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A study to evaluate the effectiveness of structured teaching programme on knowledge regarding Prevention and management of vaginal candidiasis among antenatal women in selected hospitals of Bangalore.

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Abstract:

Background: Vulvovaginal candidiasis is an extremely prevalent vaginal fungus infection while pregnant which can result in poor outcomes for the mom as well as the fetus if not treated promptly. **Methods:** The design type of this study was a quantitative evaluative approach. A purposive sampling of 60 antenatal women was done from multispeciality hospital in Bangalore. A structured questionnaire was selected for the collection of data pre and seven days post educational intervention. Data were analyzed using descriptive and inferential statistics. **Results:** Pre-test yielded that 76.7% of respondents had inadequate knowledge while 23.3% of them had moderate adequate knowledge. Post-intervention, all of them (100%) reached adequate knowledge. The overall mean knowledge enhancement was 14.13 ± 3.77 (56.5%), with a statistically significant enhancement. Significant relationships were found between age, religion, educational status, socioeconomic status ($p < 0.05$). **Conclusion:** Intervention provided significant knowledge of these focused, antenatal women on prevention and management of vaginal candidiasis. These pedagogy activities can be integrated into the standard prenatal healthcare to augment health awareness and encourage preventative behaviors.

Key words: Vulvovaginal candidiasis, prevention , management, antenatal women.

INTRODUCTION

Vulvovaginal candidiasis is a prevalent fungal illness affecting the vulva and vagina, and the most common causal organism is Candida albicans. A healthy vaginal microbial balance is normally maintained by Lactobacillus spp. which produce lactic acid and hydrogen peroxide that helps to maintain an acidic environment and prevents fungal growth.

Candida species multiply in circumstances caused by imbalances in the body due to hormonal changes, antibiotics, poor hygiene, diabetes, or a weakened immune system.

Risk of vulvovaginal candidiasis rises significantly during pregnancy due to increased oestrogen and increased glycogen production in vaginal secretions which can increase the growth of fungi. Compared to other infections, it usually presents with non-typical vaginal discharge, pruritis, burning sensation, dysuria and pain of the vulva. These infections can usually be controlled, but if infection is not treated, the mother may become distressed, with harmful effects on her pregnancy.

VVC is a highly prevalent reproductive tract infection, particularly amongst women of fertile years and pregnant women. It is very important to detect, intervene and take preventive measures in time to reduce issues and improve maternal health. It is essential to educate women about risk factors, symptoms, prevention, and the need for timely access to care for minimizing minimizing the effects of this illness.

AIM:

To evaluate the effectiveness of structured teaching programme on knowledge regarding prevention and management of vaginal candidiasis among antenatal women.

METHODOLOGY

An evaluative research was carried out using a quantitative approach. The study was done in one multispecialty hospital in Bangalore with Sixty antenatal women were recruited using non-probability purposive sampling. Women who were willing to participate, available during data collection, and were able to read English, Hindi or Kannada were included.

A structured questionnaire consisting of demographic and knowledge was employed to gather data. The structured teaching programme has been created using literature review and consulting with the experts.

After the pre-test, the programme was provided through lecture with the help of power points and charts. The same questionnaires were used in the post-test which was carried out after 7 days.

Data from the descriptive statistics, paired t-test and chi-square test were used to summarize the demographic characteristics, knowledge score changes and association of knowledge with selected demographic variables respectively.

RESULT

Table 1 presents the baseline characteristics of the 60 antenatal women. Most participants were aged 18–25 years (41.7%), belonged to the Hindu religion (61.7%), and had pre-university education (33.3%). A higher proportion lived in nuclear families (40.0%) and belonged to the middle socioeconomic class (55.0%). More than one-third (36.7%) were in their first pregnancy, while 51.7% were in the first trimester of pregnancy.

The majority were housewives (56.7%). Most participants did not have any medical issues during pregnancy (76.7%), whereas among those with medical conditions, hypertension (35.7%) was the most common. In addition, 63.3% had no previous knowledge of fungal infection, while mass media (45.4%) was the major source of information among those who had prior knowledge.

Table 2 shows that most antenatal women had inadequate knowledge (76.7%) during the pre-test, while 23.3% had moderately adequate knowledge. Following the intervention, all participants (100%) achieved an adequate level of knowledge.

Table 3 indicates improvement in all knowledge domains after the intervention. The highest mean percentage gain was observed in signs and symptoms during pregnancy (58.5%). The overall mean enhancement was 56.5%, with statistically significant improvement across all domains ($p<0.05$).

Table 4 presents that significant associations were observed with age, religion, educational status, socioeconomic status, and employment status ($p<0.05$).

DISCUSSION

The present study demonstrated that the structured teaching programme was effective in improving knowledge regarding the prevention and management of vaginal candidiasis among antenatal women. Before the intervention, 76.7% of participants had inadequate knowledge, whereas after the intervention, all participants (100%) attained an adequate level of knowledge. A significant increase was observed in the overall mean knowledge score ($t = 29.032$, $p < 0.05$).

Improvement was evident across all knowledge domains, with the highest gain in knowledge related to signs and symptoms during pregnancy. Furthermore, age, religion, educational status, socioeconomic status, and employment status showed significant associations with knowledge levels, while type of family, number of pregnancies, gestational age, medical issues during pregnancy, and previous knowledge of fungal infection were not significantly associated. This finding indicates that the educational intervention effectively enhanced knowledge among antenatal women.

CONCLUSION

The intervention markedly enhanced the awareness of pregnant women for the prevention and management of vaginal candidiasis. The post-test knowledge scores were markedly superior than the pre-test scores ($p < 0.05$), indicating the intervention's efficacy. Hence, structured educational programmes are effective in enhancing awareness and promoting preventive practices among antenatal women.

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Table 1: Distribution of Baseline Variables among Antenatal Women (N = 50)

S. No.	Baseline Variable	Category	Frequency (F)	Percentage (%)
1	Age (Years)	18–25 years	25	41.7
		26–32 years	23	38.3
		33–38 years	12	20.0
		39 years and above	0	0.0
2	Religion	Hindu	37	61.7
		Christian	10	16.7
		Muslim	9	15.0
		Others	4	6.7
3	Educational Status	Primary	8	13.3
		Secondary	17	28.3
		Pre-university	20	33.3
		Graduation	15	25.0
4	Type of Family	Nuclear	24	40.0
		Extended	16	26.7
		Joint	18	30.0
		Single parent	2	3.3
5	Socio-economic Status	Upper class	11	18.3
		Middle class	33	55.0
		Lower class	16	26.7
6	Number of Pregnancy	First pregnancy	22	36.7
		Second pregnancy	18	30.0
		Third pregnancy	12	20.0
		Fourth pregnancy	8	13.3
7	Gestational Age	First trimester	31	51.7
		Second trimester	18	30.0
		Third trimester	11	18.3
8	Employment Status	Housewife	34	56.7
		Private employee	12	20.0
		Government employee	6	10.0
		Self-employed	8	13.3
9	Medical Issues During	No	46	76.7
		Yes	14	23.3
		If yes (n = 14): Anemia	2	14.3
		Diabetic	4	28.6
		Hypertension	5	35.7
		Thyroid	3	21.4
10	Previous Knowledge on	No	38	63.3
		Yes	22	36.7
		If yes (n = 22): Friends	4	18.2
		Health personnel	5	22.8
		Mass media	10	45.4
		Others	3	13.6

Table 2. Level of Knowledge Regarding Prevention and Management of Vaginal Candidiasis (N = 60)

Sl. No.	Level of Knowledge	Pre-test	Post-test
1	Inadequate	46 (76.7)	0 (0.0)
2	Moderately Adequate	14 (23.3)	0 (0.0)
3	Adequate	0 (0.0)	60 (100.0)

Table 3: Paired t-test analysis for statistical significance. (N = 60)

Sl.No	Aspects	Max score	Enhancement			t-test value
			Mean	SD	Mean%	
1.	General information	3	1.68	1.651	56.1	20.038*
2.	Risk factors & complications	4	2.20	1.13	55.0	15.054*
3	Sign and symptoms during pregnancy	6	3.51	1.35	58.5	20.043*
4	Diagnosis for vaginal candidi-asis	4	2.33	1.02	58.2	17.727*
5	Treatment for vaginal candidi-asis	4	2.20	1.10	55.0	15.469*
6	Prevention and management	4	2.20	0.93	55.0	18.222*
Overall		25	14.13	3.77	56.5	29.032*

*Significance at $p<0.05$

Table 4: Association between Knowledge and Selected Baseline Variables .(N = 60)

S. No.	Baseline Variable	χ^2 Value (df)	p-value	Significance
1	Age (Years)	16.342 (2)	<0.05	Significant
2	Religion	9.505 (3)	<0.05	Significant
3	Educational Status	9.180 (3)	<0.05	Significant
4	Type of Family	1.033 (3)	>0.05	Not Significant
5	Socio-economic Status	6.635 (2)	<0.05	Significant
6	Number of Pregnancy	5.413 (2)	>0.05	Not Significant
7	Gestational Age	3.371 (2)	>0.05	Not Significant
8	Employment Status	10.237 (3)	<0.05	Significant
9	Medical Issues During Pregnancy	1.565 (1)	>0.05	Not Significant
10	Previous Knowledge of Fungal Infection	0.150 (1)	>0.05	Not Significant

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