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Research Article

A Study to evaluate the effectiveness of Video Assisted Teaching Module regarding management of leucorrhoea with coriander seed soaking water on level of knowledge and level of leucorrhoea among women residing in karikalampakkam, Puducherry.

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Abstract:

Introduction: Leucorrhoea is a common reproductive health problem among women and may affect physical comfort and quality of life. Lack of knowledge regarding its management may contribute to inappropriate practices and persistence of symptoms. **Aim:** To evaluate the effectiveness of a Video-Assisted Teaching Module on knowledge regarding management of leucorrhoea and ingestion of coriander seed soaking water on the level of leucorrhoea among women. **Methodology:** A quantitative approach with a quasi-experimental pre-test and post-test control group design was adopted. The study was conducted among 200 women with symptoms of leucorrhoea in Karikalampakkam, Puducherry. One hundred women were assigned to the experimental group and 100 to the control group using convenient sampling. Data were collected using a sociodemographic proforma, self-structured knowledge questionnaire, and leucorrhoea assessment checklist. The experimental group received a Video-Assisted Teaching Module and consumed coriander seed soaking water daily for 25 days, while the control group received routine care. Data were analyzed using descriptive and inferential statistics. **Results:** The experimental group showed a significant improvement in knowledge following the intervention, with the mean score increasing from 6.80 ± 2.53 to 15.23 ± 3.38 ($t = 26.597$, $p = 0.0001$). Post-test comparison showed significantly better knowledge and lower leucorrhoea scores in the experimental group than in the control group ($p = 0.0001$). **Conclusion:** The study concludes that regular, hands-on practice and tailored training programs are essential for bridging the gap between theoretical knowledge and practical application in critical life-saving techniques like COLS.

Keywords: Leucorrhoea, knowledge, vaginal discharge, women.

INTRODUCTION

Health is defined as a state of complete physical, mental, and social well-being, rather than merely the absence of disease or infirmity (WHO, 1948). Reproductive health encompasses complete physical, mental, and social well-being in all matters related to the reproductive system and includes the ability to have a safe and satisfying reproductive life with informed reproductive choices (WHO, 1948).

Gynecological disorders affect the female reproductive organs and include infections, tumors, and endocrine problems, which can significantly affect women's quality of life and reproductive health (2021). Vaginal discharge is a common gynecological complaint and may have physiological or pathological causes (2022). Abnormal discharge may result from bacterial vaginosis, vulvovaginal candidiasis, sexually transmitted infections, or cervical infections and may present with foul odor, itching, dysuria, or abnormal coloration (2022). Accurate diagnosis requires a detailed history, assessment of hygiene practices, physical examination, and appropriate laboratory investigations (2021).

Cervical cancer remains an important cause of morbidity and mortality among women, while changes in the cervicovaginal microbiota may contribute to disease progression (2022). Appropriate treatment of vaginal infections depends on the underlying cause and factors (2020).

Ayurvedic approaches have traditionally been used for managing leucorrhoea, including herbal preparations containing Haridra, Ashoka, and Lodhra (2023). Medicinal plants remain important sources of therapeutic compounds and are widely used in traditional healthcare systems (2022). *Coriandrum sativum* (coriander) contains bioactive compounds such as linalool, gallic acid, thymol, and bornyl acetate, which possess various pharmacological properties, including anti-inflammatory, analgesic, and antimicrobial activities (2021).

Globally, sexually transmitted infections and reproductive tract infections remain major reproductive health concerns, with bacterial vaginosis being one of the most common causes of abnormal vaginal discharge among women of reproductive age (WHO, 2020; WHO, 2024). In India, reproductive tract infections affect 19–71% of women, while vaginal discharge is a common complaint influenced by hygiene, socioeconomic conditions, and other risk factors (2022).

In Puducherry, bacterial vaginosis, candidiasis, and trichomoniasis were reported as major causes of vaginal discharge (2020). Inadequate awareness and self-medication may delay appropriate diagnosis and treatment. Therefore, the researcher was motivated to evaluate the effectiveness of a Video-Assisted Teaching Module regarding the management of leucorrhoea with ingestion of coriander seed soaking water on the level of knowledge and leucorrhoea among women residing in Karikalampakkam, Puducherry.

AIM

To evaluate the effectiveness of a Video-Assisted Teaching Module on knowledge regarding the management of leucorrhoea and the effectiveness of coriander seed soaking water on the level of leucorrhoea among women residing in Karikalampakkam, Puducherry

METHODOLOGY

The study adopted a quantitative research approach. A quasi-experimental pre-test and post-test control group design was used to evaluate the effectiveness of the intervention. The study was conducted in Embalam and Karikalampakkam, Puducherry, including the Karikalampakkam Community Health Centre, as the setting was feasible and had adequate availability of eligible participants. The population consisted of women aged 25–55 years with symptoms of leucorrhoea residing in Puducherry, while the target population comprised women with symptoms of leucorrhoea residing in Karikalampakkam village, Puducherry.

The sample consisted of 200 women, with 100 women in the experimental group and 100 women in the control group. The participants were selected using a convenient sampling technique. The inclusion criteria were women aged 25–55 years, present during the period of data collection, experiencing symptoms of white discharge, and able to read Tamil or English. Women who were unmarried, menopausal, or receiving estrogen treatment were excluded from the study.

The data collection tools consisted of a sociodemographic proforma, a self-structured knowledge questionnaire regarding management of leucorrhoea, and a checklist to assess the level of leucorrhoea.

The intervention consisted of a Video-Assisted Teaching Module covering the definition, causes, types, symptoms, investigations, management, home remedies, preparation of coriander seed soaking water, and the importance of coriander seeds. The teaching session had a total duration of 30 minutes. The experimental group was also instructed to consume 100 ml of coriander seed soaking water prepared by soaking 10 g of coriander seeds in 100 ml of water overnight for eight hours, followed by grinding and preparation of the final mixture. The prepared drink was consumed once daily on an empty stomach between 7:00 and 8:00 a.m. for 25 days, with daily documentation maintained throughout the intervention period.

The collected data were organized and coded in a master data sheet and analyzed using descriptive and inferential statistics. Frequency distribution, percentage, mean, and standard deviation were used for descriptive analysis. Chi-square test was used to determine associations, and the paired t test was used to assess the effectiveness of the intervention

RESULT

Table 1 shows that the experimental group had a higher proportion of women aged 41–50 years, whereas the control group was predominantly aged 31–40 years. Most women in both groups had a normal BMI. Homemakers predominated in the experimental group, while coolies were predominant in the control group.

Secondary education was most common in the experimental group, whereas undergraduate education predominated in the control group. Most women in both groups had a monthly family income below ₹20,000. Regular menstrual cycles and non-use of contraception were predominant in both groups.

Significant differences were observed in number of children, menstrual cycle, contraception, and co-morbid diseases, whereas marital status showed no significant difference between the groups.

Table 2 shows that in the pre-test, inadequate knowledge was predominant in the experimental group (59.0%), while the control group had equal proportions of inadequate and moderately adequate knowledge (50.0% each). No women had adequate knowledge in either group. Regarding leucorrhoea, most women had mild leucorrhoea in both the experimental (76.0%) and control (83.0%) groups, while moderate leucorrhoea was observed in 24.0% and 17.0%, respectively. No women had severe leucorrhoea in either.

Table 3 shows that the mean knowledge score increased from 6.80 ± 2.53 in the pre-test to 15.23 ± 3.38 in the post-test, with a mean difference of 8.43. The paired t test revealed a statistically significant improvement in knowledge ($t=26.597$, $p=0.0001$). Similarly, the mean leucorrhoea score decreased from 7.24 ± 1.97 in the pre-test to 2.99 ± 1.92 in the post-test, with a mean difference of 4.25. The difference was statistically significant ($t=25.148$, $p=0.0001$), indicating that the intervention was effective in improving knowledge regarding leucorrhoea management and reducing the level of leucorrhoea among women in the experimental group.

Table 4 shows that there was no significant difference between the experimental and control groups in the pre-test knowledge scores ($t=1.934$, $p=0.055$) or pre-test leucorrhoea scores ($t=1.757$, $p=0.080$). In the post-test, the experimental group had a significantly higher mean knowledge score (15.23 ± 3.38) than the control group (7.47 ± 2.20), with a mean difference of 7.76 ($t=19.191$, $p=0.0001$). Similarly, the experimental group had a significantly lower mean leucorrhoea score (2.99 ± 1.92) compared with the control group (6.71 ± 1.90), with a mean difference of 3.72 ($t=13.722$, $p=0.0001$). These findings indicate significant effectiveness of the interventions in improving knowledge and reducing the level of leucorrhoea.

Table 5 shows a significant negative correlation between knowledge regarding management of leucorrhoea and the level of leucorrhoea among women in the experimental group ($r = -0.148$, $p = 0.001$). This indicates that higher knowledge regarding leucorrhoea management was associated with a lower level of leucorrhoea.

The table 6 indicates that, in the experimental group, marital status ($\chi^2 = 13.482$, $p = 0.036$) and use of contraception ($\chi^2 = 6.058$, $p = 0.048$) were significantly associated with the post-test level of knowledge regarding the management of leucorrhoea. In addition, history of co-morbid disease was significantly associated with the post-test level of leucorrhoea ($\chi^2 = 3.877$, $p = 0.049$). All three associations were statistically significant at the $p < 0.05$ level. No statistically significant associations were observed among the selected demographic variables in the control group.

DISCUSSION

The study findings demonstrated that the Video-Assisted Teaching Module (VATM) combined with coriander seed soaking water was effective in improving knowledge regarding leucorrhoea management and reducing the level of leucorrhoea among women in the experimental group. Following the intervention, there was a marked improvement in the level of knowledge, with most women attaining an adequate level of knowledge compared with the pre-test findings, where inadequate knowledge was predominant. Similarly, the level of leucorrhoea showed considerable improvement, with most women demonstrating

with most women demonstrating mild or normal levels after the intervention and no women remaining in the moderate category.

Comparison between the experimental and control groups showed that there was no significant difference at baseline, indicating that the groups were comparable before the intervention. However, in the post-test, the experimental group demonstrated significantly better knowledge and a lower level of leucorrhoea than the control group. The significant improvement observed after the intervention indicates that the VATM was effective in enhancing knowledge, while ingestion of coriander seed soaking water contributed to reducing the level of leucorrhoea.

The study also revealed a significant negative correlation between knowledge regarding leucorrhoea management and the level of leucorrhoea in the experimental group, indicating that better knowledge was associated with a lower level of leucorrhoea. Overall, the findings support the effectiveness of the combined intervention in improving knowledge and reducing leucorrhoea among women.

CONCLUSION

The study concluded that the Video-Assisted Teaching Module combined with ingestion of coriander seed soaking water was effective in improving knowledge regarding the management of leucorrhoea and reducing the level of leucorrhoea among women in the experimental group. The significant improvement observed after the intervention, compared with the control group, indicates that the intervention was effective and feasible for promoting better awareness and management of leucorrhoea among women. The findings also suggest that improved knowledge was associated with a reduction in the level of leucorrhoea.

RECOMMENDATION

The study recommends that the research may be replicated in different settings to enhance the generalizability of the findings. Similar studies may also be conducted using different sampling techniques or research designs to strengthen the evidence. Further, the study may be replicated among adolescent girls to assess the effectiveness of the intervention in improving knowledge and managing leucorrhoea at an early stage.

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Table 1: Demographic variables of the nursing students. N= 125

Demographic Variable	Experimental Group n (%)	Control Group n (%)
Age (years)		
21–30	27 (27.0)	30 (30.0)
31–40	27 (27.0)	31 (31.0)
41–50	32 (32.0)	19 (19.0)
51–60	14 (14.0)	20 (20.0)
BMI (kg/m²)		
<18.5	1 (1.0)	3 (3.0)
18.5–24.9	45 (45.0)	53 (53.0)
25.0–29.9	35 (35.0)	20 (20.0)
>29.9	19 (19.0)	24 (24.0)
Occupation		
Homemaker	50 (50.0)	37 (37.0)
Coolie	24 (24.0)	59 (59.0)
Private job	24 (24.0)	4 (4.0)
Government job	2 (2.0)	0 (0.0)
Educational status		
No formal education	35 (35.0)	23 (23.0)
Secondary education	41 (41.0)	23 (23.0)
Undergraduate	23 (23.0)	54 (54.0)
Postgraduate	1 (1.0)	0 (0.0)
Family income/month		
< ₹20,000	49 (49.0)	88 (88.0)
₹20,000–60,000	39 (39.0)	10 (10.0)
₹60,000–1 lakh	10 (10.0)	2 (2.0)
> ₹1 lakh	2 (2.0)	0 (0.0)
Marital status		
Widow	20 (20.0)	14 (14.0)
Divorced	13 (13.0)	13 (13.0)
Married	67 (67.0)	73 (73.0)
Number of children		
1	30 (30.0)	19 (19.0)
2	59 (59.0)	33 (33.0)
3	6 (6.0)	41 (41.0)
>3	5 (5.0)	7 (7.0)
Menstrual cycle		
Regular	74 (74.0)	89 (89.0)
Irregular	26 (26.0)	11 (11.0)

≤3 days	19 (19.0)	6 (6.0)
>3 days	7 (7.0)	5 (5.0)
Use of contraception		
Yes	19 (19.0)	17 (17.0)
No	81 (81.0)	83 (83.0)
Type of contraception		
Antara	4 (4.0)	4 (4.0)
Copper-T	13 (13.0)	10 (10.0)
Pill	1 (1.0)	1 (1.0)
Tubectomy	1 (1.0)	2 (2.0)
History of co-morbid disease		
Yes	34 (34.0)	10 (10.0)
No	66 (66.0)	90 (90.0)
Type of co-morbid disease		
Diabetes mellitus	10 (10.0)	4 (4.0)
Hypertension	17 (17.0)	2 (2.0)
Diabetes + Hypertension	3 (3.0)	2 (2.0)
Thyroid	4 (4.0)	2 (2.0)

Table 2. Level of Knowledge and Level of Leucorrhoea among Women in the Experimental and Control Groups (N=200)

Variable	Category	Experimental Group (n=100) n (%)	Control Group (n=100) n (%)
Level of Knowledge	Inadequate (1–7)	59 (59.0)	50 (50.0)
	Moderately adequate (8–13)	41 (41.0)	50 (50.0)
	Adequate (14–30)	0 (0.0)	0 (0.0)
Level of Leucorrhoea	Mild (1–8)	76 (76.0)	83 (83.0)
	Moderate (9–16)	24 (24.0)	17 (17.0)
	Severe (17–24)	0 (0.0)	0 (0.0)

Table 3: Effectiveness of the Intervention in the Experimental and Control Group (n=200)

Variable	Group	Pre-test Mean ± SD	Post-test Mean ± SD	Mean Differ- ence	Paired <i>t</i>	<i>p</i> value
Knowledge regard- ing management of leucorrhoea	Experimental	6.80 ± 2.53	15.23 ± 3.38	8.43	26.597	0.0001**
	Control	7.44 ± 2.12	7.47 ± 2.20	0.03		
Level of leucorrhoea	Experimental	7.24 ± 1.97	2.99 ± 1.92	4.25	25.148	0.0001***
	Control	6.76 ± 1.89	6.71 ± 1.90	0.05		

Table 4: Effectiveness of the Interventions on Knowledge and Level of Leucorrhoea between groups. N=200

Variable	Assessment	Experimental Group Mean $\pm$ SD	Control Group Mean $\pm$ SD	Mean Difference	Independent <i>t</i> test, <i>p</i> value
Knowledge	Pre-test	6.80 $\pm$ 2.53	7.44 $\pm$ 2.12	0.64	<i>t</i> =1.934, <i>p</i> =0.055, NS
	Post-test	15.23 $\pm$ 3.38	7.47 $\pm$ 2.20	7.76	<i>t</i> =19.191, <i>p</i> =0.0001, S*
Level of leucorrhoea	Pre-test	7.24 $\pm$ 1.97	6.76 $\pm$ 1.89	0.48	<i>t</i> =1.757, <i>p</i> =0.080, NS
	Post-test	2.99 $\pm$ 1.92	6.71 $\pm$ 1.90	3.72	<i>t</i> =13.722, <i>p</i> =0.0001, S*

Table 5: Associations of Post-Test Outcomes with Selected Demographic Variables. N=200

Outcome	Group	Significant Demographic Variable	χ^2	df	<i>p</i> value
Post-test knowledge regarding management of leucorrhoea	Experimental	Marital status	13.482	6	0.036
	Experimental	Use of contraception	6.058	2	0.048
Post-test level of leucorrhoea	Experimental	History of co-morbid disease	3.877	1	0.049

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