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A descriptive study to assess the knowledge and practice of menstrual hygiene and complementary & alternative therapy in menstrual problems among nursing students in selected nursing academic institutions, West Bengal

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Abstract

Introduction: Adolescent girls constitute about 1/5th of the total female population in the world. It is the very crucial period for a girl. It is the starting period for preparing physically, mentally and socially for future motherhood because they are the future mother of our nation. In India, there's little open discussion about menstruation, puberty changes, and the risks of poor hygiene. So Good menstrual hygiene is essential for girls' health and dignity.

Purpose: The purpose of this study is to comprehensively assess the knowledge and practices of menstrual hygiene and the awareness and utilization of complementary and alternative therapies among nursing students in selected academic institutions in West Bengal. Menstrual health is a critical aspect of women's well-being, and proper hygiene practices are essential for maintaining health and preventing complications.

Methodology: The study adopted a descriptive survey design among 90 nursing students from selected nursing training institution, West Bengal. Data were collected by using a structured questionnaire to assess the knowledge and a self-reported checklist to assess the practice regarding menstrual hygiene. Both Descriptive and inferential statistical analysis has been used to analyse the collected data.

Results: The study revealed that the Nursing students have poor, average and good knowledge respectively in different area. The result also showed there was no significant association between age and knowledge. Practice in certain area to be improved through health education.

Conclusion: The study revealed that there was good level of awareness and practice of good menstrual hygiene among the respondents, however some specific areas such as cleaning direction and addressing menstrual stigma need further improvement.

Keywords: Adolescent girls, menstrual hygiene, knowledge

Introduction

WHO has defined Adolescence as the period between 10-19 years of life. Adolescent girls constitute about 1/5th of the total female population in the world.

Adolescence is the period of physical and psychological preparation of a girl for the safe motherhood. Almost a quarter of India's population comprises of girls below 20 years. This period is marked with onset of menarche. In females menstruation is a universal and natural, physiological process during the reproductive age. Yet often a girl sees blood first time (Menarche) from her vagina, can be shocking and frightening. In India the physiological bases of menstruation, biological changes at puberty and infection risks by poor practices are hardly ever discussed openly. Adolescence in girls signifies the transition from girlhood to womanhood. Good menstrual hygiene is crucial for the health and dignity of girls and women.

Around 40-50% of adolescent girls have less knowledge and unsafe hygienic regarding their menstrual flow.

Nurses hold a very important position in the hierarchy of health care providers and act as a bridge between the patient and medical profession so that the assessment of their knowledge

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and practices about menstruation is of prime importance. Also, they can impart their knowledge to females at grass root level as nurses are the main health care providers in many remote and backward areas in our country. With this background, the present study was undertaken to assess knowledge and practices regarding menstruation as well as complementary & Alternative therapy used in menstrual problem among the 1st and 2nd year nursing students.

A Descriptive Study to Assess the Knowledge and Practice of Menstrual Hygiene, Complementary & Alternative Therapy in Menstrual Problems among Nursing Students in Selected Nursing Academic Institution, West Bengal

Purpose of the study

The purpose of this study is to comprehensively assess the knowledge and practices of menstrual hygiene and the awareness and utilization of complementary and alternative therapies among nursing students in selected academic institutions in West Bengal.

Menstrual health is a critical aspect of women's well-being, and proper hygiene practices are essential for maintaining health and preventing complications. Understanding nursing students' current knowledge and practices regarding menstrual hygiene will provide insights into educational needs and potential areas for improvement within nursing curricula.

Additionally, exploring nursing students' awareness and utilization of complementary and alternative therapies for menstrual problems aims to help in managing menstrual health issues. By identifying gaps in knowledge and practices related to both conventional hygiene methods and alternative therapies, this study seeks to contribute to the development of educational programs and interventions that can enhance nursing education and promote holistic menstrual health care practices among future healthcare providers.

Through this research, nursing students will be equipped with comprehensive knowledge and skills to address menstrual health needs effectively in their future practice.

Objectives

1. To assess the knowledge of nursing students regarding menstrual hygiene and complementary and alternative therapies in relieving menstrual problems.
2. To explore the current practices of nursing students related to menstrual hygiene.
3. To find the association between the knowledge scores and the selected socio demographic variables.

Hypothesis

- **H₀₁:** Nursing students have not adequate knowledge regarding menstrual hygiene and complementary and alternative therapies in relieving menstrual problems.
- **H₁:** Nursing students have adequate knowledge regarding menstrual hygiene and complementary and alternative therapies in relieving menstrual problems.
- **H₀₂:** There is no significant difference in the practices related to menstrual hygiene among nursing students.
- **H₂:** There is a significant difference in the practices related to menstrual hygiene among nursing students.
- **H₀₃:** There is no association between the knowledge scores and the selected socio demographic variables.
- **H₃:** There is an association between the knowledge

scores and the selected socio demographic variables.

Assumption

- Nursing students generally know about menstruation and menstrual hygiene but need details education regarding this
- Nursing students have lack of knowledge regarding Complementary and Alternative Therapy used in menstrual problem.
- Cultural norms may influence in the practice of menstrual hygiene of the Nursing students.
- Nursing students will participate willingly in research study.

Inclusion Criteria

1. Only students of the 1st and 2nd year of the nursing program were included.
2. Students who were available during the study.
3. Students who were willing to participate in the study
4. Students who provided informed consent to participate in the study.

Review of Literature

Review of literature is a survey of scholarly sources on a specific topic. It provides an overview of current knowledge, allowing to identify relevant theories, methods, and gaps in the existing research. The review of literature enabled the investigator to gain insight into the area of research to formulate questionnaire and make decision regarding the methodology.

A study by Deshpande *et al.* (2018) ^[1] investigates to assess the knowledge, beliefs, and source of information regarding menstruation, and also to assess hygiene among them. Study was carried out in urban slum areas. 72% were between 15 and 19 years. A maximum of 47% were having high school education. About 47% mothers were illiterate; 27% girls had menarche at 14 years and 82% had regular cycles. About 76% had no knowledge of menses before menarche. About 60% girls used sanitary pad and the rest used cloth pieces. About 22% used water and no soap for hand washing. Multiple restrictions were practiced. This study reported that menstrual hygiene was unsatisfactory among adolescent girls, therefore, they should be educated about the facts of menstruation and proper hygienic practices.

Kuruvila (2017) ^[2] conducted a study to assess the knowledge regarding menstrual hygiene and practices among tribal adolescent girls residing in selected tribal colonies of kannur district, Kerala. The result of the study revealed that among the respondents, 34.8% had poor knowledge, 41% had favorable attitude and 80.5% had poor practice. About 49% had menstrual pattern disorders, 39% reported symptoms of urinary tract infection. Dysmenorrhoea (67.2) and back pain (53%) were the predominant physical problems and anger (49.5) was the major emotional problems. The study concluded to mandate health education in school by professional nurses.

Shivaleela *et al.*, (2015) ^[3] conducted a study to assess the knowledge and practice of menstrual hygiene among high school girls in Nekmte Town, Western Ethiopia. In this study, 504 (60.9%) and 330 (39.9%) respondents had good knowledge and practice of menstrual hygiene respectively. The study concluded that the knowledge and practice of menstrual hygiene is low. Awareness regarding the need for information about good menstrual practices is very

important. So, health education program should be setup to create awareness and practice of good menstrual hygiene.

Deekala and her team (2022) ^[4] conducted a study on Prevalence of Dysmenorrhea and Determinants of Menstrual Distress in Adolescent Girls with Dysmenorrhoea, In Tirupati Town, The objectives of the study were to assess the prevalence of dysmenorrhea in adolescent girls studying in selected Government high schools of Tirupati, India. The study revealed that Total study participants were 564 adolescent girls out of which 380 were suffering with dysmenorrhea. Prevalence of dysmenorrhea was 67.7%. The impact of menstrual cycle on daily activities, includes –Menstruation with severe pain with limitations in daily activities 108 (33.8%) and Menstruation with severe pain with studies get affected 64 (20%). The study concluded that to improve quality of life, positive academic output and to reduce absenteeism in schools, need to educate the adolescent girls, their parents, educational institutions and education ministries to act accordingly and even make necessary changes in the curriculum if required.

Sundari and her team (2022) ^[5] conducted a cross-sectional study to assess the psychosocial problems of adolescent girls during menstruation. in Bhoodhur Govt high school, Sholavaram, Chennai. The study revealed that majority (71.7%) of adolescent girls belong to the age group of 14-15 years, 68% were in ninth standard. Nearly half of the respondents were using pads (45%) and clothes (42%) as absorbent, majority (65%) preferred to discuss about their menstrual problems with mother, 28% with friends about menarche, 7% do not discuss with anyone. Most of them (58%) faced physical problems during menstruation such as pre-menstrual syndrome (55%), menorrhagia (12%), sleep disturbance (12%), body pain (68%), headache (45%), leg pain (55%). A majority (67%) had psychological problems such as change in the mood (70%) irritability, (78%) restlessness, (63%) unstable mood, (58%) feeling stressed). One-third had faced psychosocial problems in terms of being unaware of menarche before the onset (65%), 10% do not have privacy to change sanitary pad and do not know how to use pad, 32% faced restrictions during menarche. The study concluded that mental health education of adolescents girls is essential to deal with psychosocial problems related to menstruation.

Omidvar *et al.* (2018) ^[6] conducted a cross sectional study among 536 healthy menstruating girls aged 10-19 years adolescent girls from different educational institutions in the urban areas of a major city in South India. Results of the study revealed that Mean age of menarche was 13 ± 1.1 years with wide variations, i.e., 10–17 years. 73.1% had cycle duration of 21–35 days. More than half of them reported 5–6 days' duration of menstrual blood flow and 12% of the participants had > 7 days of flow. 30.1% reported abundant blood loss, 66.8% had dysmenorrhea the study concluded that a comprehensive school education program on menarche and menstrual problems may help girls to cope better and seek proper medical assistance.

Abubakar *et al.* (2020) ^[7] conducted a study on Use of complementary and alternative therapies for the treatment of dysmenorrhea among undergraduate pharmacy students in Malaysia. 219 Pharmacy students participated in the study. The prevalence of dysmenorrhea was 72.1%, and the prevalence of ever-use and current use of CATs was 70.3 and 54.4%, respectively. Bed rest (71.5%), hot

compress/heating pad (47.5%) and massage (43.0%) were the most common CATs used by the respondents. The most common reasons for using CAT were to reduce the need for analgesics (61.4%), efficacy (37.3%) and recommendation by others (32.9%). About 23 and 9% of the respondents believed that CATs were equally “effective” and “more effective” than analgesics, respectively. The study concluded that Bed rest, hot compress/heating pad and massage are the most common CATs used by the students. The need to reduce the use of analgesics and believe that CAT is effective in relieving menstrual pain are independently associated with the current use of CATs.

Jenabi (2013) ^[8] conducted a study to assess the effectiveness of ginger in providing relief to patients of primary dysmenorrhea among 70 female students of the university in Azad University, Toyserkan. The clinical trial was conducted from July 10 to September 5, 2010. The subjects were randomly divided in to two equal groups and were given either placebo or ginger in capsule form for 3 days in first menstruation cycles. They graded the severity of their pain using a visual analogue scale. A 5-point Likert scale was used to assess response to treatment. Wilcoxon's rank-sum test was used to compare the severity of pain in the two groups. The study revealed that compared with the baseline, the decrease in the visual analogue scores of post-therapy pain in the ginger group was significantly greater than that for placebo group. In the ginger group, 29 (82.85%) subjects reported an improvement in nausea symptoms.

The study concluded that the Ginger is effective in minimizing the pain severity in primary dysmenorrhea.

Research methodology

Methodology is the systematic, theoretical analysis of the methods. The purpose is to archive research objectives

The methodology of the research indicates the general pattern for organizing the procedure for gathering valid & reliable data for the study. Research methodology included research approach, variables, setting, population, sample and sampling technique, data collection tools and techniques and plan for data analysis

- **Research Approach:** Quantitative research approach
- **Research Design:** Cross sectional survey
- **Setting:** The research setting was nursing training Institution (Sramajibi Academy of Nursing) in Belur West Bengal
- **Population:** For this study, population were Nursing students (1st and 2nd year) who were available during the study and who provided informed consent to participate in the study Sample.
- **Sampling technique:** In the present study, a Non-Probability Convenience sampling technique to be used.
- **Sample size:** 90
- **Variables:** In the present study,
- **Demographic variable:** Selected socio-demographic variables are age in years, educational qualification, parent's level of education & occupation, monthly family income, type of family, number of elder sister present in the family, source of information during menarche, facing any pre-menstrual syndrome etc.
- **Independent variable:** Nursing students
- **Dependent variable:** knowledge and practice of the Nursing students regarding menstrual hygiene.

Tools for data collection

Part - A: It consists of socio demographic variables.

Items like age in years, educational qualification, parent's level of education & occupation, monthly family income, type of family, number of elder sister present in the family, source of information during menarche, facing any pre-menstrual syndrome etc.

Part B

Self-structured questionnaire schedule prepared to assess the level of knowledge, complementary & alternative therapy

Part C: Self-reported checklist prepared to assess the practices of nursing students regarding menstrual hygiene.

Ethical consideration

- Approval taken from the principal of Sramajibi Academy of Nursing
- Informed consent taken from the willing participant
- Confidentiality and anonymity of the responses has been maintained

Plan for data analysis

Both descriptive and inferential statistics are planned to be used for the data analysis.

1. Descriptive statistics (Frequency distribution and percentage) will use to analyse the socio demographic profiles information.
2. Descriptive statistics (e.g., mean, median, standard deviation) will summarize student knowledge levels and key characteristics of their attitudes.
3. Association between level of knowledge about teenage pregnancy and selected demographic variables are tested by Chi-square test.

Result

This analysis reveals valuable insights into the knowledge and practices of nursing students regarding menstruation and menstrual hygiene the findings suggest a generally positive outlook towards caring for adolescent girls suffering from menstrual problem but also highlight areas for improvement in their educational preparation.

Table 1: The Socio-Demographic Variables and Frequencies and Percentage

Category	Frequency	Percentage
Age in years		
18-21	70	77.78%
22-25	16	17.78%
Above 25	4	4.44%
Educational qualification		
Undergraduate	81	90.00%
Postgraduate	9	10.00%
Professional qualification		
GNM 1st year	45	50%
GNM 2nd year	45	50%
Father's level of education		
No formal education	2	2.22%
Primary	21	23.33%
Secondary	46	51.11%
Above secondary	21	23.33%
Mother's level of education		
No formal education	7	7.78%
Primary	18	20.00%
Secondary	51	56.67%
Above secondary	14	15.56%
Father's occupation		
Employed	81	90.00%
Unemployed	9	10.00%
Mother's occupation		
Housewife	71	78.89%
Working	19	21.11%
Type of family		
Nuclear	66	73.33%
Joint	17	18.89%
Single parent	7	7.78%
Source of information during menarche		
Family member	66	73.33%
Closed relatives	2	2.22%
Book	4	4.44%
Social media	18	20.00%
Faced any pre-menstrual syndrome		
Yes	70	77.78%
No	20	2.22%

The mean knowledge score was found to be approximately 22.31. It indicates a moderate level of understanding among students. The standard deviation (SD = 3.06) suggests some variation in knowledge, with half scoring above and half

below the median (22.46). The chi-square test (0.134) demonstrates no statistically significant association between age groups and knowledge scores. Age may not be a major factor influencing knowledge acquisition in this sample.

The menstrual hygiene practice has been assessed by 14 statements and the responses are categorized into three levels like Yes/No Here's the table with frequency and

percentage for each statement:

This table summarizes the frequency and percentage of respondents who answered "yes" or "no" to each statement.

Table 2: Frequency & percentage of the self-reported practice checklist

Statement	Yes	No	Total	Yes (%)	No (%)
I use readymade sanitary napkin	90	0	90	100.00	0.00
I use cloth napkin	0	0	0	0	0
I take care my cloth/ napkin like cleaning, drying.	69	21	90	76.67	23.33
I dispose the used napkin after wrapping with a paper	90	0	90	100.00	0.00
I change the napkin 3-4 times per day	54	36	90	60.00	40.00
After changing the napkin I dispose it into the dustbin	89	1	90	98.89	1.11
I have clean my perineum every time when the napkin.	65	25	90	72.22	27.78
I have clean the perineum with plain water	64	26	90	71.11	28.89
I have clean the perineum from front to back	59	31	90	65.56	34.44
Girls kept away from social activities	45	45	90	50.00	50.00
Have you take iron rich diet, fruit and plenty of.	79	11	90	87.78	12.22
Taking iron containing diet will help to prevent.	25	65	90	27.78	72.22
Doing exercise is most suitable in relieving men.	47	43	90	52.22	47.78
I maintain regular bowel habit	74	16	90	82.22	17.78

Sanitary Practices

- 100% of respondents use readymade sanitary napkins and dispose of them properly after use.
- 76.67% take care of cloth napkins by cleaning and drying them appropriately.

Changing and Disposal Habits

- 60% change their napkins 3-4 times per day.
- Almost all (98.89%) dispose of used napkins into the dustbin after changing.

Hygiene Practices

- About 72.22% clean their perineum every time they change their napkin, and a similar percentage (71.11%) use plain water for cleaning.
- 65.56% clean their perineum from front to back, which is recommended for hygiene.

Health and Lifestyle

- 87.78% report having a diet rich in iron, fruits, and plenty of fluids, which is beneficial for health.
- However, only 27.78% believe that an iron-containing diet helps prevent anemia.

Other Factors

- 82.22% maintain regular bowel habits.
- Social activities are affected for 50% of respondents during menstruation.
- Exercise is seen as beneficial for relieving menstrual discomfort by 52.22% of respondents.

Conclusion

This study was conducted to assess menstrual knowledge and practices among nursing students who are the most important pillar in regards to policy making and implementation of women health. From this study we found that the knowledge and practices regarding menstruation is satisfactory, still education about menstrual hygiene need to be imparted at the grass root level. Anganwadi workers, health care workers, teachers and media can play a major role in safe and hygienic menstrual practices. All mothers irrespective of their educational status need to be taught about the importance of hygienic practices during

menstruation, conveying timely and correct information regarding menses to their daughters and also should be encouraged to break the age old myths and taboos associated with menstruation.

Nursing implication

- **Education:** Introduce comprehensive programs in nursing schools focusing on menstrual hygiene and safe practices.
- **Alternative Therapies:** Include training on alternative therapies like acupuncture or herbal remedies for managing menstrual issues.
- **Collaboration:** Encourage teamwork between nursing students and other healthcare professionals for holistic patient care.
- **Research:** Support research by nursing students on menstrual health and alternative therapies.
- **Policy Support:** Advocate for policies that promote menstrual hygiene management in schools and healthcare facilities.
- **Community Outreach:** Organize outreach programs to educate the public, especially young women, on menstrual health.

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