very few (20%) belong to joint family. Half of the subjects (50%) were living in urban area, about (35%) were living in rural area and

only (15%) were from semi-urban area. Further, out of the total mothers of the subjects, 41% were having education till high school, (15%) were having secondary education and (20%) had done their graduation and only (8%) had done their post-graduation. Maximum number of the subjects (67%) achieved menarche at the age of 14-16 years and only (1%) achieved at the age of 8-10 years. Majority of the subjects (74%) had taken knowledge from their mothers regarding dysmenorrhoea and only (4%) had taken knowledge from internet. Most of the subjects (60%) had duration of menstrual cycle from 26-30 days and only (4%) had duration of above 45 days. About (53%) of subjects had duration of menstrual period for 3-4 days and only (12%) had duration of 2-3 days. Maximum number of subjects (83%) suffered from menstrual pain from the very first day and only (2%) experienced pain on 4th day. About (41%) of subjects suffered from pain for one day and only (4%) of subjects suffered for pain for more than two days.

Description of pain in terms of pain score on Verbal Rating Scale

The data given in **Figure 1** shows the level of menstrual pain measured on verbal rating scale as reported by the nursing students.

Description of knowledge scores of students regarding dysmenorrhoea and its treatment

The data given in **Figure 2** shows the level of knowledge of nursing students regarding dysmenorrhoea and its treatment.

The data presented in **Table 01** reveals that the mean knowledge score of students regarding dysmenorrhoea and its treatment was 10.86. The findings also showed that the median and standard deviation were 11 and 2.86 respectively.

Description of Impact of dysmenorrhoea among students

The data presented in **Figure 3** shows the level impact of dysmenorrhoea among nursing students.

The data presented in **Table 02** indicates that the mean of the impact score of students regarding dysmenorrhoea was 27.14. The findings also revealed that the Median and Standard Deviation of impact scores were 27 and 5.74 respectively.

Description of Association of level of knowledge with selected demographic variables

The data presented in **Table 03** shows that the computed Chi square value of level of knowledge with course of Nursing (34.25) was higher than the tabulated value which indicates the difference obtained was true difference and not by chance. The computed Chi square values of knowledge with age (15.27), type of family (2.59), residence (10.73), educational status of mother (10.83), age of menarche (8.12), source of knowledge regarding menstruation (5.84) and longevity of menstrual pain (16.41) were lower than the tabulated chi-square values which indicated that level of knowledge did not have any significant association with these variables. Thus, it can be concluded that level of knowledge of nursing students was independent of their age, type of family, residence, educational status of mother, age of menarche, source of knowledge regarding menstruation, and longevity of menstrual pain. Further, it can be inferred that there was a significant association of level of knowledge with course of nursing at 0.05 level of significance.

Discussion

The findings of the present study revealed that 48% of students were having good knowledge and 41%, 08% and 03% of students were having average, very good and poor knowledge regarding dysmenorrhoea and its treatment respectively. These findings are in compliance with the findings of the study of **Pour Eslami M et al.** which showed that 70% of the subjects had enough knowledge regarding dysmenorrhoea.[8]

The results of the present study also indicated that 56% of students were moderately affected from dysmenorrhoea whereas 39% and 05% of students were mildly and severely affected from dysmenorrhoea respectively and none of the students was unaffected from dysmenorrhoea. Similar findings were shown in the study conducted by **Fawole AO et al.** who reported that majority 882 (72.7%) experienced dysmenorrhoea; severe dysmenorrhoea was reported by 154 (12.7%).[9]

Conclusion

The study concluded that less than half (48%) of the students were having good knowledge regarding dysmenorrhoea and its treatment and 41%, 08% and 03% of students were having average, very good and poor knowledge regarding dysmenorrhoea and its treatment respectively. The study also concluded that more than half (56%) of the students were moderately affected from dysmenorrhoea whereas 39% and 5% of the students were mildly and severely affected from dysmenorrhoea respectively and none of the students fell in the category of unaffected form dysmenorrhoea. There was a significant association of level of knowledge of dysmenorrhoea and its treatment with course of Nursing.

Nurses must encourage girls to consult their physicians for the treatment of dysmenorrhoea so as to prevent long term complications. Workshops and seminars can be organized on various menstrual disorders to update knowledge of students and health professionals. Nurse administrators at educational settings can provide print materials to students regarding dysmenorrhoea and its management.

A similar study may be replicated on a larger sample for better generalizations of the findings. A comparative study can be conducted to assess the effect of two different interventions i.e. hot water bottle and ginger tea to relieve dysmenorrhoea.

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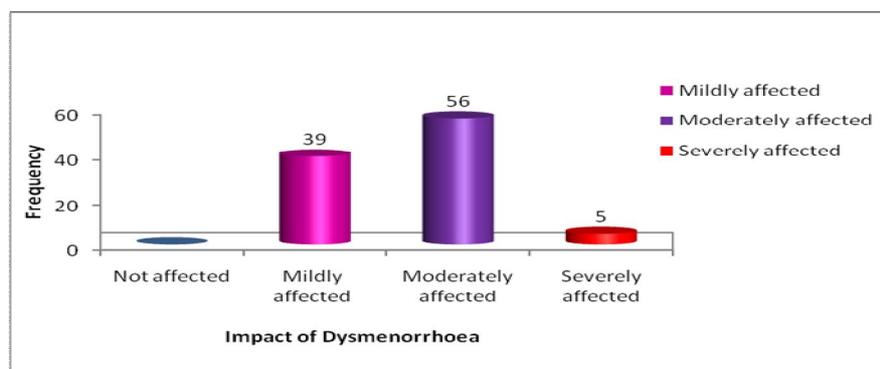
TABLES AND FIGURES
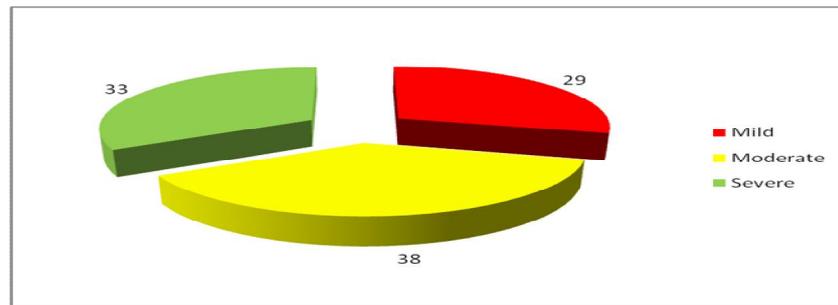
Figure 1: Pie diagram showing frequency distribution of students according to severity of menstrual pain
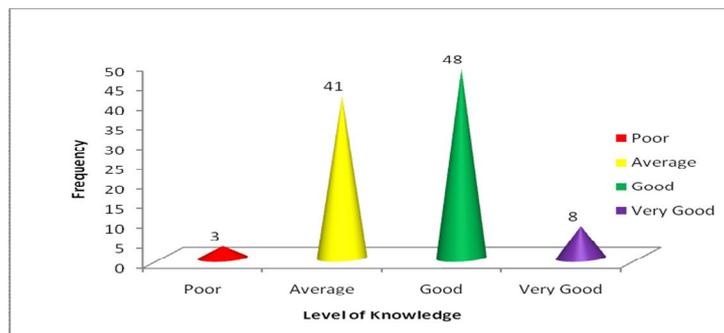
Figure 2: Cone diagram showing frequency distribution of students according to level of knowledge

Figure 3: Cylinder diagram showing frequency distribution of students according to impact of dysmenorrhoea

Table 01

Mean, Median and Standard Deviation of knowledge scores of students on structured knowledge questionnaire

N=100

Test	Mean	Median	Standard Deviation
Knowledge Test	10.83	**11**	2.86

Minimum score 0   **Maximum score 20**

Table 02

Mean, Median and Standard Deviation of impact scores regarding dysmenorrhoea

N=100

Test	Mean	Median	Standard Deviation
Rating Scale	27.14	**27**	5.74

Minimum score 15   **Maximum score 45**

Table 03

Chi Square Value Showing Association of Knowledge regarding dysmenorrhoea with Selected Demographic Variables

N=100

S.No.	Demographic variable	Chi square value	df
1.	Age	15.27^{NS}	9
2.	Course of nursing	**34.25***	9
3.	Type of family	2.59^{NS}	6
4.	Residence	10.73^{NS}	6
5.	Educational status of mother	10.83^{NS}	12
6.	Age of menarche	8.12^{NS}	9
7.	Source of knowledge regarding menstruation	5.84^{NS}	12
8.	Pain remains for	16.41^{NS}	9

$X2 (6) =12.59, x2 (9) =16.952, x2 (12)=21.03$

$P \leq 0.05$, (* Significant), $p > 0.05$ NS (NS= Not Significant)