International Journal of Recent Innovations in Academic Research

E-ISSN: 2635-3040; P-ISSN: 2659-1561
Homepage: https://www.ijriar.com/
Volume-10, Issue-1, January-March-2026: 19-24

Research Article

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Leukorrhea and Its Prevention Among B.Sc. Nursing Students

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Article History
Received: December 15, 2025
Accepted: January 05, 2026
Published: January 11, 2026

Abstract

Background: Leukorrhea is a common gynecological condition characterized by excessive or abnormal vaginal discharge that may originate from the vagina, cervix, ovaries, or fallopian tubes, before menses or at mid-cycle, most commonly from the cervix. Lack of awareness and misconceptions about genital hygiene among young women, including nursing students, often contribute to complications. As future health educators, nursing students must possess adequate knowledge about leukorrhea to guide women in preventive and promotive health practices. **Objectives:** 1) To assess the pre-test level of knowledge regarding leukorrhea among nursing students by using a structured knowledge questionnaire. 2) To evaluate the effectiveness of planned teaching programme on leukorrhea among nursing students in terms of gain in mean post-test level of knowledge scores and 3) To compare the pre-test and post-test knowledge scores among nursing students. **Method:** A quasi-experimental one-group pre-test post-test design without a control group was adopted for the study. A structured knowledge questionnaire was used to assess the level of knowledge among nursing students before, and then the planned teaching programme was administered to the subjects. On the seventh day, the post-test was conducted by using a structured knowledge questionnaire. The sample consisted of 45 students selected by using a simple random sampling technique. The collected data were analyzed by using descriptive and inferential statistics. **Results:** The paired 't' value (tcal= 23.16*) at $p < 0.05$ level of significance for knowledge proved that the stated hypothesis i.e. the mean post-test knowledge scores of B.Sc. Nursing students in selected nursing institute who exposed to the planned teaching programme will be significantly higher than mean pre-test knowledge scores at 0.05 level of significance. Hence H_1 was accepted and H_2 was rejected. **Interpretation and Conclusions:** The findings of the study showed that the knowledge of the third-year B.Sc. Nursing students was below average before the administration of the planned teaching programme. The planned teaching programme facilitated them to gain more knowledge regarding leukorrhea, which is evident from the post-test knowledge score. Hence, it can be concluded that the planned teaching programme is effective for providing information and improving the knowledge of student nurses.

Keywords: Knowledge, Effectiveness, Planned Teaching Programme, Leukorrhea, Prevention, Nursing Students.

Introduction

Leukorrhea is an abnormal vaginal discharge often associated with irritation and is non-hemorrhagic in nature[2]. Leukorrhea is a flow of a whitish, yellowish, or greenish discharge from the vagina that may be normal or that may be a sign of infection. Such discharges may originate from the vagina, ovaries, fallopian tubes, or most commonly, the cervix[3]. Physiologic leukorrhea is a normal condition occurring within several months to a year of the onset of menses in adolescent girls and is sometimes present in newborn girls, usually lasting one to two months. However, in many cases, leukorrhea is a sign of infection, especially when the discharge is yellow or green, has an offensive odor, and is accompanied by irritation, itching, pain, or tissue inflammation. Abnormal leukorrhea may be caused by infections with bacteria, yeast, or other microorganisms. For example, many sexually transmitted diseases, which involve the transmission of viruses or bacteria and include diseases such as gonorrhea and chlamydia, are major causes of leukorrhea. These diseases lead to infection of the cervix, which is indeed one of the most common gynecological disorders. The infection has a tendency to irritate the mucus glands of the cervix, causing them to secrete an excess of mucus mixed with pus. Leukorrhea is also a sign of vaginitis (inflammation of the vagina), which is often caused by infection with the fungus *Candida albicans* or by infection with the protozoan parasite *Trichomonas vaginalis*.

A Guide to Vaginal Discharge Color

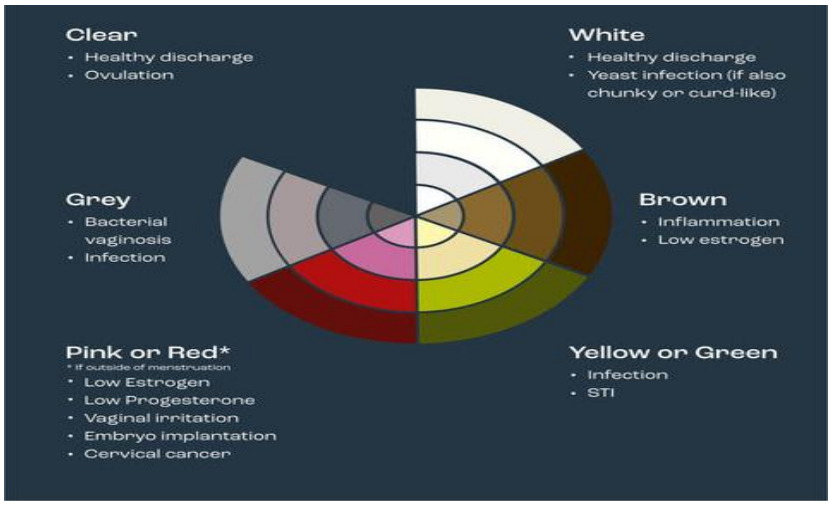

Figure 1. Authors' view: A guide to vaginal discharge color and its clinical significance.

Statement of the Problem

A study to assess the effectiveness of planned teaching programme on knowledge regarding leukorrhea and its prevention among nursing students in selected colleges at Mangaluru.

Objectives

1) To assess the pre-test level of knowledge score regarding leukorrhea and its prevention among nursing students, as measured by using a structured knowledge questionnaire.
2) To evaluate the effectiveness of planned teaching programme on leukorrhea and its prevention among nursing students, in terms of gain in mean post-test level of knowledge scores.
3) To compare the pre-test and post-test knowledge scores among nursing students.

Methodology

Research Approach: An evaluative research approach.
Research Design: Pre-experimental; one-group pre-test and post-test design (O_1 X O_2).
Research Setting: Athena College of Nursing, Mangaluru.

Table 1. Symbolic representation of pre-experimental one-group pre-test and post-test design.

Group	Pre-test	Intervention	Post-test
Experimental group	O_1	X	O_2

Keys:

O_1: Assessment of pre-test knowledge regarding leukorrhea among nursing students before planned teaching programme.
X: Administration of planned teaching programme.

O_2: Assessment of post-test knowledge regarding leukorrhea on the 7th day after planned teaching programme.

Variables
Independent Variable: Planned teaching programme.
Dependent Variable: Knowledge on leukorrhoea.
Baseline Variables: Age, type of family, dietary pattern, source of information, age of menarche, mother's occupation, father's occupation.

Population
Target Population: Nursing students.

Sample and Sampling Techniques
Sample: 3rd Year B.Sc. Nursing students of Athena College of Nursing, Mangaluru.
Sampling Technique: Non-probability: purposive sampling technique.
Sample Size: 45.

Criteria for Selection of the Sample
The criteria for selection of the samples in this study involve:

Inclusion Criteria:
B.Sc. Nursing students who were:

- Willing to participate in the study.
- Present at the time of study.

Exclusion Criteria:
B.Sc. Nursing students who were:

- Not present at the time of data collection.
- Have been following any reproductive health counseling.

Description of the Tool
The tool consists of a structured knowledge questionnaire.

Tool 1: Baseline Proforma of the Tool
This section has 7 items such as age, type of family, dietary pattern, source of information, age of menarche, mother's occupation, and father's occupation.

Tool 2: Structured Knowledge Questionnaire
This tool is prepared by the investigator based on the second objective of the study, that is, to assess the effectiveness of planned teaching programme on leukorrhea among nursing students. Before preparing the tool, its blueprint was constructed, which includes 20 items.

Analysis of the Results
Findings Related to the Baseline Proforma of the Subjects
Out of 45 subjects, all 45 belonged to the age group of 21–24 years, and it was 100%. Among the 4th year B.Sc. Nursing students, the majority, 62.3%, belonged to nuclear families, 24.5% belonged to joint families, and 7.5% belonged to extended family groups. A majority of 100% of students followed a mixed diet. A majority of 96.8% of students received the source of information from mass media and 7.5% from their mother. The majority, 34%, had an age of menarche at 13 years, 30.2% at 14 years, 26.4% at 12 years, and 2.8% at 15 years. A majority of 50% of mothers were housewives, and 50% were working. A majority of 100% of fathers were working in the private sector.

Table 2. Mean, median, mode, standard deviation and range of knowledge scores of subjects regarding nesting on posture and movements of the premature babies (n = 45).

Area of analysis	Mean	Median	Mode	Standard deviation	Range
Pre-test	16.9	17	17.2	2.68	11
Post-test	29.3	29	28.4	2.30	08
Difference	12.4	12	11.2	0.38	03

Table 2 reveals that, the mean pre-test knowledge score was 16.9, median 17, mode 17.2, standard deviation 2.68, and range 11. Whereas the mean post-test knowledge score was 29.3, median 29, mode 28.4, standard deviation 2.3, and range 08. The overall difference in mean knowledge score was 12.4, median 12, mode 11.2, standard deviation 0.38, and range 03.

Table 3. Frequency and percentage distribution of knowledge scores of subjects regarding nesting on posture and movements of the premature babies (n = 45).

Level of knowledge	Pre-test		Post-test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Good (above 20)	09	20	45	100
Average (14 – 20)	30	67	00	00
Poor (below 14)	06	13	00	00

Table 3 reveals that, in the pre-test, the majority of the subjects, 30 (67%), had average knowledge, 09 (20%) had good knowledge, and 06 (13%) had poor knowledge. In the post-test, after the planned teaching programme, all of the subjects, 45 (100%), had good knowledge regarding leukorrhea and its prevention.

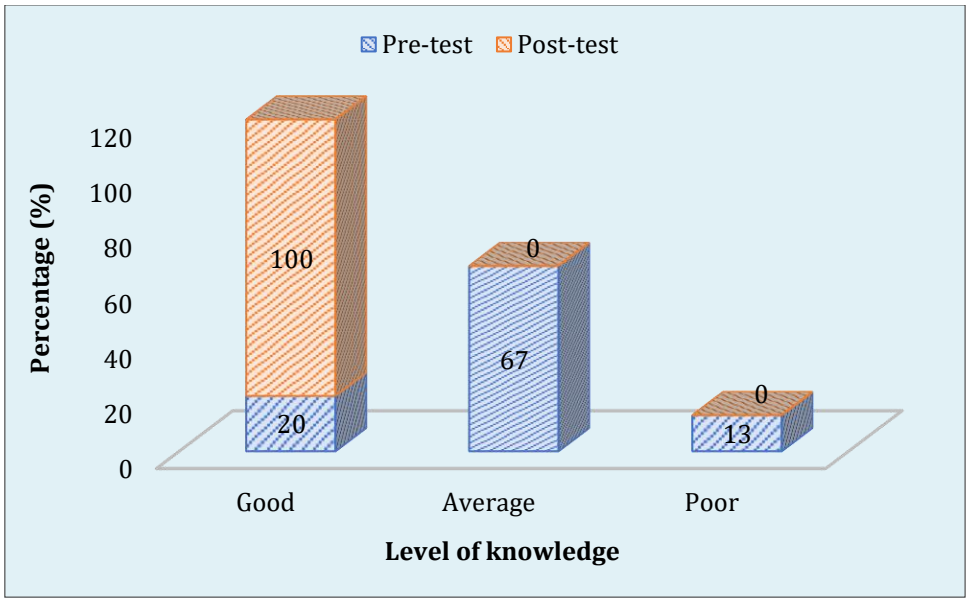

Figure 2. Percentage distribution of subjects according to their level of knowledge scores in the pre-test and post-test.

Testing Hypotheses

H_1: The mean post-test knowledge scores of 3rd year B.Sc. Nursing students who underwent the planned teaching programme will be significantly higher than the mean pre-test knowledge scores, as measured by a structured knowledge questionnaire, at the 0.05 level of significance.

Table 4. Mean difference ($\bar{d}$), standard error of the difference ($S\bar{d}E$), and paired 't' values of the knowledge scores of subjects (n = 45).

Mean difference ($\bar{d}$)	Standard error of difference ($S\bar{d}E$)	Paired 't' values	
		Calculated	Tabulated
12.4	2.23	23.16*	2.02
*Significance at 0.05 level			

Table 4 reveals that the calculated paired 't' value ($t_{(}cal_{)}$ = 23.16*) was greater than the tabulated value ($t_{(}tab_{)}$ = 2.02). Hence, H_1 was accepted. This indicates that the gain in knowledge scores was statistically significant at the 0.05 level. Therefore, the planned teaching programme was effective in improving the knowledge of the subjects.

Contributions Made Towards Increasing the State of Knowledge in the Subject

The findings of the present study contribute to nursing practice, nursing education, nursing administration, and nursing research.

Nursing Education: Nursing education plays an important role in preparing nurses for the well-being of people in various areas. The present study has implications for nursing education. The study emphasizes the need to educate nursing personnel through in-service or continuing education programmes to update their knowledge regarding leucorrhea. Nurse educators play a major role in preparing nursing students to improve their knowledge and understanding of the importance of leucorrhea and its prevention.

Nursing Practice: Several implications may be drawn from the present study for nursing practice. Nurses and nursing students need to learn the fine art of midwifery and post-labour care in order to provide appropriate care to adolescent girls. To attain mastery in providing care to this group, nurses need to have in-depth knowledge regarding leucorrhea and its prevention.

Nursing Administration: Since students are often overlooked in terms of care according to their developmental age, nursing administrators need to motivate their subordinates to improve and advance the field of gynaecological nursing. Nursing administrators will be able to involve themselves in policy-making and programme implementation regarding leucorrhea and its prevention, and to develop protocols related to developmental care. Nursing administrators should arrange continuing nursing education (CNE) programmes to improve knowledge and practice regarding leucorrhea and its prevention.

Nursing Research: Research helps to increase the body of nursing knowledge, which in turn improves the care provided. There is a need for evidence-based standards of practice. The tools, lesson plans, and planned teaching programmes used in the present study can be utilized or modified for similar studies. The findings of the present study contribute to the existing body of knowledge and provide a basis for further research studies.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

1) The overall pre-test knowledge of 3rd year B.Sc. Nursing students was average.
2) The post-test knowledge scores of the subjects after the administration of the planned teaching programme were significantly higher than the pre-test scores. Hence, the planned teaching programme was effective in improving knowledge regarding leucorrhea and its prevention.

Declarations

Acknowledgments: To conduct the above research project, the Rajiv Gandhi University of Health Sciences, Bengaluru, granted a research fund under the UG Research Grant Programme for undergraduate students. I wholeheartedly acknowledge and thank the Hon'ble Vice-Chancellor, Registrar, and Director of the Advanced Research Wing for providing the funding and opportunity.

Artificial Intelligence (AI) Use Statement: The authors confirm that no artificial intelligence (AI) tools were employed in the preparation, analysis, or writing of this manuscript.

Author Contributions: HX, DTS, EG, GJ, and DPC: Contributed to the conception and design of the study, data collection, data analysis, and interpretation of the results, and drafted the manuscript; HG: Supervised the study, provided methodological guidance, and critically revised the manuscript for important intellectual content. All authors reviewed and approved the final manuscript and agreed to be accountable for all aspects of the work.

Conflict of Interest: The authors declare no conflict of interest.

Consent to Publish: The authors agree to publish the paper in International Journal of Recent Innovations in Academic Research.

Data Availability Statement: The data used or analysed during the current study are available from the corresponding author on reasonable request.

Funding: To conduct the above research project, the Rajiv Gandhi University of Health Sciences, Bengaluru, granted a research fund under the UG Research Grant Programme for undergraduate students.

Institutional Review Board Statement: The proposal for the study was approved by the Institutional Review Board of the Athena Institute of Health Sciences, Mangaluru.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Research Content: The research content of this manuscript is original and has not been published elsewhere.

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Citation: Hanna Xavier, Deena Tresa Sebastian, Elsa George, Glennamary Joseph, Diya Philo Cherian and Honey Gundami. 2026. A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Leukorrhea and Its Prevention Among B.Sc. Nursing Students. International Journal of Recent Innovations in Academic Research, 10(1): 19-24.