



EFFECTIVENESS OF A STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING DYSFUNCTIONAL UTERINE BLEEDING (DUB) AMONG WOMEN IN THE REPRODUCTIVE AGE GROUP: AN INTERVENTIONAL STUDY

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Abstract

Background: Dysfunctional Uterine Bleeding (DUB) is a common gynecological condition affecting women in the reproductive age group. Despite its prevalence, awareness and knowledge about DUB remain inadequate among women, often leading to delayed diagnosis and management.

Objective: To assess the effectiveness of a structured teaching program on knowledge regarding DUB among women in the reproductive age group.

Methods: A quasi-experimental one-group pretest-posttest design was used. The study was conducted among 100 women aged 15–45 years selected through purposive sampling from a community health center. A structured questionnaire was used to assess baseline knowledge followed by administration of a structured teaching program. A posttest was conducted after 7 days to assess knowledge improvement. Descriptive and inferential statistics, including paired t-tests, were used for analysis.

Results: The mean pretest knowledge score was 8.2 ± 3.9 , which increased significantly to 16.8 ± 2.1 in the posttest. The mean difference of 7.4 was statistically significant ($p < 0.001$). The study found no significant association between knowledge improvement and demographic variables like age, education, or marital status.

Conclusion: The structured teaching program was effective in significantly improving knowledge about DUB among women in the reproductive age group. Structured educational interventions should be integrated into reproductive health education initiatives to promote early identification and management of DUB.

Keywords: Dysfunctional Uterine Bleeding, Structured Teaching Program, Reproductive Age, Knowledge Assessment.

1. Introduction

A dysfunctional uterine hemorrhage is detected in 40–60% of women who have heavy periods. Blood loss above 80 milliliters is referred to as this (normal menstrual loss is less than 80 milliliters). A woman's health may be impacted by heavy menstrual flow in both physiologically and socially, leading to issues like social anxiety and iron deficiency anemia,

respectively. The most frequent cause of chronic sickness in the impoverished world and iron deficiency in the industrialized world is dysfunctional uterine hemorrhage.¹

Unusual heavy, prolonged, or frequent uterine bleeding that is not caused by pregnancy or another recognizable systemic or pelvic illness is referred to as "dysfunctional uterine bleeding" (DUB). It is an excluding diagnosis as a result. The source and origin of the irregular bleeding are largely unclear. The complex process of menstruation involves a number of different components, including tissue breakdown and remodeling mechanisms, endometrial vasculature, endometrial vasoactive substances, estrogen, progesterone, and their receptors, as well as endometrial repair & regeneration.¹

A condition of aberrant uterine bleeding without any clinically discernible organic, systemic, or iatrogenic cause (excluding pelvic disease, such as tumors, inflammation, or pregnancy) is known as dysfunctional uterine hemorrhage.²

When all pelvic and systemic causes of heavy menstruation have been ruled out, DUB is diagnosed as an exclusionary condition. Ovulatory and anovulatory DUB are the two categories into which it falls. Eighty percent of instances are ovulatory DUB, which occurs in women in the reproductive age range, whereas anovulatory DUB occurs during perimenopause and at menarche. Approximately 28% of women believe that their periods are too frequent and schedule their social events around their cycles, while 10% of working women take time off due to heavy menstrual loss.³

General steps for managing DUB include keeping a menstrual calendar, treating anemia, receiving medical care, and ultimately undergoing surgery. NSAIDs, traneximic acid, progestogens, combination OCPs, danazol, and levonorgestrel-releasing intrauterine devices are among the medications used to treat DUB. According to Morana B et al., medicinal treatment for DUB lowers the number of hysterectomies and increases patient satisfaction.⁴

Non-cancerous diseases include infection, uterine fibroids, polyps, adenomyosis, or endometriosis can cause AUB. But in postmenopausal women, it is also the most prevalent sign of endometrial cancer (EC). Women with AUB should get prompt medical attention in either case.⁵

DUB accounts for a large proportion of gynecological consultations, particularly among women in their reproductive years. DUB can significantly affect women's quality of life, leading to anemia, fatigue, and emotional distress.⁶

Despite the high incidence, many women are unaware of the causes, symptoms, and treatment options for DUB. This gap in knowledge contributes to delays in seeking medical care, worsening health outcomes. Educational interventions are essential to empower women with adequate knowledge to recognize and manage DUB effectively.

This study was conducted to assess the effectiveness of a structured teaching program in improving the knowledge of women in the reproductive age group regarding DUB.

2. Objectives

- To assess the pre-intervention knowledge level regarding DUB among women of reproductive age.

- To implement a structured teaching program on DUB.
- To evaluate the effectiveness of the teaching program through post-intervention knowledge assessment.
- To find the association between knowledge gain and selected demographic variables.

3. Materials and Methods

3.1 Study Design:

A quasi-experimental, one-group pretest-posttest design was used.

3.2 Study Setting and Population:

The study was conducted at rural community, targeting women aged 21–50 years.

3.3 Sample Size and Sampling Technique:

A total of 200 women were selected using purposive sampling based on inclusion criteria.

3.4 Inclusion Criteria:

- Women aged 21–50 years
- Willing to participate and provide informed consent
- Available during the study period

3.5 Exclusion Criteria:

- Women with known gynecological conditions
- Health professionals or students in medical fields

3.6 Data Collection Tools:

- **Demographic Performa:** Age, education, marital status, occupation, menstrual history.
- **Structured Knowledge Questionnaire:** 20 multiple-choice questions covering causes, symptoms, complications, and management of DUB.

3.7 Intervention:

A structured teaching program was developed with validated content by gynecology and nursing experts. The session lasted approximately 45 minutes and included visual aids and interactive discussions.

3.8 Ethical Considerations:

Approval was obtained from the Institutional Ethics Committee. Informed consent was obtained from all participants.

3.9 Data Analysis:

Data were analyzed using SPSS (v25). Descriptive statistics were used to summarize demographic data and knowledge scores. A paired t-test evaluated the effectiveness of the intervention. Fisher's exact tests assessed associations between demographic variables and knowledge gain.

4. Results

4.1 Demographic Characteristics:

- **Age Distribution:** Majority (53%) were aged 26–30 years
- **Education Level:** 41.5% had secondary education, 31.5% completed higher secondary, 16.5% were post graduates
- **Marital Status:** 79% were married
- **Occupation:** 72% were homemakers

Table 1: Description of samples (women in reproductive age group) based on their personal characteristics in terms of frequency and percentage

Demographic variable	Freq	%
Age		
26-30 Years	106	53.0%
31-35 Years	49	24.5%
36-40 Years	24	12.0%
41-45 Years	15	7.5%
46-50 Years	6	3.0%
Education		
No formal education	21	10.5%
Primary education	63	31.5%
Secondary education	83	41.5%
Postgraduate	33	16.5%
Religion		
Hindu	185	92.5%
Christian	5	2.5%
Muslim	3	1.5%
Other	7	3.5%
Occupation		
Business	12	6.0%
Homemaker	144	72.0%
Service	44	22.0%
Marital status		
Married	158	79.0%
Unmarried	38	19.0%
Widow	3	1.5%
Divorced	1	0.5%

4.2 Knowledge Score Analysis:

Table 2: Effectiveness of structured teaching program regarding Dysfunctional Uterine Bleeding

Knowledge Level	Pre-Test (n)	Post-Test (n)
Poor	74	0
Average	103	14
Good	23	186

4.3 Statistical Findings:

- **Mean Pretest Score:** 8.2 ± 3.9
- **Mean Posttest Score:** 16.8 ± 2.1
- **Mean Difference:** 8.6
- **Paired t-test Result:** $t = 31.19, p < 0.001$ (highly significant)

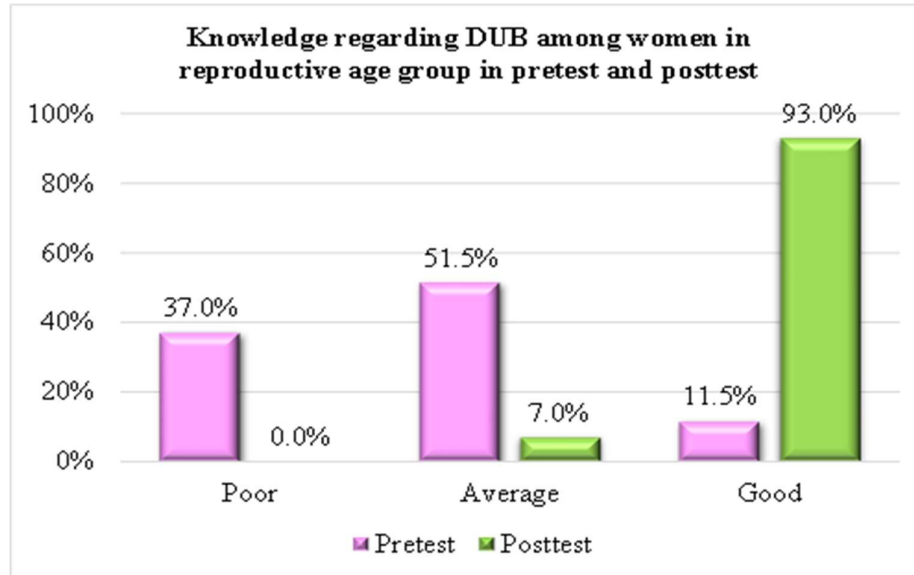


Fig 1: Knowledge Regarding DUB

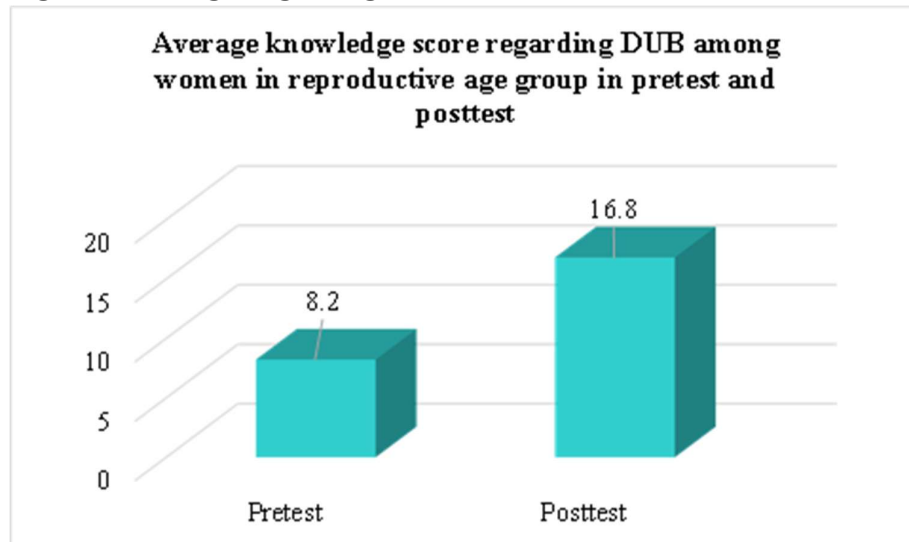


Fig 2: Paired t-test for the effectiveness of structured teaching program regarding Dysfunctional Uterine Bleeding

Table 3: Knowledge item analysis

Knowledge item	Pretest		Posttest	
	Freq	%	Freq	%
DUB is	89	44.5%	196	98.0%
Age group is most commonly affected by DUB	50	25.0%	188	94.0%
Primary cause of DUB	61	30.5%	176	88.0%
Risk factor for DUB	94	47.0%	173	86.5%
Common symptom of DUB	91	45.5%	176	88.0%

Dysfunctional Uterine Bleeding affects the quality of life of women	129	64.5%	187	93.5%
Not risk factor for DUB	65	32.5%	154	77.0%
Home remedy that helps in managing pain related DUB	65	32.5%	157	78.5%
Treatment option for DUB	58	29.0%	166	83.0%
Treatment of DUB depend on it's cause.	136	68.0%	189	94.5%
Drinking mustard seeds powder solution is one of the effective home remedies on dysfunctional uterine bleeding.	110	55.0%	177	88.5%
Treatment of dysfunctional uterine bleeding may include:	53	26.5%	164	82.0%
Primary treatment goal to DUB	69	34.5%	169	84.5%
Hormonal imbalance causes DUB	95	47.5%	165	82.5%
Relationship between stress and DUB	91	45.5%	132	66.0%
Lifestyle factors can contribute to DUB	80	40.0%	164	82.0%
Medication can cause DUB	73	36.5%	166	83.0%
Physical inactivity contribute to DUB	75	37.5%	146	73.0%
How can poor hygiene contribute to DUB	76	38.0%	140	70.0%
Relationship between diet and DUB	85	42.5%	179	89.5%

4.4 Association with Demographic Variables:
p-value corresponding to education and marital status were small (less than 0.05), the demographic variables education and marital status had significant association with knowledge regarding DUB.

5. Discussion

The findings clearly indicate that the structured teaching program significantly improved knowledge about DUB. The marked increase in post-test scores aligns with previous research highlighting the effectiveness of educational interventions in women's health.

Interestingly, the study revealed that knowledge improvement was dependent of education level and marital status, suggesting that women need formal education to be benefited from the intervention. This underscores the importance of community-level health education initiatives.

6. Conclusion

The structured teaching program was effective in enhancing awareness and knowledge regarding DUB among women in the reproductive age group. Integrating such programs into routine reproductive health services can contribute to early detection, treatment, and improved health outcomes.

7. Recommendations

- Similar studies should be conducted in larger populations across different regions.
- Health education on DUB should be incorporated into maternal and reproductive health services.
- Mobile health interventions can be explored to reach a wider audience.

8. Limitations

- Limited to one geographic area
- Short follow-up period; long-term retention of knowledge was not assessed
- No control group for comparison

9. Acknowledgments

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10. Conflict of Interest

The authors declare no conflict of interest.

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References:

1. The initial management of menorrhagia: evidence based clinical guidelines. No. 1. Royal College of Obstetricians and Gynaecologists, 1998
2. D.C. Dutta textbook of gynecology, published by JAYPEE brother's, 6th edition' 2015. p.187.
3. Edlund M et al. Quality of life: A Swedish survey of 2200 women with DUB. London Royal Society of Medicine Press 1994; 36-7.
4. MoranaB, ZarboR, PuglisiF, ZarboG. Dysfunctional uterine bleeding: Medical therapies. Minerva Ginecol 2003; 55:241-5
5. Kang MY, Sykes P, Herbison PY, Petrich S. Retrospective analysis on timeframes of referral, diagnosis and treatment of patients with endometrial carcinomas in Dunedin hospital, 2008-2011. N Z Med J. 2013;126 (1384):84–95.
6. Sujatha R, Study of dysfunctional uterine bleeding in patients in a medical college hospital. Indian J ObstetGynecol Res 2019;6 (3):308-311