

SYNOPSIS

Subject:- Nursing Research

Submitted to ,

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Submitted by,

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“Menstrual Health is a Fundamental Health Human Rights issue, rather than just Aa hygiene matter. It encompasses physical, mental and social well -being throughout the entire menstrual cycle.”

– WHO

Introduction : -

WHO has defined Adolescence as the period between 10-19 years of life. Adolescent girls constitute about 1/5th total female population in the world. Adolescence in girls has been recognized as a special period which signifies the transition from girlhood to womanhood. Menstruation is a phenomenon unique to all females. Menstruation is generally considered as unclean in the Indian society. Isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon. The first menstruation is often horrifying and traumatic to an adolescent girl because it usually occurs without her knowing about it. “There is a substantial lacuna in the knowledge about menstruation among adolescent girls. Several research studies have revealed this gap and they showed that there was a low level of awareness about menstruation among the girls when they first experienced it. Many studies have revealed that most of the adolescent girls had incomplete and inaccurate information about the menstrual physiology and hygiene. It also revealed that mothers, television, friends, teachers and relatives were the main sources which provided information on menstruation to the adolescent girls. Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation. Women and girls of the reproductive age need access to clean and soft, absorbent sanitary products which can in the long run, protect their health.

2. Background & Justification of the Study

Background

Adolescence is a unique time in a woman's life that represents the shift from youth to adulthood. Menstruation is an essential phenomenon in an adolescent girl's life. She undergoes various physiological and psychological changes during this phase of life. Menstruation is considered unclean in India, and teenage girls are not allowed to undertake home chores or engage in religious or cultural events during their period. The problem of improper menstrual hygiene is scarcely acknowledged in developing countries like India. Lack of menstrual hygiene is connected with negative effects such as infections of the reproductive and urinary tract, which may lead to future infertility and birth complications. Proper knowledge about menstrual hygiene and its application can improve adolescent girls' reproductive health to a great extent.

Girls' and women's health, education, and integrity are all dependent on good menstrual hygiene.

In India, many adolescent girls lack adequate knowledge regarding menstrual hygiene due to socio-cultural restrictions, lack of proper education, and limited access to resources. Studies have shown that inadequate menstrual hygiene management is associated with increased risk of infections and poor quality of life.

Need of the study

The application of Menstrual hygiene is effective in reducing infection rates although extensive research has been conducted to investigate the Menstrual hygiene knowledge and attitude of adolescent girls (WHO, 2022, 22 JUN), there are very few previous studies addressing menstrual hygiene knowledge and attitude of School going adolescent girls.

This study would be very useful in identifying gaps in knowledge and attitude to in knowledge and attitude the development of appropriate strategies to promote menstrual hygiene for school adolescent students in the future.

This study reveals that rural school-going girls in districts like- Howrah and other districts like - Bankura, Paschim Medinipur face far higher challenges regarding access and taboos.

West Bengal, particularly semi-urban areas like Howrah, still faces challenges in menstrual health awareness. Schools provide an ideal platform for health education interventions.

A structured educational program can significantly improve knowledge and change attitudes. However, limited studies have been conducted in this specific region. Hence, this study is justified to evaluate the effectiveness of such interventions among adolescent girls.

3. Problem Statement

“A study to assess the effectiveness of a structured educational intervention on knowledge and attitude regarding menstrual hygiene among adolescent girls in a selected school of Howrah, West Bengal.”

4. Objectives

1. To evaluate the effectiveness of the structured educational intervention by comparing pre-test and post-test knowledge scores regarding menstrual hygiene among adolescent girls.
2. To evaluate the effectiveness of the structured educational intervention by comparing pre-test and post-test attitude scores regarding menstrual hygiene among adolescent girls.
3. To find out the association between pre-test knowledge and attitude scores with selected demographic variables (such as age, class, age at menarche, source of information.).

5. Literature Review :-

Literature related to Menstrual Hygiene :

- **Jaseela Majeed et al.** (June 2022) conducted a study on menstrual hygiene practices and associated factors among Indian adolescent girls. The study included adolescent females from low- and middle-income countries (LMICs). PRISMA checklist and PICO guidelines were used to screen literature from 2011–2021, and the Newcastle-Ottawa Scale assessed study quality. A total of 84 studies were included, and meta-analysis with subgroup analysis was performed. Four major themes were identified: hygiene practices, types of absorbents used, menstruation-related morbidities, and interventions. The findings highlighted key aspects such as menstrual hygiene management, associated diseases, abnormalities, and interventions.
- **Richa Rathoria et al.** (PMCID: PMC9229495; PMID: 35739585) conducted a descriptive cross-sectional study among adolescent school girls in Barabanki district, Uttar Pradesh, from August 2021 to April 2022. Based on NFHS-5 (2019–2021), 72.6% of women aged 15–24 used hygienic menstrual methods, while 27.4% followed unhygienic practices. A sample size of 306 was selected using simple random sampling from public and private schools. The study aimed to assess the association between socio-demographic factors, menstrual characteristics, and knowledge, attitude, and practices regarding menstrual hygiene.
- **Tashi Tshomo et al.** (2021; PMID: 36303967; PMCID: PMC9580629) conducted a cross-sectional KAP study among female undergraduate students in Bhutan. The study included students from eight RUB colleges and two KGUMSB colleges. Participants

above 18 years who gave consent were included. Data were collected using a questionnaire adapted from previous studies, along with observation of MHM facilities in colleges and hostels. The study analyzed socio-demographic data, overall KAP, and differences between first- and final-year students. The findings identified gaps in menstrual hygiene management and provided recommendations for improvement by the Ministry of Health in Bhutan.

- **Shafique Ahmed et al. (2024)** conducted a cross-sectional study on menstrual hygiene management and menstrual problems among adolescent girls in an urban area of North India. The study assessed hygiene practices, menstrual problems, and awareness levels among adolescent girls. The findings highlighted that inadequate knowledge and poor hygiene practices were associated with increased menstrual problems, emphasizing the need for proper education and awareness programs.
- **Rajnish R. Prasad et al. (2024)** conducted a cross-sectional study among 417 adolescent girls in urban slums of Jaipur, India. The study aimed to assess factors influencing knowledge and practices of menstrual hygiene. Findings revealed that socio-demographic factors, lack of awareness, and poor access to sanitary facilities significantly affected menstrual hygiene practices among adolescent girls.
- **Mousumi Ganguly et al. (2025)** conducted a study on menstrual hygiene management among rural school-going adolescent girls in West Bengal, India. The study focused on hygiene practices, use of absorbents, and challenges faced by girls. Findings identified gaps in awareness, cultural barriers, and inadequate facilities, highlighting the need for targeted interventions and education programs.

6. Variables & Operational Definition of Terms

Variables

- Independent Variable: Structured educational intervention
- Dependent Variables: Knowledge and attitude regarding menstrual hygiene
- Demographic Variables: Age, class, religion, mother's education etc.

Operational Definitions

Structured Educational Intervention: Refers to a planned teaching programme developed on menstrual hygiene, including topics such as menstrual physiology, use of sanitary products, personal hygiene, myths and misconceptions, and safe practices, delivered through lecture, discussion, with help of charts and posters.

Effectiveness: Refers to the extent to which the structured educational intervention improves knowledge and attitude regarding menstrual hygiene, determined by comparing pre-test and post-test scores.

Adolescent Girls: Refers to girls aged between 13–19 years studying in the selected school of Howrah, West Bengal

Knowledge: Refers to the extent to which the adolescent girls possess accurate information regarding menstrual hygiene, measured by structured knowledge questionnaire which will be developed by the researcher and will be validated by experts.

Attitude: Refers to the feelings, beliefs, and perceptions of adolescent girls towards menstrual hygiene, measured using a Likert scale which will be developed by the researcher and will be validated by experts

Menstrual Hygiene: Refers to hygienic practices followed during menstruation, including the use of clean absorbents, proper disposal, genital hygiene, and awareness of menstrual health.

Hypotheses

1. There will be a significant increase in the knowledge scores regarding menstrual hygiene among adolescent girls after the structured educational intervention.
2. There will be a significant improvement in the attitude regarding menstrual hygiene among adolescent girls after the structured educational intervention.
3. There will be a significant association between pre-test knowledge and attitude scores with selected demographic variables (age, class, age at menarche)

7. Research Design

- Pre-experimental one-group pre-test post-test design.

Type of study:- Study Experimental / (Quasi experimental)

The study is a pre experimental one group and post test design. Pre-test and Post Test design

1. In this study, one group of adolescent girls will be selected.
2. Pretest will be conducted to assess baseline knowledge and attitude.
3. A structured educational intervention will be administered
4. Post test will be conducted to evaluate effectiveness.

8. Settings

- Selected school in Howrah, West Bengal.

9. Population & Sample

Population

- 13 to 19 years old adolescent girls studying in selected school.

Sample

- Adolescent girls who meet inclusion criteria.

10. Sampling Techniques & Sampling Criteria

Sampling Technique

- Non-probability convenient sampling.

Sampling Criteria

Inclusion Criteria

- Students in class VII – X, the teenage girls aged 13–19 years
- Those who had reached menarche.
- Willing to participate

Exclusion Criteria :-

- Cognitive or Communication Impairments.
- Girls without menarche, those with serious mental health conditions.
- Non-response or Incomplete Data: Girls who are unable to provide complete answers.

11. Sample Size Calculation & Feasible Sample Size

- Sample size will be calculated using appropriate statistical formula based on previous studies or pilot study.
- **Feasible sample size:** Approximately 100 participants (depending on availability).

Formula (for pre-experimental study):

$$n = \frac{(Z^2 \times p \times q)}{d^2}$$

Where:

- n = Required sample size.
- Z = 1.96 (95% confidence level)
- p = 0.5 (estimated proportion)
- q = 1 – p = 0.5 (Remaining proportion)
- d = 0.1 (allowable error)

Calculation:

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.1)^2}$$

$$n \approx 96$$

12. Data Collection Tools & Techniques

Tools

1. Section A: Demographic data
2. Section B: Structured knowledge questionnaire
3. Section C: Attitude scale (Likert scale)

Technique

- Self-administered questionnaire

13. Steps of Data Collection (Brief)

Obtain ethical clearance and permission from school authority.



Explain purpose and obtain consent.



Conduct pre-test (knowledge & attitude).



Administer structured educational intervention.



Conduct post-test after specified duration (e.g., 7 days).

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Collect and organize data.

Ethical Consideration

- Approval from Institutional Ethics Committee
- Permission from school authority
- Informed consent from participants (and guardians if required)
- Confidentiality and anonymity maintained
- Right to withdraw at any time

15. Plan of Statistical Analysis

Descriptive Statistics

- Frequency, percentage, mean, standard deviation

Inferential Statistics

- Paired t-test (to compare pre-test & post-test)
- Chi-square test (association with demographic variables)

16. References :-

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