

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

Abstract

Adolescent girls in India are a vulnerable group because they are often denied access to basic necessities like education and healthcare. Adolescence, which marks the passage from childhood to adulthood, is characterized by the child's growth and development.. It is acknowledged as a unique time in a girl's life cycle that needs special consideration. The menarche, which marks the beginning of a woman's reproductive stage of life, is a crucial developmental step for her biologically.

Keywords: Exploratory Study, Nurse Initiated Menstrual Hygiene Management Program Awareness, Adolescent Hiv Clients, Tertiary Care Hospital.

Author

Vidhyalakshmi P N
Nursing Tutor
Child Health Nursing
E S College of Nursing
Villupuram, V Salai, Tamil Nadu, India.
reegankavin@gmail.com

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI – A MIXED ANALYSIS

I. OBJECTIVES

- explore the experiences of the menstrual awareness among Adolescent HIV Clients
- Assess the pre-test level of menstrual awareness among Adolescent HIV Clients.
- Assess the impact of Nurse Initiated Menstrual Hygiene management program on menstrual awareness among Adolescent HIV Clients.
- Compare the pre-test and post-test level of menstrual awareness among Adolescent HIV Clients.
- Associate the post test level of menstrual awareness among Adolescent HIV Clients with their selected bio socio demographic variables.
- combine the findings of qualitative and quantitative data

II. METHODOLOGY

This study was conducted with 30 participants (early adolescents with HIV) in both qualitative and quantitative approach using Exploratory sequential design(Convenience sampling) and Pre-experimental design purposive Sampling technique. I have applied the Von betlanffy theory for this study.

III. RESULTS

In qualitative aspect the adolescent verbalized *“It was bit difficult, and then I adjusted to it”*

The participants expressed negative emotion towards menstruation. Tiredness was consistently as a physical challenge that participants had to go through their daily activities. In post test aspect the effectiveness of Nurse Initiated Menstrual Hygiene Management Program was assessed, the participants verbalized *“Very useful to me”* From above ,it is clearly stated that Nurse Initiated Menstrual Hygiene Management Program was very effective and also highlighted positive change in behavior.

In quantitative aspect the adolescent with HIV had no prior knowledge and practice about menstrual hygiene (during pretest) the findings was knowledge and practice score was 10.0% and 0% whereas after administration of Nurse Initiated Menstrual Hygiene Management Program ,there was difference in pretest and post test level of knowledge and practice level among study participants.The post test level of knowledge and practice score was 73.33% and 70% respectively.

The study was highly significant ($p < 0.001$) .After administration of Nurse Initiated Menstrual Hygiene management Program, the knowledge and practice on menstrual awareness was assessed both subjectively and objectively.

From the above discussion, the study findings proved that the Nurse Initiated Menstrual hygiene management program has improved the knowledge and practice on menstrual hygiene among adolescent HIV clients .hence the nurse must concentrate on teaching menstrual hygiene practices among early adolescents and helps to solve the social stigma regarding menstruation

IV. CONCLUSION

The study was inferred that Nurse Initiate Menstrual Hygiene Management Program was the best teaching strategy in imparting knowledge regarding menstrual awareness which were the commonly encountered problems in developing and developed countries, that can be educated through an ongoing Nurse Initiate Menstrual Hygiene Management Program by Nurses. Therefore, it is very essential to give more emphasis on increasing the knowledge and practice among adolescents with HIV

V. CHAPTER 1

1. Introduction

“Adolescence is a new birth, for the higher and more completely human traits are now born”

G. Stanley Hall

Adolescent girls in India are a vulnerable group because they are often denied access to basic necessities like education and healthcare. A person is designated an adolescent by the World Health Organization if they are between the ages of 10 and 19. Adolescence, which marks the passage from childhood to adulthood, is characterised by the child's growth and development. The child's physical, psychological, and biological growth takes place throughout this time. It is acknowledged as a unique time in a girl's life cycle that needs special consideration. The menarche, which ushers in the reproductive stage of a woman's life, is a significant biological turning point in her development.. The typical age at menarche, which is between 12 and 13, is largely constant among populations. Unfortunately, the situation for girls gets worse due to ignorance about menstruation preparation and management or due to shyness and embarrassment. Despite being a natural occurrence, menstruation is still frowned upon in Indian culture since it is seen as filthy and unclean. When their period finally arrives each month, millions of adolescent girls around the world experience a dreadful cycle of pain, discomfort, embarrassment, worry, and solitude. Adolescent girls continue to be ignorant of the scientific facts and sanitary health practises, which can occasionally have a negative impact on their health, because menstruation and menstrual practises are still shrouded in taboos and socio-cultural constraints. It is well known that girls' adolescence is a unique stage of their lives that calls for particular and unique care. Due to ignorance about the scientific nature of menstruation, there are many psychological and religious hurdles around it. The period of adolescence is thought to be the most susceptible to developing infections of the urinary tract, the reproductive tract, and other sexually transmitted diseases. Therefore, promoting safe behaviours and lessening the suffering of millions of women may be made possible by raising awareness of menstruation from an early age. Health care should place a high priority on managing menstrual hygiene. Adolescent females think that having periods is something shameful that should be kept private. Due to this, adolescent girls are more susceptible to experiencing mental, emotional, and physical issues.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

- 2. Background of the Study: International Level:** World menstrual day is an international awareness day for menstruation and menstrual hygiene .It is held annually on May 28.The theme for World Menstrual Hygiene Day (2022) is '**making menstruation a normal fact of life by 2030**'.

Every year, this day is observed in an effort to break the taboo surrounding menstruation, raise awareness about the significance of managing menstrual hygiene, and empower girls to realise their full potential.Increased attention must be paid to adolescents and young people if the tide of the AIDS epidemic is to be turned.Globally, the proportion of HIV-positive people who are young adolescents and teenagers is rising. 150,000 [44,000-310,000] of the 410,000 [194,000-690,000] young people (10 to 24) who contracted HIV for the first time in 2020 were teens between the ages of 10 and 19.(Estimated by UN AIDS in 2021).

- 3. National Level:** In 2019, the estimated number of PLHIV in the country was 23.48 lakh (17.98 lakh - 30.98 lakh). According to estimates, there are 3.96 lakh PLHIV in Maharashtra, 3.14 lakh in Andhra Pradesh, 2.69 lakh in Karnataka, 1.61 lakh in Uttar Pradesh, 1.58 lakh in Telangana, 1.5 lakh in Tamil Nadu, 1.55 lakh in Bihar, and 1.04 lakh in Gujarat (Figure 3).Another 18% of the total PLHIV size was given by the states of West Bengal, Delhi, Punjab, Rajasthan, Madhya Pradesh, Odisha, and Haryana. In total, these 15 States accounted for 90% of PLHIV estimations (NACO, 2019).
- 4. State Level:** The Scoping Study on Menstrual Hygiene Management- PNP/NNP in November 2018 cites a UNICEF survey that found that 79 percent of girls in Tamil Nadu are not aware of proper menstrual hygiene procedures.

According to the recently published India HIV Estimation 2019 report, Tamil Nadu (0.23% [0.16-0.29]) had the lowest estimated adult (15-49 years) HIV prevalence trend in India, which has been dropping since the epidemic's peak in 2000.

- 5. Institutional Level:** The statistics for 10-15 years of female children attended at PCoE at Institute of Child Health and Hospital for Children ,ART centre for past three years is

YEAR	2020	2021	2022
Number of female children (10-15 year old) attended in PCoE –ICH ART CENTRE	59	50	43

In year 2022, every month 43 adolescent girls visit the PCoE ART CENTRE at Institute of child health and hospital for children.

- 6. Need for the Study:** Although menstruation is a natural occurrence, it is frequently viewed as a private matter in many regions of India. Once a girl reaches adolescence, menstrual hygiene becomes a significant factor in her life and has been linked to a variety of traits. Studying adolescent girls' attitudes and menstrual hygiene experiences is crucial because it is a rigorous procedure and a substantial source of morbidity as well.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI’ – A MIXED ANALYSIS

Girls in our nation do not always have access to information on puberty until they reach menarche. The majority of girls—71%—are unaware about menarche and menstrual hygiene. The majority of girls approach their mothers for advice and assistance, however 70% of mothers view this as nasty discourse about menstruation. According to a study by Mansi Tiwari (2018) on menstrual practises in rural India, these practises depend on basic sanitation infrastructure, the availability of napkins, and people's attitudes toward menstruation, which are seen as filthy and unclean. As a result, various initiatives are required to address the issues with menstrual hygiene.

According to a study by Anjali Mahajan (2017) among school-going adolescent girls in Himachal Pradesh, it is determined that only about 29% of girls have adequate knowledge, and 71% of girls do not. This lack of knowledge is closely related to superstitious beliefs, cultural practices, and the mother's education. According to the practice scores, 19 percent of respondents had bad practice, 69 percent had fair practice, and 12 percent had good practice.

Global data on the mechanisms, timing, and prevalence of HIV infection in adolescent females are lacking, despite their increased vulnerability. To determine how and at what age adolescent females are contracting HIV, further information is required. This would make it possible to establish targeted HIV prevention programmers and interventions that take into account the particular needs, social positions, and developmental stages of girls

Yeast infections in the vagina, Other vaginal infections include bacterial vaginosis, common STDs like gonorrhea, Chlamydia, and trichomoniasis, infections with the human papillomavirus (HPV), which can cause cervical cancer and cause genital warts, and pelvic inflammatory disease (PID), which affects a woman's reproductive system and menstrual cycle. are just a few of the additional symptoms that changes like ceasing to have periods.

Adolescent girls with HIV are at a higher risk of infection and have weakened immune systems, making them more susceptible to severe health problems if they do not maintain proper menstrual hygiene habits. As menstruation and HIV infection are social stigmas in our society, Nurses are primary healthcare providers who are accountable for giving patients the knowledge they need to manage their menstrual hygiene Informing women and girls about menstrual hygiene products, hygiene management, and encouraging them is a big part of the nurse's job. When it comes to comprehending the emotional and physical changes that take place during menstruation, there is a large knowledge gap in the general community (Sommer, 2009).

Since patient contact is a significant component of the profession of nursing, nurses play a crucial role in ensuring that the population is knowledgeable about menstrual hygiene. When talking, the nurses must be both professional and competent.

As an ongoing public health issue and a human right issue , the health care sector among other institutions do not only have responsibility to address this problem ,they also

have capacity to .It must be handled on global level, national level, and last but not least local level (Sommer, Hirsch, Nathanson &Parker,2015)

Menstruation has not received enough attention or investigation. and there is no much research studies regarding menstrual hygiene in qualitative aspects , among adolescent HIV clients, the researcher felt need to look into this topic in order to protect the health of adolescent HIV clients. The researcher is interested in doing research in both qualitative and quantitative aspect as mixed analysis.

7. Statement of The Problem: “An exploratory study to assess the impact of nurse initiated menstrual hygiene management program on menstrual awareness among adolescent HIVclients and their experiences on menstruation at a tertiary care hospital Chennai” – A Mixed analysis

8. Objectives

- explore the experiences of the menstrual awareness among Adolescent HIV Clients
- Assess the pre-test level of menstrual awareness among Adolescent HIV Clients.
- Assess the impact of Nurse Initiated Menstrual Hygiene management program on menstrual awareness among Adolescent HIV Clients.
- Compare the pre-test and post-test level of menstrual awareness among Adolescent HIV Clients .
- Associate the post test level of menstrual awareness among Adolescent HIV Clients with their selected bio socio demographic variables.
- combine the findings of qualitative and quantitative data

9. Operational Definition

- **Assess:** To assess the knowledge and practice of menstrual hygiene among adolescent HIV patients.
- **Impact:** Refers to the by-significant difference in pre and post test scores among adolescent HIV patients after Nurse Initiated management programme.
- **Nurse Initiated Management :** Refers to those aspects of menstrual hygienic knowledge and practices among Adolescents girls diagnosed with HIV and the complication of unhygienic practices for improving their quality of life with computer assisted teaching, positive reinforcement techniques
- **Menstrual Hygiene Practices:** The hygienic measures followed by the adolescent girls
- **Adolescent HIV Client:** Adolescents girls with age group of 10-14 years of age and diagnosed with HIV and on treatment

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI – A MIXED ANALYSIS

- **Experiences:** The experiences felt by adolescent HIV clients during their menstrual period

10. Hypotheses

- **H₀** : There is no significant difference between the pre and post test level of knowledge and practice on Nurse Initiated Menstrual Hygiene management program among Adolescent HIV clients
- **H₁**: There is a significant difference between the pre and post-test level of knowledge and practice on Nurse Initiated Menstrual Hygiene management program among Adolescent HIV Clients
- **H₂**: There is a significant association between the selected bio socio demographic variables with their post test scores of Nurse Initiated Menstrual Hygiene management program among Adolescent HIV Clients.

11. Assumptions

- The adolescent HIV clients will have inadequate menstrual hygienic practices.
- The adolescent HIV clients will have low quality of life than others.

12. Delimitation

- The study is limited to the adolescent HIV clients in the selected hospital at Chennai.
- The study period is limited to 4 weeks of duration.
- The sample size is limited to 30 adolescent HIV clients

VI. CHAPTER 2

1. Review of Literature: A critical phase of the research process is the literature review. The primary goal of the literature review is to provide a solid understanding of the research activities that must be carried out in educational and clinical practice. Reading about topics of popular interest can help the researcher focus on open research questions or discover novel applications that are appropriate for the study. This chapter examines the pertinent literature review on menstrual hygiene knowledge and practice in adolescent girls.

2. Literature Related To :

- **SECTION 1:** Literature related to knowledge and practice on menstrual hygiene
- **SECTION 2:** Literature related to experience on menstruation
- **SECTION 3:** Conceptual framework

3. Literature Related To Knowledge And Practice On Menstrual Hygiene

- **Anne Sebert Kuhlmann(2021)** conducted a survey research method among female students enrolled in grades 9 through 12 at a public high school in St. Louis, Missouri. Participants' average ages were 15.78 1.28. 64.4 percent (95 percent CI 55.1 percent -

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

73.0 percent) of respondents reported feeling insecure about their period products. 66.9 percent (95 percent CI 57.7 percent -75.3 percent) of respondents said they have used at least one school resource to get period products. A lack of period products caused one-third of the participants (33.6 percent [95 percent CI 25.0 percent -43.1 percent]) to miss school.

- **Juliana Lubis et al(2022)** exhibited a explanatory cross sectional design among 33 teenagers ,the study revealed that **Juliana Lubis et al(2022)** exhibited a explanatory cross sectional design among 33 teenagers ,the study revealed that ,60.9% of adolescents gained knowledge about personal hygiene during menstruation. Adolescent behavior about personal hygiene during menstruation obtained 60.9% which is less supportive of health, so this study shows that there is an influence of adolescent knowledge about menstruation on personal hygiene behavior during menstruation in environment III Silandit village.
- **Bhandari et al (2021)** formulated a community based survey. Data was collected using a questionnaire including the demographic information of each participant.The study lasted for six months. 84 participants from the age range of 10-15 years participated in the study, and it was discovered that 57 of them had had early menarche. This study was conducted to determine the prevalence of early menarcheal age in teenage girls and the degree of menstrual hygiene knowledge among adolescent schoolgirls in Karad. According to this study, menarche occurred on average at the age of 11.05. They typically enter menarche unprepared because they lack the knowledge of menstruation and menstrual hygiene. Compared to other girls, those who reached menarche earlier had less knowledge.
- **Dr.Manish singh et al (2018)** performed a cross sectional study among the female medical undergraduate students. The study found that information was gathered utilising a pre-designed, pre-tested, semi-structured, anonymous questionnaire. Participants in the study had an average age of 19.95 +1.41 years. Menarche occurred on average at 13.38 + 1.28 years old. The majority of participants (82.31%) practised appropriate menstrual hygiene and had sufficient understanding about menstrual hygiene. A 45.38 percent absence rate in college was discovered. Pain and discomfort were found to be the leading causes of college absenteeism (36.92 percent), followed by unhygienic restrooms (21.54 percent), a lack of water in the restroom (13.85 percent), a concern about stains (6.15 percent), a lack of a trash can (1.54 percent), and a lack of privacy in the restroom (0.77 percent). To guarantee that teenage women and girls receive the necessary support.
- **Sumit Aggarwal et al (2021)** conducted a study among 122 adolescents girls between ages of 13 and 19 years and were evaluated by personal interview and questionnaires. All of the girls were secluded during menstruation and lacked the necessary scientific understanding regarding menstruation. They were prone to infections and used cloth or handmade sanitary pads. Sharing information with schoolchildren and their families, educating people about menstrual hygiene, and ensuring that rural communities have access to the essential sanitary products are all vital needs.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

- **Neerja Agarwal et al (2018)** conducted a community based cross sectional study at department of obstetrics and Gynaecology in connection with department of community medicine, Raipur among 263 adolescent girls. The majority of adolescent girls who attend school are between the ages of 13 and 14. 50.95 percent of girls, 21.67 percent of girls, and 12.93 percent of girls reported having their menstrual cycles aged 13, 12, and 14, respectively. Only 17.87 percent of the girls used sanitary napkins, whereas 49.81 percent of the girls used cloth. 32.70% of the girls felt that their external genitalia needed more cleaning. Only 58.17 percent of girls cleaned their genitalia with soap and water. It was shown that abdominal pain (59.70 percent) was the most common complaint during menstruation.
- **J Parle et al (2019)** formulated a cross-sectional study with 600 adolescent schoolgirls in the rural Raigat district to assess their knowledge, attitudes, practices, and perceptions regarding menstruation. The study's findings showed that more than half had inadequate knowledge and poor practises regarding menstruation and menstrual hygiene, at 53.3 percent and 52.8 percent, respectively. Despite their lack of information, 55.2 percent of respondents said they had heard of menstruation before reaching menarche. Adolescent age ($\chi^2=267.294$, $p=0.00$), mother's education ($\chi^2=77.331$, $p=0.00$), and menstrual hygiene practise ($\chi^2=111.745$, $p=0.00$) were factors that were substantially linked with knowledge of menstruation and menstrual hygiene. Therefore the researcher came to the conclusion that menstrual hygiene and health education programmes should be developed to support adolescent girls' improved health.
- **Vishna shah et al(2019)** conducted a mixed method in the rural Kiang West district of The Gambia. Mothers, teenagers, and teachers participated in twenty focus group discussions and thirteen in-depth interviews to learn more about their perspectives on menstruation, cultural beliefs, sources of information, and understanding of menstrual hygiene management methods. Additionally, a survey of 331 schoolgirls was conducted to determine their attitudes, practises, and understanding regarding menstruation and its management. The qualitative data was analysed using inductive content analysis, and the quantitative data was analysed using descriptive analysis and chi-squared testing. When addressing menstruation, all groups acknowledged difficulty, embarrassment, and humiliation. Before menarche, two thirds of the girls in the poll said they had learned about menstruation, but most of them said they felt unprepared. Although teachers were the primary source of knowledge, most females preferred to consult their mothers when seeking advice. Despite the fact that males did not need to be taught about menstruation, mothers reported having trouble talking about it with their kids, despite the fact that boys were really interested in learning more. Unless they receive complimentary pads from school, the majority of girls utilised reusable cloth.
- **Bishal Pokrel (2020)** performed a cross-sectional descriptive research involving 151 adults with physical disabilities. Face-to-face interviews and a self-structured questionnaire were used to collect data. about (80.13 percent) were aware that a

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

woman's cycle should last 26 to 30 days, (91.39 percent) had mentioned that they shouldn't visit holy sites during this time, and (94.03 percent) shouldn't cook during this time. While 69.53 percent of respondents changed pads twice a day, 83.44 percent of respondents utilised sanitary products. The majority of responders (91.39%) disposed of sanitary pads in trash cans. Parents taught 87.41% of respondents about menstruation hygiene.

4. Literature Related To Experience On Menstruation

- *Molly secor turner (2020)* conducted a qualitative research among Four key topics emerged from a study including 12 participants between the ages of 12 and 16: learning about menstruation, experiencing menstruation, managing menstruation, and societal norms and the meaning of menstruation. Participants talked about how little they understood about menstruation and how they felt uncertain about using period hygiene items. Lack of proper access to menstrual hygiene products, a lack of time to change products, anxiety over losing menstrual blood, and effects on school attendance were among the difficulties faced at school.
- *Deepanjali Behera (2015)* conducted a qualitative study to evaluate people's beliefs, behaviors, and experiences with menarche, menstruation, and convenience A sampling technique was employed to choose 32 teenage girls. The study found that participants lacked sufficient knowledge of menstruation and its stages, especially those who had not yet reached menarche. Focus group talks were used to gather data on the participants' perceptions, behaviors, and experiences related to menarche and menstruation, which were then analyzed thematically.. All conversations about menstruation took place between friends, and mothers were found to be just marginally involved. While most of the girls still wear outdated clothes, several of the females were wearing sanitary pads. Major barriers to their use included financial concerns and a lack of access to sanitary pads.
- *Erin N. Sweeney et al (2022)* exhibited Using snowball sampling, a mixed-methods online survey was created using qualtrics among 30 nurses employed in elementary schools. Using the Integrated Behavioral Model (IBM) as a framework, a deductive semantic thematic analysis was used to identify the themes for each question. Ten qualitative questions and one quantitative question were included in an 11-item online mixed-methods survey built on the Integrated Behavioral Model (IBM) using qualtrics. There are no opportunities for school nurses to pursue professional development or to learn how to instruct young children about menstrual hygiene and cleanliness.

VII. CHAPTER 3

Research Methodology

Research methodology, which addresses several facets of study structure, is the overall strategy for solving the research problem. It serves as a roadmap for the study's design, execution, and analysis. The description of the research method, research design, research setting, study population and size, variables, sampling techniques, description of the tool, content validity, and reliability, pilot study, intended format for data collecting, and plan for data analysis are all included.

1. Research Approach

- In this study, Mixed research approach was used.

2. Research Design

- Pre-experimental design (one group pre-test and post-test design), which helps to examine relationship among variables were used by the investigator.
- Qualitative: Exploratory sequential design.

3. Setting of the Study

- The location of the research was taken into consideration while choosing the setting, along with the investigator's knowledge with the institution, the Department of ART Center, the viability of the study, the availability of the subjects, approval, and the location of the setting. The study was carried out at the Institute of Child Health and Hospital for Children's Department of ART Center in Egmore and Chennai-083.4 4.

4. Duration of the Study

- The Duration of Data Collection from 20.06.2022 To 17.07.2022 (4weeks).

5. Study Population

- **Target Population:** The target population of this study was adolescent with HIV
- **Accessible Population:** Adolescent with HIV attending the ART centre at Institute of child health and hospital

6. Study Sample

- The sample consists adolescent client with HIV who met inclusion criteria attending in ART centre, Institute of child health and hospital , Chennai 08

7. Sampling Technique

- PHASE I: QUALITATIVE: Convenience sampling
- PHASE II: QUANTITATIVE: Purposive sampling

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI' – A MIXED ANALYSIS

8. Tool for Data Collection: The tool should be developed after extensive review of literature and discussions with experts as a tool to collect data.

- **Section A:** Socio Demographic Questionnaire
- **Section B:** Unstructured interview schedule
- **Section C:** Knowledge and practice of menstrual hygiene practices questionnaire

❖ **Sampling Criteria:**

❖ **Inclusion Criteria:**

- Adolescent diagnosed with HIV Clients and on treatment
- Early adolescents. (10-14 years of age)
- Able to understand & speak Tamil.
- Adolescent HIV Clients who are stable

❖ **Exclusion Criteria:**

- Late adolescent(15-19 years of age)
- Not willing to participate
- Adolescent With complications

9. Variables Under The Study

- **Dependent Variable:** Knowledge and Practices on menstrual hygiene among Adolescent HIV Clients
- **Independent Variable:** Nurse Initiated menstrual hygiene management programme

10. Method of Data Collection: Informed consent was in their understandable language was obtained and Qualitative data about experiences during menstruation was collected as an in depth unstructured interview with 05 participants .In quantitative aspect the pretest knowledge and practice was assessed using semi structured questionnaire developed by investigator .Nurse initiated menstrual hygiene Management programme was given to the participants in their own language Quantitative data was collected after the intervention from the Adolescent HIV Clients with 30 participants.

In qualitative aspect, the impact of Nurse Initiated Menstrual Hygiene Management programme was also assessed

Both qualitative and quantitative data was collected sequentially and results are merged at the time of interpretation.

Sample Size:

Qualitative: 05 numbers

Quantitative: 30 numbers.

Sample Size Calculation:The following formula was used to determine the sample size based on Shoba P et al's prior study, which found that 68% of adolescents practiced

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

menstrual hygiene, with a 95% confidence limit and a 25% relative precision of estimation. Formula for sample calculation $= (Z)^2 X (1-p)$

$$(p)X(e)^2$$

$$P=68\% \quad e=18\% \quad z=1.96$$

$$\text{Sample size (N)} = (1.96)^2 X (1-0.68)/0.68X(0.25)^2$$

$$=3.84(0.32)/0.0425 = 29 =30 \text{ adolescents HIV clients.}$$

Based on

Shobha P Shah, Rajesh Nair, Pankaj P Shah, Dhiren K Modi, Shrey A Desai & Lata Desai
Reproductive Health Matters , 21:41, 205-213, DOI: 10.1016/S0968-8080(13)41691

11. Development and Description of The Tool

- **Development of the Tool:** The researcher has created a semi-structured questionnaire that is appropriate. The researcher created the tool after a thorough examination of the literature, expert advice, and content validity from the medical, nursing, and statistics departments. During the pilot research, the tool underwent pre-testing. During data gathering, clients were directly assessed
- **Description of the Tool: It consists of 3 sections.**
 - **Section –A:** It deals with the sample's demographic factors, such as the mother's age, level of education, occupation, and family's monthly income, as well as the family's religion, home location, type, and number of children.
 - **Section –B:** Unstructured interview schedule
 - **Section – C:** Knowledge and practice questionnaire on menstrual hygiene

12. Content Validity

- After construction of questionnaire the tool was validated at pediatric tertiary care hospital, Chennai -08", it was tested for its validity and reliability.
- The tool's validity was evaluated using content validity. Medical professionals, nursing specialists, and one research statistical expert determined the content validity. They recommended making certain changes to the tool. Following the changes, they approved this tool for assessment. effectiveness of nurse initiated intervention regarding knowledge and practice questionnaire among adolescent HIV clients at ART centre at Tertiary Care Hospital, Chennai - 08.

13. Ethical Consideration: His Madras Medical College's ethical committee received the study proposal and submission, and after reviewing it, approved it with reference number EC.Reg.NO.ECR/270/Inst/TN/2013/RR-20/02.03.2022, NO. 31032022. Every responder received a thorough explanation of the study's purpose as well as their part in it. To

participate in the study, each subject provided their free and informed consent. Information on the matter was kept confidential. As a result, the researcher complied with the research committee's ethical directives. The Director of the Chennai-based Institute of Child Health and Hospital for Children was contacted in order to gain the necessary approval to carry out the study. Human rights were not violated in the course of conducting the study.

14. Human Rights: The study was proposed among the experts of the Institutional Ethics Committee and got the permission to carry out the study

The study details was also explained to the Professor and Head of the Department of Pediatric centre of Excellence ART centre, Institute of Child health and Hospital for Children, to carry out the study in the Pediatric centre of Excellence ART centre and got the permission.

The content validity was received from the various experts in the field of Pediatric Nursing.

- **Beneficence: Potential benefits and risks were explained to the caregivers of adolescent with HIV**
- **Dignity:** Parents and children were fully informed about the study and encouraged to participate.
The caregivers provided informed consent.
The choice of whether to participate in the study or not was left up to the participants.
- **Confidentiality:** A promise of confidentiality and anonymity was made. The confidentiality of the study participants' information was also guaranteed.
- **Justice: The study participants were treated with justice**
The Nurse initiated menstrual hygiene management programme was provided to the participants through the computer assisted teaching after the pre-test.

15. Tansac (Tamil Nadu State Aids Control Society) Approval: The study was proposed and submitted to the TANSAC committee, Egmore and the committee approved the study with Reference No., 005529/TANSACS/M&E/2019.Dt: 09/06/2022. The aim of the study and their role during the study were clearly explained to every respondent. All participants gave their free, informed consent to take part in the study. Information on the matter was kept confidential. As a result, the researcher complied with the research committee's ethical directives. The Director of the Chennai-based Institute of Child Health and Hospital for Children was contacted in order to gain the necessary approval to carry out the study. Human rights were not violated in the course of conducting the study.

16. Pilot Study: From June 6 to June 13, 2022, the pilot study was carried out at the Pediatric Center of Excellence ART, Institute of Child Health, and Hospital for Children in Egmore and Chennai-08. For the purpose of conducting this study, official approval from the hospital's director was requested.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI' – A MIXED ANALYSIS

Five volunteers were used in the pilot project, who were chosen using a non-probability, purposeful sampling procedure, completed the inclusion criteria, and gave their verbal and written consent. Pre-testing was done on the first day using a self-administered knowledge and practice questionnaire about menstrual hygiene. Following the pre-test, a computer-assisted 45-minute nurse-initiated menstrual hygiene management intervention was administered. To evaluate the knowledge and practice among the same participants using the same questionnaire after 7 days, a post-test was undertaken. The study's results showed that the correlation coefficient was very high, making it a useful tool for evaluating adolescents with HIV's knowledge of and practices surrounding menstrual hygiene. It was also feasible and practicable to conduct the main study at the Pediatric Center of Excellence ART ICH&HC, Chennai -08. It was intended to collect data for the primary study while eliminating samples from the pilot trial.

17. Reliability of the Tool: After the pilot research, the tool's dependability was evaluated using the Test-Retest approach. At the Pediatric Tertiary Care Hospital in Chennai-08, it is an excellent tool to evaluate knowledge and practice on menstrual hygiene management because the knowledge score reliability correlation coefficient value is 0.78, which is extremely high.

Using the Cronbach alpha method and the inter rater method, the tool's reliability was evaluated. The reliability correlation coefficient for knowledge scores was 0.86, and the reliability correlation coefficient for practice scores was 0.82. These correlation values were very strong, making them a useful tool for evaluating the management of menstrual hygiene knowledge and practice among adolescents with HIV.

18. Data Collection Procedure: The permission obtained from Institutional Ethics Committee, Madras Medical College, Chennai and the Director, ICH&HC, Egmore, Chennai to conduct the main study. The data collection was done from 20.06.2022 to 17.07.2022 the researcher first made a rapport and spoke with all the caregivers of children to determine which adolescents met the inclusion criteria. She then selected 30 samples using the non-probability purposive sampling technique, explained the purpose of the study, and obtained written consent from all the study participants' caregivers of adolescents with HIV.

The data collected from Monday to Saturday between 8 am to 4 pm. On the first week the qualitative data collected by unstructured interview schedule. The pre-test, knowledge and practice on menstrual hygiene was assessed among adolescent with HIV who were gathered in Pediatric centre excellence of ART , The computer assisted teaching was performed to all participants regarding menstrual hygiene .On the 7th day the post test was conducted from the same subjects using same tool knowledge and practice on menstrual hygiene management programme .The effectiveness of Nurse initiated menstrual hygiene management programme was assessed in qualitative aspect also.The knowledge and practice among participants was assessed both subjectively and objectively at Pediatric centre for Excellence ART ICH&HC, Chennai -08.

19. Data Analysis and Interpretation: The analysis is a process of organizing and synthesizing the data in such a way that the research questions can be answered and the hypotheses are tested.

The most crucial stage of the research process is data analysis and interpretation, which includes calculating certain metrics and looking for patterns of relationships between data sets. In order to evaluate the menstrual hygiene management program, the data obtained from 30 adolescent girls with HIV in the Pediatric Center of Excellence ART, Institute of Child Health, and Hospital for Children, Egmore were analyzed and interpreted in this chapter. The information was tallied, arranged, and analyzed in accordance with the goals. Data analysis starts with a description that is relevant to the inquiry and uses some concepts and numerical data. The investigator can organize the data and assess the amount of information using descriptive statistics, while inferential statistics is used to determine the

- **Organization of the data:** Data collected were organized under the following sections.
 - **Section-A:** Distribution of demographic variables of the study participants.
 - **Section-B:** Assessment of pre-test percentage of knowledge and practice on menstrual hygiene management among adolescent with HIV
 - **Section-C:** Assessment of post-test percentage of knowledge and practice on menstrual hygiene management among adolescent with HIV
 - **Section-D:** Comparison of domain wise mean score between pre-test and post-test level of menstrual hygiene management
 - **Section-E:** Effectiveness of nurse initiated menstrual hygiene management program.
 - **Section-F:** Association between the post test level of impact on nurse initiated Menstrual hygiene management program among adolescent HIV clients with their selected bio socio demographic variables

20. Statistical Analysis

- Demographic information was presented in categories as frequencies and percentages. knowledge score and practice score were given in mean and standard deviation.
- Association between demographic variables and knowledge score / practice score were analysed using pearson chi-square test
- Qualitative level of knowledge/ practice score in pretest and posttest were compared using Stuart-Maxwell test /extended McNemar test
- Association between posttest knowledge score/ practice score with demographic variables are assessed using chi square test

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI” – A MIXED ANALYSIS

- Simple bar diagrams, multiple bar diagrams, Pie diagrams, and simple bar with 2 standard error bar diagrams were used to display the data. Every statistical test has two possible outcomes. The Statistical Package for Social Sciences (SPSS, version 22) statistical software was used to conduct the statistical study
- . **“AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIVCLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI” – A MIXED ANALYSIS.**
 - explore the experiences of the menstrual awareness among Adolescent HIV Clients
 - Assess the pre-test level of menstrual awareness among Adolescent HIV Clients.
 - assess the impact of Nurse Initiated Menstrual Hygiene management program on Menstrual awareness among Adolescent HIV Clients.
 - Compare the pre-test and post-test level of menstrual awareness among Adolescent HIV Clients .
 - Associate the post test level of menstrual awareness among Adolescent HIV Clients with their selected bio socio demographic variables.
 - combine the findings of qualitative and quantitative data

VIII. ANALYSIS AND INTERPRETATION

Qualitative: This chapter deals with the classification and analysis of data collected from the group of participants who are early adolescent with HIV .

The data collection period was between. all interview were conducted within this time frame.

1. **Interpretation and Analysis:** The process of analysis and justification of theme development has been described. The specific process of how the findings were organized and interpreted is now described.
2. **Introduction to the Theme:** The overall aim of the qualitative study is to explore the experience on menstruation among early adolescent with HIV

The major themes involved in the study are:

- The experience of menarche and a resenting emotion
- The experience of living with periods
 - Physical experiences during menstruation
 - Emotional experiences during menstruation
 - Superstitions related to menstruation
 - Missing school during menstruation
- Impact of intervention
 - No prior knowledge

- New learnings
- Use of multimedia
- Positive change in behavior

RESPONDENT 1

- **The experience of menarche and a resenting emotion**

“It was bit difficult. Then I adjusted it.”

The participants expressed a negative emotion when they got their first period. Some associated the feeling with physical pain while others mentioned it was an overall difficult experience which they had not signed up for.

- **Physical experiences during menstruation:** Tiredness was consistently given as a physical challenge that participants had to go through during their periods which in some cases kept the participants from going through their daily activities.
- **Emotional experiences during menstruation:** While participant expressed they did not feel any form of emotion during their periods, others expressed distress emotions including anger and nervousness.
- **Missing school during menstruation:** Most of the participants did not feel that the periods caused a hurdle towards attending school. However one participant said that she skipped school when she had backache and another said she skipped school because she did not have proper facilities at school hence she skipped during periods.

RESPONDENT 2

- **Physical experiences during menstruation**

“I have viscous kind of feel but I don’t get stomach pain.”-

The participant had feeling with physical pain while others mentioned it was an overall difficult experience.

- **Superstitions related to menstruation**

“Yes, they have told. I felt even Goddess is a female, then she might have also gone through it, we are also female like her, why shouldn’t I go near the God?”

The participant verbalized participants expressed how they are forbidden from going near the sacred area where God is worshipped

RESPONDENT 3

- **Superstitions related to menstruation**

“only on the first day they had told me that, that’s it. They said don’t come out, negative energies might affect, like spirits might enter the body.”

The participant expressed that she is not allowed to go to temple on first day of menstruation.

RESPONDENT 4

- **Impact of Intervention**

- **No Prior Knowledge:**

"I did not know about it earlier. No one at home had also ever told me anything about menses but you told about many things."

Participants admitted that whatever was taught during the counselling were new to them and they had no knowledge before it. One participant mentioned how these cautions were not even given from her own family.

- **New Learnings :**

"I used to be the same way on all days but you taught me how I have to be, what I have to eat. I came to know about all that only after you told me. I came to know that I have to take head bath, maintain cleanliness and hygiene only after you told me. So it was very useful to me."

Hygiene was one major new learning that the participants had during the counselling from the researcher. Periodic change of sanitary napkins and cleanlines was emphasised on to be helpful learnings.

- **Positive change in behavior :**

"I got to know only after you told me about it. Before this I used to use cloth but only after you explained I came to know there is so much in the pad. Hereafter I will use it as you said."

All participants were thankful for the counselling. They were optimistic about using it during the time of their future periods and also share it among their peers.

RESPONDENT 5

- **Use of multimedia**

"When you were explaining, rather than explaining just through words, you showed it like a video to me, so I could understand it even more better"

Participants highlighted the use of videos and photos to be helpful in understanding the concepts better.

- **Positive change in behavior**

"hereafter I would be even more careful and change the pad correctly on time and whatever do and don'ts during the menses time are there, you have told me about all"

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

that, how to follow all that, it was all very useful. I will try the way you have told me. I will also teach this to my friends as well."

- **Objective 2: Assess The Pre-Test Level Of Menstrual Awareness Among Adolescent Hiv Clients.**

Table 4.2: Each statement wise pre-test percentage of knowledge score on Menstrual Hygiene management program among Adolescent HIV Clients.

sno	statements	Pretest Knowledge score			
		Correct response		Not correct response	
		n	%	n	%
1	Age at menarch(years)	30	100.00%	0	0.00%
2	Menstrual cycle pattern	30	100.00%	0	0.00%
3	Menstrual flow according to you	30	100.00%	0	0.00%
4	Have you ever heard of menstruation prior to reaching menarche?	30	100.00%	0	0.00%
5	What kind of knowledge was available before menarche?	30	100.00%	0	0.00%
6	What is the cause for menstrual bleeding?	4	13.33%	26	86.67%
7	What kind of sanitary product is optimum to use when menstruating?	5	16.67%	25	83.33%
8	How many times a day should a sanitary pad be changed?	5	16.67%	25	83.33%
9	How should the sanitary pad be safely disposed?	7	23.33%	23	76.67%
10	Do you change your undergarments daily?	13	43.33%	17	56.67%

The table 4.2 depicts pretest percentage of knowledge score on Menstrual Hygiene management program among Adolescent HIV Clients. Maximum knowledge score 100% for the questions Age at menarch (years),

S.No	statements	Pretest Practice score			
		Correct response		Not correct response	
		n	%	n	%
1	What sanitary material are you using during menstruation?	6	20.00%	24	80.00%
2	Where do you procure sanitary pads?	30	100.00%	0	0.00%
3	How often do you change the sanitary pads ?	8	26.67%	22	73.33%
4	Where do you dry your innergarments after washing?	9	30.00%	21	70.00%
5	Do you have toilet facility at home?	30	100.00%	0	0.00%

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

6	Do you clean your external genitalia during menstruation?	16	53.33%	14	46.67%
7	How do you clean your external genitalia?	4	13.33%	26	86.67%
8	When do you clean your external genitalia during menstruation?	18	60.00%	12	40.00%
9	Do you follow hand hygiene?	15	50.00%	15	50.00%
10	Do you change your undergarments daily during menstruation?	9	30.00%	21	70.00%

Above table depicts the pretest percentage of practice score on Menstrual Hygiene management .Most of the adolescents had maximum practice score 100% for procuring sanitary pads. (13.33%) of adolescents clean their external genital

Table 4.9: Posttest Level of Practicescore

Level of practice	No. of adolescents	%
Poorpractice	0	0.00%
Moderate practice	9	30.00%
Goodpractice	21	70.00%
Total	30	100.0%

Table No 4.9 depicts the level of practice score on score on Menstrual Hygiene management program among Adolescent HIV Clients. In general none of adolescents are having poor practice score, 30.00% of them having moderate practice score and 70% of them are having good practice

Table 4.12: Comparison of Overall Knowledge And Practice Score Before And After Nurse Initiated Menstrual Hygiene Management Program

	No. of adolescents	Pretest Mean±SD	Posttest Mean±SD	Mean difference Mean±SD	Student's paired t-test
Knowledge Score	30	6.13 ± 0.90	9.00 ± 1.02	2.87 ± 1.07	t=14.62 P=0.001*** DF = 29, significant
Practice Score	30	4.83 ± 1.37	8.00 ± 1.02	3.17 ± 1.15	t=8.90 P=0.001*** DF = 29, significant

*** very high significant at $P \leq 0.001$

Table no 5.2 shows the comparison of overall knowledge score before and after the administration of nurse initiated menstrual hygiene management program.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI’’ – A MIXED ANALYSIS

Considering knowledge score, On an average, adolescents improved their knowledge score from 6.13 to 9.00 after the administration of intervention. In contrast during pretest they were able to answer only 6 questions before administration of intervention, they were able to answer upto 9 questions. Due to nurse initiated menstrual hygiene management program they were able to answer 3 more questions correctly. This difference is statistically significant. Statistical significance was calculated by using student’s paired ‘t’ test.

In light of the practice score, After receiving the intervention, teenagers' practice scores increased on average from 4.83 to 8.00. Or we may state that during the pretest, only 5 questions could be answered before administration intervention, but they could respond up to 8. The nurse-initiated menstrual hygiene management program allowed them to accurately respond to three additional questions. There is a statistically significant difference here. The student's paired't' test was used to determine statistical significance.

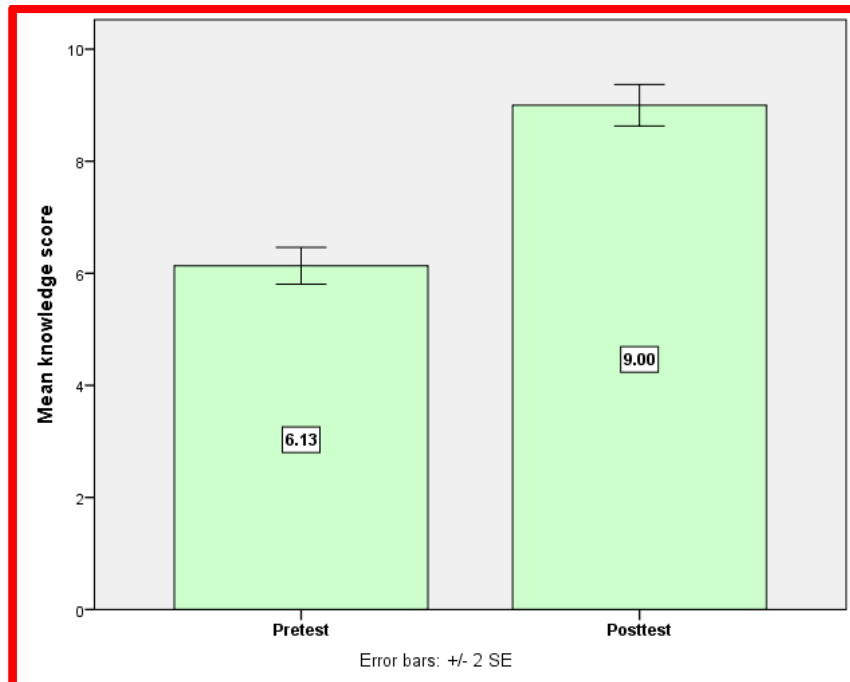


Figure 4.55: Simple bar with 2 standard error bar diagram compares the pretest and posttest adolescent’s knowledge score

Table 4.13: Comparison of Pretest and Posttest Level of Knowledge Practice Score

	Level	Pretest		Posttest		Extended McNemar’s test
		n	%	n	%	
Knowledge	Inadequate knowledge	10	33.33%	0	0.00%	$\chi^2=20.21$ $P=0.001^{***}(S)$
	Moderate knowledge	17	56.67%	8	26.67%	

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

	Adequate knowledge	3	10.00%	22	73.33%	
	Total	30	100.00%	30	100.00%	
Practice	Poor practice	19	63.33%	0	0.00%	$\chi^2=22.72$ $P=0.001^{***}(S)$
	Moderate practice	11	36.67%	9	30.00%	
	Good practice	0	0.00%	21	70.00%	
	Total	30	100.0%	30	100.00%	

***very high significant at $p \leq 0.001$ level

Table no.5.3 shows the pretest and post-test level of knowledge/practice score among Adolescent HIV Clients.

Considering knowledge score,

Before intervention, 33.33% of the adolescents are having inadequate knowledge score, 56.67% of them having moderate knowledge score and 10% of them are having adequate knowledge.

After intervention, none of the adolescents are having inadequate knowledge score, 26.67% of them having moderate knowledge score and 73.33% of them are having adequate knowledge.

Considering practice score,

Before intervention, 46.67% of them are having Not at all Satisfied score, 53.33% of them are having Partly Satisfied score, none of them are having Satisfied score and none of them having very Satisfied score.

After intervention, none of them are having Not at all satisfied score, none of them are having Partly Satisfied score, 20% of them are having Satisfied score and 80% of them having very Satisfied score.

Level of knowledge, practice gain score between pretest and posttest was calculated using Extended McNemar's chi-square test.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI’ – A MIXED ANALYSIS

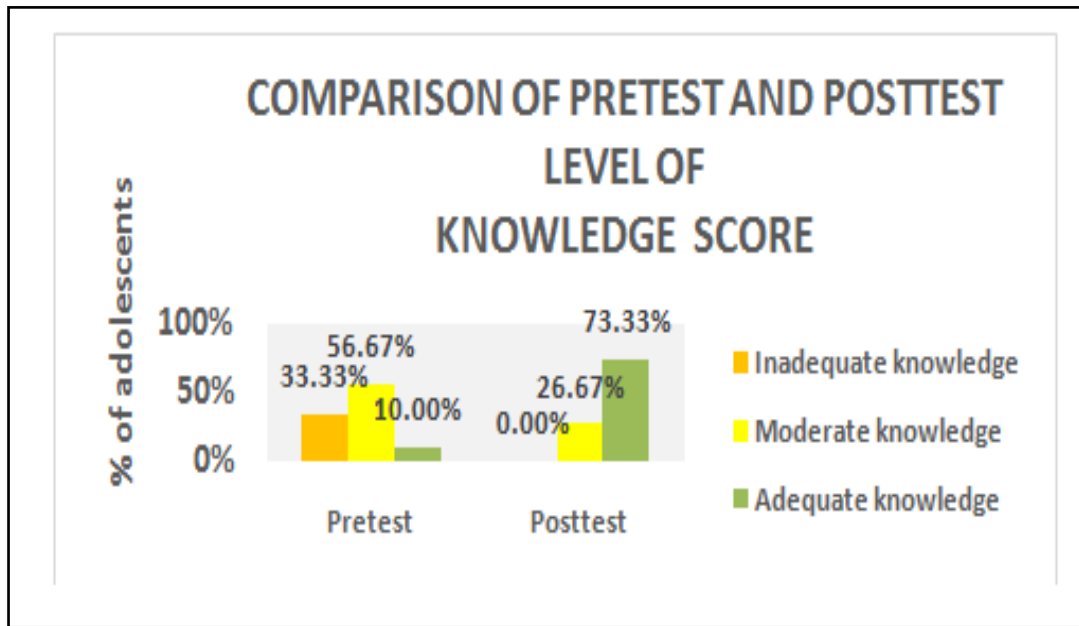


Figure 4.55: Percentage wise distribution of comparison of pretest and post-test level of knowledge score

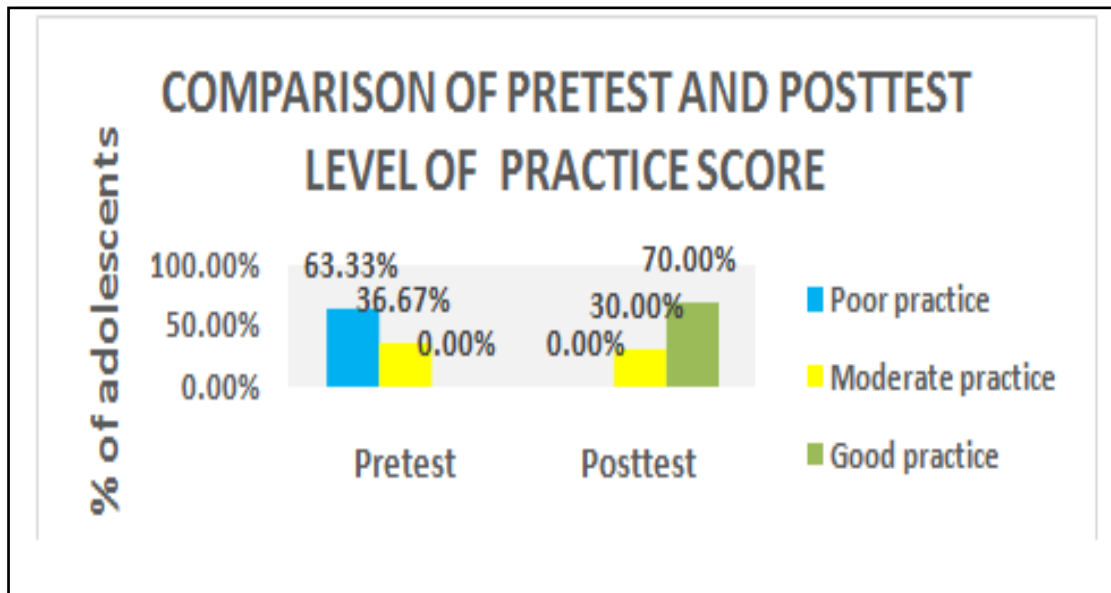


Figure 4.56: Percentage Wise Distribution of Comparison of Pretest and Post-Test Level of Practice Score

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

Table 4.14: Correlation Between Knowledge Gain Score And Practice Gain Score

	Correlation between	Mean gain score \pm SD	Karl pearson correlation coefficient	interpretation
Knowledge gain Vs practice gain	knowledge	2.87 \pm 1.07	r=0.45 p=0.001*** significant	The association between the knowledge gainscore and the practice gainscore is significant, positive, and moderate. It indicates that when their knowledge gain score rises, so too does their practice gain score.
	Practice	3.17 \pm 1.15		

*** very high significant at $P \leq 0.001$

Interpretation for r-value

Pearson correlation coefficient is denoted by "r"

"r" always lies between -1 to +1

0.4 - 0.6 moderate correlation

Table 4.15: Effectiveness of Nurse Initiated Menstrual Hygiene Management Program

		Max score	Mean score	% of mean score	Mean Difference of gain score with 95% Confidence interval	Percentage Difference of gain score with 95% Confidence interval
Knowledge	Pretest	10	6.13	61.30%	2.87(2.47 – 3.27)	28.70%(24.70% – 32.70%)
	Posttest	10	9.00	90.00%		
Practice	Pretest	10	4.83	48.30%	3.17(2.44 – 3.89)	31.70%(24.40% – 38.90%)
	Posttest	10	8.00	80.00%		

Table no 4.15 shows the effect of nurse initiated menstrual hygiene management program on menstrual hygiene awareness among adolescent HIV clients and their experiences at a tertiary care hospital chennai.

Considering knowledge gain score, On an average, in posttest after having nurse initiated menstrual hygiene management program, adolescents gained 28.70% more knowledge score than pretest score.

Considering practice gain score, On an average, in posttest after having nurse initiated menstrual hygiene management program, adolescents are gained 31.70% more practice score than pretest score.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

Objective 5: Associate the Post Test Level Of Menstrual Awareness Among Adolescent Hiv Clients With Their Selected Bio Socio Demographic Variables

Table 4.16: Association between Posttest Level Of Knowledge Score And Adolescents' demographic Variables

Demographic variables		Posttest level of knowledge score				n	Chi square test
		Moderate		Adequate			
		n	%	n	%		
Age in years	10-13yrs	3	14.29%	18	85.71%	21	$\chi^2=5.49P=0.02^*$ (S)
	14-15 yrs	5	55.56%	4	44.44%	9	
Presence of caregiver	Mother	3	23.08%	10	76.92%	13	$\chi^2=0.15P=0.70$ (NS)
	Father/others	5	29.41%	12	70.59%	17	
Education of the father	Informal education	4	40.00%	6	60.00%	10	$\chi^2=1.36P=0.24$ (NS)
	Primary& above	4	20.00%	16	80.00%	20	
Education of the mother	Informal education	3	21.43%	11	78.57%	14	$\chi^2=0.36P=0.54$ (NS)
	Primary& above	5	31.25%	11	68.75%	16	
Occupation of the father	Unskilled Worker/	5	22.73%	17	77.27%	22	$\chi^2=0.65P=0.42$ (NS)
	Semiskilled Worker	3	37.50%	5	62.50%	8	
Occupation of the mother	Home maker	5	27.78%	13	72.22%	18	$\chi^2=0.02P=0.89$ (NS)
	Others	3	25.00%	9	75.00%	12	
Monthly family income	<Rs.5000	3	16.67%	15	83.33%	18	$\chi^2=2.30P=0.12$ (NS)
	Rs 5000-Rs.10000	5	41.67%	7	58.33%	12	
Religion	Hindu	6	35.29%	11	64.71%	17	$\chi^2=1.49P=0.22$ (NS)
	Muslim/Christian	2	15.38%	11	84.62%	13	
Residential place of parents	Urban/Sub Urban	3	13.64%	19	86.36%	22	$\chi^2=7.16P=0.01^{**}$ (S)
	Rural	5	62.50%	3	37.50%	8	
Type of family	Nuclear/broken family	3	23.08%	10	76.92%	13	$\chi^2=0.15P=0.70$ (NS)
	Joint family/extended	5	29.41%	12	70.59%	17	

**very high significant at $p \leq 0.01$ level $P > 0.05$ not significant

Table no 4.16 shows the association between pretest level of knowledge score and adolescents demographic variables 14-15 years, and urban area adolescents are having

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI’ – A MIXED ANALYSIS

more adequate level of practice score than other. Statistical significance was calculated using chi square test.

Table 4.17: Association between Posttest Level of Practice Score and Adolescents’ Demographic Variables

Demographic variables		Posttest level of practice score				n	Chi square test
		Moderate		Good			
		n	%	n	%		
Age in years	10-13yrs	9	42.86%	12	57.14%	21	$\chi^2=8.21P=0.01^{**}$ (S)
	14-15 yrs	0	0.00%	9	100.00%	9	
Presence of caregiver	Mother	5	38.46%	8	61.54%	13	$\chi^2=0.78P=0.38$ (NS)
	Father/Others	4	23.53%	13	76.47%	17	
Education of the father	Informal education	2	20.00%	8	80.00%	10	$\chi^2=0.71P=0.39$ (NS)
	Primary& above	7	35.00%	13	65.00%	20	
Education of the mother	Informal education	3	21.43%	11	78.57%	14	$\chi^2=0.91P=0.33$ (NS)
	Primary& above	6	37.50%	10	62.50%	16	
Occupation of the father	Unskilled Worker	7	31.82%	15	68.18%	22	$\chi^2=0.13P=0.72$ (NS)
	Semiskilled Worker	2	25.00%	6	75.00%	8	
Occupation of the mother	Home maker	4	22.22%	14	77.78%	18	$\chi^2=1.30P=0.25$ (NS)
	Others	5	41.67%	7	58.33%	12	
Monthly family income	<Rs.5000	5	27.78%	13	72.22%	18	$\chi^2=0.11P=0.74$ (NS)
	Rs 5000-Rs.10000	4	33.33%	8	66.67%	12	
Religion:	Hindu	6	35.29%	11	64.71%	17	$\chi^2=0.52P=0.47$ (NS)
	Christian/Muslim	3	23.08%	10	76.92%	13	
Residential place of parents	Urban/Sub Urban	7	31.82%	15	68.18%	22	$\chi^2=5.49P=0.02^*$ (S)
	Rural	2	25.00%	6	75.00%	8	
Type of family	Nuclear/broken family	3	23.08%	10	76.92%	13	$\chi^2=0.52P=0.47$ (NS)
	Joint family/extended	6	35.29%	11	64.71%	17	

Table no 4.17 shows the association between posttest level of practice score and adolescents demographic variables. 14-15 years, and urban area adolescents had more adequate level of practice score than other. Statistical significance was calculated using chi square te

IX. CHAPTER 5

1. Discussion: The chapter discusses the study's findings in light of a suitable literature evaluation, statistical analysis, and study objectives. The current study's objective is to evaluate the nurse-initiated program for managing menstrual hygiene among adolescents with HIV. in in Pediatric centre of Excellence ART , Institute of Child Health and Hospital for Children, Egmore. 30 samples in total were chosen for the study using a convenient sampling technique, 30 samples were chosen for quantitative data, and 5 samples were gathered for qualitative data using a purposive sampling technique. The researcher gave the participants an explanation of the study and evaluated their understanding and use of menstrual hygiene. Both descriptive statistics (distribution, mean, standard deviation) and inferential statistics (chi-square test) were used to examine the data. SPSS version 2.5 was used to computerize and evaluate the data that had been gathered. The results of the statistical analysis of evaluation based on the study's objectives are the basis for the discussion of the current study.

2. Findings Based On Sociodemographic Variables

- 36.67% adolescent girls were in the age group of 12-13 years
- 43.33% caregivers accompanied adolescent girls with HIV
- 33.33% fathers completed their informal education
- 46.67% mothers completed their informal education
- 73.33% fathers were unskilled worker
- 60.0% mothers were homemaker
- 60.0% family income were less than Rs.5000
- 56.67% were hindus
- 50.0% were residing in suburban
- 30.0% were in living in joint family

3. Statement of the Problem

“An exploratory study to assess the impact of nurse initiated menstrual hygiene management program on menstrual awareness among adolescent HIV clients and their experiences on menstruation at a tertiary care hospital ,Chennai’’ – A Mixed analysis

4. Objectives

- explore the experiences of the menstrual awareness among Adolescent HIV Clients
- Assess the pre-test level of menstrual awareness among Adolescent HIV Clients.
- Assess the impact of Nurse Initiated Menstrual Hygiene management program on menstrual awareness among Adolescent HIV Clients.
- Compare the pre-test and post-test level of menstrual awareness among Adolescent HIV Clients.
- Associate the post test level of menstrual awareness among Adolescent HIV Clients with their selected socio demographic variables.
- combine the findings of qualitative and quantitative data

5. Findings Based on Objectives

- **Objective 1:** Explore The Experiences of The Menstrual Awareness Among Adolescent Hiv Clients

The participants expressed a negative emotion when they got their first period(menstruation). Some associated the feeling with physical pain while others mentioned it was an overall difficult experience which they had not signed up for.

The present study was based on the theme of

- The experience of menarche and a resenting emotion
- The experience of living with periods
- Physical experiences during menstruation
- Emotional experiences during menstruation
- Superstitions related to menstruation
- Missing school during menstruation
- Impact of intervention
- No prior knowledge
- New learning's
Use of multimedia
- **Positive Change in Behavior:** Tiredness was consistently given as a physical challenge that participants had to go through during their periods which in some cases kept the participants from going through their daily activities

Most of the participants did not feel that the periods caused a hurdle towards attending school. However one participant said that she skipped school when she had backache and another said she skipped school because she did not have proper facilities at school hence she skipped during periods.

Almost all participants admitted that whatever was taught during the counselling were new to them and they had no knowledge before it. One participant mentioned how these cautions were not even given from her own family

Hygeine was one major new learning that the participants had during the counselling from the researcher. Periodic change of sanitary napkins and cleanlines was emphasised on to be helpful learnings.

The findings of the study is consistent with the study conducted by *Molly secor turner (2020)*

The research identified four key themes: (1) understanding menstruation, (2) experiencing menstruation, (3) managing menstruation, and (4) societal norms and the significance of menstruation. Participants talked about how little they understood about menstruation and how they felt uncertain about using period

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

hygiene items. Lack of proper access to menstrual hygiene products, a lack of time to change products, anxiety over losing menstrual blood, and effects on school attendance were among the difficulties faced at school. To conclude the adolescent expressed negative emotion towards menstruation and physical pain in doing their daily activities. The adolescents with HIV verbalized menstruation caused hurdle towards attending school due to improper facilities in school.

- **Objective 2:** Assess The Pre-Test Level of Menstrual Awareness Among Adolescent Hiv Clients.

The present study illustrated the level of pre-test level of knowledge and practices of menstrual hygiene among adolescent HIV clients before the administration of nurse initiated menstrual hygiene management program .

In the pre-test 33.33% of adolescents were having inadequate knowledge score, 56.67% of them having moderate knowledge score and 10% of them were having adequate knowledge and 63.33% of adolescents were having poor practice score, 36.67% of them having moderate practice score and none of them are having adequate practice.

The results of the current study are in line with those of a study performed by J. Parle et al. (2019), which involved 600 adolescent schoolgirls in rural areas of the Raigat district. That study found that more than half of the respondents had poor knowledge and poor practice regarding menstruation and menstrual hygiene, respectively, at 53.3% and 52.8% of the respondents. Despite their lack of understanding, 55.2% of respondents said they had heard of menstruation before they reached menarche. Adolescent age ($\chi^2=267.294$, $p=0.00$), mother's education ($\chi^2=77.331$, $p=0.00$), and menstrual hygiene practice ($\chi^2=111.745$, $p=0.00$) were factors that were substantially linked with knowledge of menstruation and menstrual hygiene. and researcher came to the conclusion that menstruation and menstrual hygiene education programs Despite their lack of understanding, 55.2% of respondents said they had heard of menstruation before they reached menarche. Adolescent age ($\chi^2=267.294$, $p=0.00$), mother's education ($\chi^2=77.331$, $p=0.00$), and menstrual hygiene practice ($\chi^2=111.745$, $p=0.00$) were factors that were substantially linked with knowledge of menstruation and menstrual hygiene. In order to improve the health of adolescent girls, the researcher suggested that health education initiatives and programs on menstruation and menstrual hygiene should be developed. From the above, it is revealed that majority of adolescent girls lack knowledge and practices on menstrual hygiene .

- **Objective 3:** Assess The Impact of Nurse Initiated Menstrual Hygiene Management Program On Menstrual Awareness Among Adolescent Hiv Clients.

The present study illustrated the post test level of knowledge and practices on menstrual hygiene management program among adolescent HIV clients.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI' – A MIXED ANALYSIS

In the posttest level of knowledge score on Menstrual Hygiene management program among Adolescent HIV Clients in general none of the adolescents were having inadequate knowledge score, 26.67% of them were having moderate knowledge score and 73.33% of them were having adequate knowledge.

The findings of the present study is compared with the study conducted by the **Ishwarya Santhanakrishnan et al (2018)** evaluated the Menstrual awareness and practices among teenage schoolgirls have improved as a result of health education. The interventional study took place in PSG Public Schools in Coimbatore from June to September of 2016. Self-administered questionnaires were used to gather the baseline data. Health education on menstrual hygiene was provided using PowerPoint and video presentations for a total of one hour, one week following the baseline evaluation. The same self-administered survey was used to obtain follow-up data three months later. The girls' understanding of the reason for menstruation improved (by 91%). At the follow-up, there was a noticeably higher frequency (86%) of changing pads. Compared to the baseline, a higher percentage of girls (82%) dried their underwear in the sun. After changing the diaper, over 74% of the girls cleaned their hands with soap. From the above, it is clearly stated that Nurse Initiated Menstrual Hygiene Management Program was effective and had difference in knowledge and practice level in pretest and post test on menstrual hygiene among study participants

- **Objective 4:** Compare the Pre-Test And Post-Test Level of Menstrual Awareness Among Adolescent Hiv Clients.

The present study illustrated the comparison between the pretest and post test level of knowledge and practices on menstrual hygiene management program among adolescent HIV clients

The study found that, when knowledge score was taken into account, teenagers' knowledge scores improved on average from 6.13 to 9.00 after the intervention was given. Or, we may claim that after administration intervention, they were able to answer up to 9 questions during the pretest, but only 6 questions. They are able to accurately respond to three more questions as a result of the nurse-initiated menstrual hygiene management program. There is a statistically significant difference here. The student's paired 't' test was used to determine statistical significance.

In terms of practice score, adolescents on average saw an improvement from 4.83 to 8.00 after receiving the intervention. Or, we could state that during the pretest, they could only respond to 5 questions without help from the administration; now, they can respond to up to 8 questions.

Considering knowledge score,

Before the intervention, 10% of the adolescent had adequate knowledge, compared to 33.33% of the adolescents who had inadequate knowledge and 56.67% who had moderate knowledge.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

After the intervention, none of the teenagers had knowledge scores that were insufficient, 26.67% had scores that were moderate, and 73.33% had knowledge scores that were adequate.

Considering practice score,

Before intervention, 46.67% of them was Not at all Satisfied score, 53.33% of them are having Partly Satisfied score, none of them are having Satisfied score and none of them having very Satisfied score.

The above study indicated that the significant difference between pretest and posttest level of knowledge and practice on menstrual hygiene. **Hence the hypothesis (H₁):** stated earlier that there is significant difference between the pretest and post test level of knowledge and practice on Nurse Initiated Menstrual Hygiene Management Program among Adolescent HIV clients ,the H₁ accepted

The results of the present study were supported by Abhishek Singh et al. (2020), who used a convenience sample technique to conduct a cross-sectional survey among 649 schoolgirls from January to August 2019. The participants in the control and intervention groups were exposed to Didactic Lecturers and Focused group discussions, respectively, after gathering baseline data using a pretested, predesigned, standardized questionnaire. One month after such intervention, the same questionnaire was once again self-administered by participants. Using SPSS (22.0), all tests were run with a 5% threshold of significance.

Participants in the control group had a difference in their knowledge and practice mean scores before and after the intervention, which was highly statistically significant (P 0.001). To conclude the nurse initiated menstrual hygiene management program was effective factually. There was a significant difference in pretest and post test level of knowledge and practice on menstrual hygiene among adolescent HIV client .

- **Objective 5:** Associate The Post Test Level of Menstrual Awareness Among Adolescent Hiv Clients With Their Selected Bio Socio Demographic Variables.

The current study report was association between the post test level of impact on nurse initiated menstrual hygiene management program among adolescent HIV clients with their selected socio demographic variables

The study revealed that the association between pretest level of knowledge score and adolescents demographic variables 14-15 years, and urban area adolescents are having more adequate level of practice score than other. Statistical significance was calculated using chi square test.

In the current study report was association the level of knowledge on menstrual hygiene among adolescent HIV client and it is statistically significant with

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

$\chi^2=20.21$ $P=0.001^{***}(S)$ and practices is statistically significant with $\chi^2=22.72$ $P=0.001^{***}(S)$

The results of the current study are related to those of a study by Bikis Yaynie Shibeshi et al., published in 2021, which examined differences in menstrual hygiene practices between urban and rural schoolgirls in northeastern Ethiopia. 1078 schoolgirls (539 urban and 539 rural) participated in a comparative cross-sectional survey at an institution between February and March 2020. Through the use of a multi-stage sampling approach, the participants were chosen. Data were gathered using an observational checklist and a standardized self-administrative questionnaire. With a 95% confidence interval, bivariate and multivariate logistic regression analysis was used. Statistical significance was determined by a P-value less than 0.05.

Menstrual hygiene practices were generally poor, albeit they were comparatively better among schoolgirls in urban areas. This necessitates further work to address these issues and achieve sustainable development goals. The above study indicated that the demographic variables influence the knowledge and practice on menstrual hygiene management program. **Hence the hypothesis (H₂)** : stated earlier that “there is significant association between the selected socio demographic variable with their post test scores of nurse initiated menstrual hygiene management program among Adolescent HIV clients , the H₂ is accepted ($p \leq 0.05$) significant.

To conclude the, there was a significant association between the post test level of knowledge and practice with socio demographic variable.

- **Objective 6:** Combine The Findings Of Qualitative And Quantitative Data

In qualitative aspect during pretest the participants expressed negative emotion towards menstruation. Tiredness was consistently as a physical challenge that participants had to go through their daily activities. **Themes and subthemes evolved as, FIRST EXPERIENCE**(sub themes- A resenting emotion towards menarche experience, physical and emotional experience during menstruation, missing school during menstruation .In this adolescents expressed distress emotions including anger and nervousness and frustration which is also evidenced in pretest level of knowledge and practice among adolescent which was inadequate.

The current study's qualitative findings were coincided with the *Molly secur turner (2020)*. The research identified four key themes: (1) understanding menstruation, (2) experiencing menstruation, (3) managing menstruation, and (4) societal norms and the significance of menstruation. Participants talked about how little they understood about menstruation and how they felt uncertain about using period hygiene items. Lack of proper access to menstrual hygiene products, a lack of time to change products, anxiety over losing menstrual blood, and effects on school attendance were among the difficulties faced at school. In post test aspect the effectiveness of Nurse Initiated Menstrual Hygiene Management Program was assessed ,the participants verbalized “*Very useful to me*”

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

Themes evolved as **IMPACT OF INTERVENTION** (new learning ,positive change in behavior).In this adolescents expressed the use of photos were helpful in better

Nurse Initiated Menstrual Hygiene Management Program was very effective and also highlighted positive change in behavior which is evidenced by difference in pretest and post test level of knowledge and practice level among study participants.The post test level of knowledge and practice score was 73.33% and 70% respectively.Nurse Intiated Menstrual Hygiene Management Program improves the knowledge and practice .

The study was highly significant ($p < 0.001$) .After administration of Nurse Initiated Menstrual Hygiene management Program, the knowledge and practice on menstrual awareness was assessed both subjectively and objectively.Nurse initiated menstrual hygiene program was explained Qualitatively as well as Quantitatively in Holistic manner.

Quantitative findings were coincided with *Zelalem Belaney, Birhanie Mekuriaw (2019)*.He assessed the knowledge and menstrual hygiene practice among 791 randomly selected adolescent school girls in southern Ethiopia using multi stage sampling technique.The study revealed that 68.3%had poor knowledge of menstruation and 60.3% of girls had poor menstrual hygiene practice .Majority of adolescent school girls had poor knowledge regarding menstruation and their hygienic practices are incorrect. This demonstrates a need to design acceptable awareness creation and advocacy programs to improve the knowledge and promote safe hygienic practice of adolescent school girls during menstruation.

From the above discussion, the study findings proved that the Nurse Initiated Menstrual hygiene management program was improved the knowledge and practice on menstrual hygiene among adolescent HIV clients, hence the nurse must concentrate on teaching menstrual hygiene practices among early adolescents and helps to solve the social stigma regarding menstruation.

The present study revealed that Impact of nurse initiated menstrual hygiene management program among adolescent HIV client found effective.

X. CHAPTER 6

Summary, Implications, Limitations

Recommendations & Conclusion: This chapter is split into two parts. The study's summary and findings are reported in the first section. The second half of the study includes recommendations and its conclusion, as well as its implications for nursing practices, nursing education, nursing administration, and nursing research.

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

- 1. Summary of The Study:** The study was conducted to assess the the impact of nurse initiated menstrual hygiene management program on menstrual awareness among adolescent HIVclients and their experiences on menstruation at a tertiary care hospital Chennai'' –Mixed analysis a pre-experimental design with a single group for the pre- and post-tests. The trial ran for 4 weeks, from 20 June 22 to 17 July 22. For the selection of quantitative samples, the purposeful sampling technique was utilized, and for the selection of qualitative samples, convenient sampling. 30 teenage girls from the Pediatric Center of Excellence ART at ICH&HC, Egmore, and Chennai-08 make up the study's total sample. Demographic information was gathered using a self-administered questionnaire, while knowledge and practice were evaluated using a semi-structured questionnaire. Using the cronbach alpha and inter rater methods, the tool's dependability was evaluated. Descriptive and inferential statistics were used for the data analysis and interpretation.

Chapter II deal with the review of literature with knowledge and practice on menstrual hygiene.

The conceptual frame work of the study was based on the Ludwig Von Bertalanffy(1950)

Chapter III deals with research approach ,design,settings of the study ,duration of the study population,and study sample ,sample size ,sampling criteria ,and sampling technique, research variables,development and description of tool, content validity, protection of human rights ,pilot studt,data collection procedure and data analysis.

Chapter IV deals with the data analysis and interpretation by statistically and by thematic analysis, pictorial representation also made.

The writer re-examines the scene to note detail and emotions, reflect on meaning ,examine ,reflect on meaning and examine what went well or expose a need for additional learning and relate what transpire to rest of life.

Subthemes were created by using a self structured tool and the interview was translated by transcribed verbatimWhich is the qualitative worksheet according to the subtheme?

Then based on subtheme, the theme was formulated and was discussed as a solution.

- 2. Implications of the Study:** The following implications of vital concern in the field of Nursing Practice, Nursing Education, Nursing Administration and Nursing Research, are derived from the study.

- **Nursing Practice**

- The pediatric field of health care in providing care that is focused on the needs of children and families, the pediatric healthcare environment is different from that

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI' – A MIXED ANALYSIS

of adult healthcare. The field of pediatric nurses has great responsibility to protect early adolescent from consequences of illness and promote health

- In order to deliver high-quality care, nurses in a variety of work situations should be aware of their roles and abilities in the pediatric unit. Nurses must be aware and consider all holistic health services provided to family unit.
- The study's findings highlighted the importance of educating nursing staff and student nurses in order to organize and carry out health teaching programs on a regular basis and to advance early adolescents' knowledge and skill levels. Nurses shall conduct menstrual hygiene management programme regarding menstrual hygiene practices.
- Nurses can utilize the findings of the study in the practice.

- **Nursing Education**

- Health teaching modules is prepared by the researcher about nurse initiated menstrual hygiene management program for enhancing the student's knowledge for better understanding about Menstrual hygiene and its management & improves family participation and coping ability.
- This research study emphasizes the need for developing good teaching skill among student nurses on nurse initiated menstrual hygiene management program

- **Nursing Administration**

- Appointment of nurses in community area is useful to concentrate on early adolescents on menstrual hygiene
- The health service should include individual and group health education regarding menstrual hygiene
- Conducting school health programme regarding menstrual hygiene ,menstrual absorbents available and method of disposal to students and teacher.

- **Nursing Research**

- Evidence based nursing practice must take higher priority in order to increase the knowledge of nurse initiated menstrual hygiene management program among early adolescents.
- The nurses as well as students should be encouraged to take more qualitative and quantitative researches related to nurse initiated menstrual hygiene management program

3. Limitations

- The researcher could not generalize the findings as the sample size is small.
- Large study but duration for data collection only for four weeks

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI' – A MIXED ANALYSIS

- Only knowledge and practice of the early adolescent was assessed in the study
- Difficult to single investigate to this study

4. Recommendations

- Large-scale research can be conducted on a comparable topic.
- This study can be performed as a comparative study in urban and rural areas.
- A comparable study can be carried out utilizing numerous teaching tools, such as simulation..
- A similar study that combines quantitative and qualitative features can be carried out using mixed methodology.

XI. CONCLUSION

In this study in qualitative aspect the themes involved in this study are first menstrual experience ,living with periods and impact of intervention and subthemes are A resenting emotion towards menarche experience, Physical experiences during menstruation, No prior knowledge, New learnings, Use of multimedia, Positive change in behavior. The study revealed that, the participants expressed a negative emotion when they got their first period. Some associated the feeling with physical pain while others mentioned it was an overall difficult experience, Tiredness was consistently given as a physical challenge that participants had to go through during their periods which in some cases kept the participants from going through their daily activities. Most of the participants did not feel that the periods caused a hurdle towards attending school. However one participant said that she skipped school when she had backache and another said she skipped school because she did not have proper facilities at school hence she skipped during periods.

In this study quantitative aspect 33.33% have inadequate knowledge and 56.67% have moderate knowledge and in practice level the adolescents have 63.3% in pretest level in menstrual hygiene .After the Nurse Initiated Menstrual Management program, the knowledge level and practice level accelerated to 73.3%and 70% respectively and the menstrual experiences.

The effectiveness of the Nurse Initiated Menstrual Hygiene Management Program was analysed through post test and their experience on watching computer assisted teaching, the adolescents revealed that ,Almost all participants admitted that whatever was taught during the counselling were new to them and they had no knowledge before it. One participant mentioned how these cautions were not even given from her own family.

Hygiene was one major new learning that the participants had during the counseling from the researcher. Periodic change of sanitary napkins and cleanliness was emphasized on to be helpful learnings. All participants highlighted the use of videos and photos to be helpful in understanding the concepts better. All participants were thankful for the counseling. They were optimistic about using it during the time of their future periods and also share it among their peers

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI'' – A MIXED ANALYSIS

BIBLIOGRAPHY

BOOKS

- [1] Achars. Text Book of Pediatrics. 3rd ed. India: orient Longman. 2011.
- [2] Basavanthappa. B. T. Pediatric/Child Health Nursing. New Delhi: Ahuja; 2013.
- [3] Bowden M. Children and their Families. Philadelphia: W.B. Saunders Company; 1998.
- [4] Donnai. L. Wong. Essentials of Pediatrics. 6th Ed. New York: Mosby Westilike; 2002.
- [5] Dorothy. R. Marlow. Text Book of Pediatrics. 6th ed. London: W.B Saunders; 2000.
- [6] Ghai. O. P. Essential Pediatrics. 6th Ed. New Delhi: Jaypee brothers; 2007.
- [7] Gupta. S. P. Statistical Methods. 5th ed. Delhi: Sultan Chand and Sons; 2000.
- [8] Hockenberry, M. J. Wilson, D. & Wong D. L. Wong's. Essentials of Pediatric Nursing. 9th ed. India: Eledsevier; 2013.
- [9] Kothari. C. R. Research Methodology Technique .2nd Ed. New Delhi: Orient Publications; 2005.
- [10] Maria Hastings. T. Fundamentals of Nursing Research. 3rd ed. Boston; 2003.
- [11] Manoj Kumar. Text book of Biostatistics. Jalandhar: Lotus; 2009.
- [12] Nelson. Textbook of Pediatrics.14th ed. India: Saunders; 2014.
- [13] Nichi. L. and Potts. Pediatric Nursing. 2 nd ed. NewDelhi: Thomson; 2008.
- [14] Nicki, L. Potts. Pediatric Nursing Caring for Children and Their Families. Australia: Thomson Delmar; 2002.
- [15] Park K. Park's Text book of preventive and social medicine.24th ed. M/s BanarasidasBhanat; 2016.
- [16] Parul Dutta. Paediatric Nursing. 2 Ed. New Delhi: Jaypee; 2007.
- [17] Piyush Gupta. Essential Paediatric Nursing.2nd Ed. New Delhi: CBS; 2004.
- [18] Polit D F & Hungler. Nursing research. Principles and methods. 6th. Philadelphia: Lippincott; 2001.
- [19] Parker E. Marilyn. Nursing theories and nursing practice. 2nd ed. Philadelphia: F.A.Davis Company; 2001.
- [20] Parthasarathy. A and MKC Nair. IAP Text book of paediatrics. New Delhi: Jaypee; 2010.
- [21] Potter P. A. & Perry A. G. Fundamentals of nursing. Missouri: Mosby, Publications; 2015.
- [22] SurajGupte. Text book of paediatrics. (10th edition). New Delhi. Jaypee Brothers publications.(2004)
- [23] Sunder Rao P.S.S., ET, al. An introduction to biostatistics. A manual for students in health science. 2nd ed. Vellore Prestographic printers; 1996.
- [24] Talbot. Nursing Research. Philadelphia: W.B. Saunders; 1995.
- [25] Terri Kyle. Essentials of Pediatric Nursing. New Delhi: Wolters klumer; 2008.
- [26] Trithankar Dutta D.R. Principles of Pediatric. New York: Central book agency; 1998.
- [27] Tom Lissauer and Graham Clayden. Illustrated text book of pediatrics. 3rd ed. Philadelphia: Mosby; 2008.
- [28] Vishwanath desai. Text book of pediatrics .5thed. New Delhi: Jaypee; 2009.
- [29] Wacheter H.E. Nursing Care of Children. 10th ed. Philadelphia: J.B. Lippincott; 1983.
- [30] Whaley F.S & Wong's L.P. Nursing care of infants and Children. 6th ed. Missouri: Mosby; 1999.

JOURNALS

- [1] Abor P. A. Menstrual hygiene management in public high schools in Ghana. *African health sciences*,(2022). 22(1), 88–91. Available at <https://doi.org/>
- [2] Agarwal, N., Soni, N., Singh, S. P., & Soni, G. P. Knowledge and practice regarding menstrual hygiene among adolescent girls of rural field practice area of RIMS, Raipur (C. G.), India. *International Journal of Reproduction, Contraception, ObstetricsandGynecology*, (2018). 7(6), 2317+available at <https://link.gale.com/>
- [3] Agbede, C. O., & Ekeanyanwu, U. C.. An outcome of educational intervention on the menstrual hygiene practices among school girls in Ogun State, Nigeria: a quasi-experimental study. *The Pan African medical.journal*, 40.,(2021)214.Available at <https://doi.org/https://www.ncbi.nlm.nih.gov/>
- [4] Aggarwal, S., Ambalkar, D., Madhumathi, J., Badge, V., & Humne, A. Menstrual Hygiene Practices of Adolescent Girls in Rural Maharashtra. *Indian Journal of GenderStudies*,(2021).28(1), 127–137.available at <https://doi.org/>

AN EXPLORATORY STUDY TO ASSESS THE IMPACT OF NURSE
INITIATED MENSTRUAL HYGIENE MANAGEMENT PROGRAM ON MENSTRUAL
AWARENESS AMONG ADOLESCENT HIV CLIENTS AND THEIR EXPERIENCES ON
MENSTRUATION AT A TERTIARY CARE HOSPITAL CHENNAI’ – A MIXED ANALYSIS

- [5] Anjali Mahajan, Kanica Kaushal knowledge and practice regarding menstrual hygiene among adolescent girls of Government School of Shimla, Himachal Pradesh. :Christmed journal of health and research (2017) 4 (2) 99-103 available at <https://www.cjhr.org/>
- [6] C. Bhandari, P., G. Bhole, M., & Shrinivasan, A. A Study on Knowledge Regarding Menstruation and Menstrual Hygiene among School Girls of Karad. *Journal of Pharmaceutical Research International*, (2021) 33(50B), 309-316. Available at <https://doi.org/>
- [7] Hussein, J., Gobena, T., & Gashaw, T). The practice of menstrual hygiene management and associated factors among secondary school girls in eastern Ethiopia: The need for water, sanitation, and hygiene support. *Women's health (London, England)*, 18. (2022), available at <https://doi.org/>
- [8] Kaur, N., & Byard, R. W. Menstrual health management: Practices, challenges and human rights violations. *The Medico-legal journal*, (2021).89(4), 241–246. Available at <https://doi.org/>
- [9] Lubis, J., Nasution, E. Y., & Tanjung, W. W. The Effect of Adolescent Knowledge about Menstruation on Personal Hygiene Behavior during Menstruation in Environment III Silandit Village. *International Journal of Basic and Applied Science*, (2022). 10(4), 126–131. available at <https://doi.org/>
- [10] McCammon, E., Bansal, S., Hebert, L. E., Yan, S., Menendez, A., & Gilliam, M. Exploring young women's menstruation-related challenges in Uttar Pradesh, India, using the socio-ecological framework. *Sexual and reproductive health matters*, (2020). 28(1), <https://doi.org/>
- [11] Michael, J., Iqbal, Q., Haider, S., Khalid, A., Haque, N., Ishaq, R., Saleem, F., Hassali, M. A., & Bashaar, M. Knowledge and practice of adolescent females about menstruation and menstruation hygiene visiting a public healthcare institute of Quetta, Pakistan. *BMC women's health*, (2020).20(1),4. Available at <https://doi.org/><https://pubmed.ncbi.nlm.nih.gov/>
- [12] Pokhrel, B., Mahat, S., & Parajuli, K. Knowledge and practice regarding menstrual hygiene among physically disabled women in Kathmandu, Nepal. (2019).available at <https:// semanticscholar.org/>
- [13] Rastogi, S., Khanna, A., & Mathur, P. Uncovering the challenges to menstrual health: Knowledge, attitudes and practices of adolescent girls in government schools of Delhi. *Health Education Journal*, (2019). 78(7), 839–850 available at <https://doi.org/><https://journals.sagepub.com/>
- [14] Sebert Kuhlmann, A., Teni, M. T., Key, R., & Billingsley, C. Period Product Insecurity, School Absenteeism, and use of School Resources to Obtain Period Products among High School Students in St. Louis, Missouri. *The Journal of school nursing : the official publication of the National Association of School Nurses*, (2021). Available at <https://doi.org/>
- [15] Secor-Turner, M., Huseth-Zosel, A., & Ostlund, R. Menstruation Experiences of Middle and High School Students in the Midwest: A Pilot Study. *The Journal of school nursing : the official publication of the National Association of School Nurses*, (2022). 38(6), 504–510. available at <https://doi.org/>
- [16] Shah, V., Nabwera, H.M., Sosseh, F. *et al.* A rite of passage: a mixed methodology study about knowledge, perceptions and practices of menstrual hygiene management in rural Gambia. *BMC Public Health* 19, 277(2019).available at <https://doi.org/><https://bmcpublichealth.biomedcentral.com/>
- [17] Ssewanyana, D., & Bitanhirwe, B. Menstrual hygiene management among adolescent girls in sub-Saharan Africa. *Global health promotion*, (2019). 26(1), 105–108. available at <https://doi.org/>
- [18] Sumit Aggarwal & Deepti Ambalkar & Jayaprakasam Madhumathi & Vijay Badge & Arun Humne., "Menstrual Hygiene Practices of Adolescent Girls in Rural Maharashtra," *Indian Journal of Gender Studies*, Centre for Women's Development Studies, vol. , (2021) 28(1), 127-137,
- [19] Sweeney, E. N., Fisher, C. M., & Adkins, M. M. Elementary School Nurses' Perceptions Regarding Menstruation Education: An Exploratory Study. *The Journal of school nursing : the official publication of the National Association of School Nurses*, (2022). Available at <https://doi.org/10.1177/>
- [20] Yalew, M., Adane, B., Arefaynie, M., Kefale, B., Damtie, Y., Mitiku, K., Agmas, A., Biset, G., Alene, T. D., Adane, M., Addisu, E., & Dewau, R. Menstrual hygiene practice among female adolescents and its association with knowledge in Ethiopia: A systematic review and meta-analysis. *PLoS one*, (2021).16(8), available at <https://doi.org/><https://www.ncbi.nlm.nih.gov/>