



**EFFECTIVENESS OF CORIANDER SEEDS SOAKING WATER ON LEUCORRHEA:  
AN INTERVENTIONAL STUDY**

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**ABSTRACT**

Leucorrhoea is a major gynaecological disorder that impacts women in both aspects, mentally and physically. The coriander seeds, water is used as a non-pharmacological approach to reduce the clinical symptoms of Leucorrhoea. The present study aims to determine the effectiveness of coriander seeds soaking water among women with Leucorrhoea. A total of 30 samples were collected using the purposive sampling technique and women with symptoms of Leucorrhoea were used as samples. The demographic data and clinical variables were collected from the samples, followed by pretest were conducted by using standardized Leucorrhoea assessment scale and numerical itching scale. After a period of intervention with coriander seeds water. Post-test was done by using the same Leucorrhoea assessment scale. The study depicts that the pretest mean score of symptoms was 21.53 with a standard deviation of 5.34 and the posttest mean score of symptoms was 17.83 with a standard deviation of 3.96. The calculated paired 't' test value of  $t = 3.022$  was found to be statistically significant at  $p < 0.01$  level. It also depicts that the pretest mean score of itching was 6.23 with a standard deviation of 2.61 and the posttest mean score of symptoms was 4.27 with a standard deviation of 1.74. The calculated paired 't' test value of  $t = 3.079$  was found to be statistically significant at  $p < 0.01$  level. This infers that there was significant improvement was observed that coriander seeds, water on Leucorrhoea were found to be effective in reducing the level of symptoms and itching among women with Leucorrhoea.

**Keywords:** Leucorrhoea, coriander seeds, women, itching

**INTRODUCTION**

Leucorrhoea is the major problem encountered in gynaecological practice. Physiological changes are one of the common causes for Leucorrhoea, followed by vaginal infection due to bacteria, fungi and parasites.<sup>1</sup> The physiological Leucorrhoea is associated with various phases of the menstrual cycle. It is due to changes in the normal bacterial flora, vaginal epithelium and its secretions that predispose to Leucorrhoea. When it turns into a pathological condition, it ends with backache, itching and burning sensation of the vulva, poor appetite, discomfort, general weakness, pain in both legs, etc.,<sup>2</sup> In India, vaginal discharge is one of the most common symptoms reported by females. Leucorrhoea does not cause mortality or morbidity in susceptible women, but it can lead to a great extent of mental stress, or sometimes the fear of failure to conceive. It may vary from the age group of 19 to 47 years. The vaginal discharge was noted in 61% of women who belong to low socio-economic and 24% belong to the high-socio economy.<sup>3</sup> Reproductive tract infection forms one of the major diseases in developing countries and it is due to a combination of infections which includes sexually transmitted infection, endogenous and iatrogenic thus end up with abnormal vaginal discharge.<sup>4</sup> The sexual and reproductive health states 2011, India's population was 1.21 billion and its decadal growth rate had declined and fertility rate was 2.2 and reached at 18 out of 29 states.<sup>5</sup> Leucorrhoea can also be caused by trichomonas vaginalis, candida albicans or mixed bacterial infections, senile vaginitis and cervical dysplasia.<sup>6</sup> Leucorrhoea is a white and thick vaginal discharge, which is accompanied by the natural defence mechanism to maintain chemical balance, lubricate the vagina as well as the flexibility of vaginal tissues. when the discharge is associated with a foul smell thus results in low self-esteem.<sup>7</sup> Indian system of medicine plays a vital role in the reproductive

child health programme, which was implemented by the ministry of health and family welfare.<sup>8</sup> According to the ministry of health, 90% of women are affected by gynaecological diseases and each year, it is increased by 15 to 25%.<sup>9</sup> Thus this study deals with the effective home remedies for vaginal discharge coriander seeds not only reduces blood glucose level but also have a significant effect on vaginal discharge.<sup>10</sup>

Coriander (*Coriandrum sativum* L.) which belongs to the family Apiaceae (Umbelliferae) is mainly cultivated for its seeds throughout the year (Mhemdi *et al.*, 2011). Coriander is native to Southeastern Europe and is cultivated extensively in India. Coriander is the most useful herb because it has antioxidant properties that remove all toxins out from the body. It kills the microbes which are the main cause of Leucorrhoea. Coriander seeds are loaded with nutrients such as high content of antioxidants, dietary fibre, Vitamin C, B, copper, potassium, manganese, magnesium, calcium, iron and zinc. It also contains moderate amounts of fat and protein. Take a teaspoonful of coriander seeds and boil them in a cup of water. Let it boil until it remains to a half cup. Then strain it and drink it once daily early in the morning on an empty stomach. This white discharge problem is also treated by natural remedies that are effective and offer relief to women. To know these home remedies to treat white discharge and its odour problem. This is one of the natural remedies to treat white discharge with no risk at all. Hence the researcher felt the need of doing this study to find out the effectiveness of coriander seeds soaking water on Leucorrhoea women with the complaints of itching, burning and soreness. This study works as effective home management to console with it and provide them guidelines to prevent and reduce the symptoms of Leucorrhoea with any cause and resolve them as soon as possible.

## MATERIALS AND METHODS

A Quantitative approach, a pre-experimental research design was used to conduct this study in Thirunindravur village in Thiruvallur District. The formal permission is obtained from the principal of Saveetha college of nursing and the Village Leader (Thirunindravur). The purpose of the study was explained to samples and written informed consent was obtained. 30 samples were selected by using the non-probability purposive sampling technique. The criteria for sample selection, women with clinical symptoms of Leucorrhoea, women who are willing to participate in the study without migration. The exclusion criteria, women undergone hysterectomy and under treatment rather than biomedicine etc., The demographic data and clinical variables were collected using a structured questionnaire, and clinical symptoms and level of itching were assessed using Leucorrhoea assessment scale and numerical itching scale. The mild and moderate symptoms of Leucorrhoea women were selected for the study samples. Followed by a period of intervention with coriander for 30 days, the level of symptom and itching was reassessed using the same checklist and itching scale. The data were analyzed using descriptive and inferential statistics. The sample characteristics were described using frequency and percentage. The paired 't' test was used to assess the effectiveness of coriander seed soaking water on Leucorrhoea. The Chi-square test was used to associate the post-test level of clinical symptoms and itching with selected demographic variables.

### Description of intervention

- A coriander seeds soaked in a glass of water left for the night
- The next day morning, the seeds were drained off and placed on a kitchen towel.
- The water in which coriander seeds was soaked is kept aside
- The seeds were roasted in low flame and grind as a powder form (10 gm of coriander seeds used to be soaked in 100 ml of water) and the powder is mixed with the water that was used for soaking.
- Daily morning 100 ml of water with coriander seed powder to be consumed on empty stomach, according to the need (salt or honey) may be added (optional).
- If the samples have health issues like diabetes or hypertension consumption of salt or honey is restricted.

## RESULTS

Out of 30 samples, most of the women, 12(40%) were aged between 20 – 30 years, 20(66.7%) were married, 23(76.6%) were Hindus, 13(43.3%) had primary education, 14(46.7%) were homemakers, 15(50%) had family income of Rs.3001-5000 per month, 29(96.7%) belonged to a nuclear family, 21(70%) were non-vegetarian, 28(90%) had no habits.

### Frequency and percentage distribution of clinical symptoms of women with leucorrhoea

The results show that 24(80%) were aged between 12–14 years at the time of menarche and 2(6.7%) had at 15-17 years, 15(50%) had regular and 15(50%) irregular menstrual flow, 20(66.7%) were aged < 18 years the time of marriage, 27(90%) had practised permanent sterilization and 3(10.0%) of them had an intrauterine device, 17(56.7%) had no abortions and 1(3.3%) had two abortions, 19(63.3%) were aged between 46-50 years at the time of menopause and 11(36.7%) of them had 51-55 years, 24(80%) had gynaecological problems and 1(3.3% of them had respiratory and gynaecological problems 26(96.6%) were under biomedicine

treatment and 2(6.7%) were under Siddha and Ayurvedic treatment. (Figure 1)

### Assessment of level of symptoms and itching among women with leucorrhoea

The results interrupt that, the level of symptoms in the pretest. Out of 30 women, 16(53.33%) had moderate symptoms, 8(26.67%) had severe symptoms and 6 (20%) had mild symptoms. Whereas in the post-test, 18(60%) had moderate symptoms and 12(40%) had mild symptoms and none of them was severe. The level of itching in the pre-test shows that 17(56.67%) had severe itching, 7(23.33%) had moderate itching and 6(20%) had mild itching. Whereas in the post-test, 14(46.67%) had moderate itching, 12(40%) had mild itching and 4(13.33%) had severe itching among women with Leucorrhoea.

Table 1 depicts that the pretest mean score of symptoms was 21.53 with a standard deviation of 5.34 and the posttest means a score of symptoms was 17.83 with a standard deviation of 3.96. The calculated paired 't' test value of  $t = 3.022$  was found to be statistically significant at  $p < 0.01$  level. It also depicts that the pretest mean score of itching was 6.23 with a standard deviation of 2.61 and the posttest mean score of symptoms was 4.27 with a standard deviation of 1.74. The calculated paired 't' test value of  $t = 3.079$  was found to be statistically significant at  $p < 0.01$  level. (Figure 2) This infers that there was significant improvement was observed that coriander seeds, water on Leucorrhoea were found to be effective in reducing the level of symptoms and itching among women with Leucorrhoea.

### Association of the post-test level of symptoms and itching with selected demographic variables

The present study results show's that the demographic variable marital status had shown a statistically significant association with the level of symptoms among women with Leucorrhoea at  $p < 0.05$  level and the other demographic variables had not shown a statistically significant association with the level of symptoms among women with Leucorrhoea.

### Association of the post-test level of symptoms and itching with selected clinical variables

The present study result show's that none of the clinical variables had shown a statistically significant association with the level of itching among women with Leucorrhoea.

## DISCUSSION

Leucorrhoea is increased vaginal discharge produced by the cervical glands and vasocongestion of the pelvic area. If the discharge causes itching and irritation, or if there is a foul odour these are the signs of infection. Douching should be avoided to regret further infection and for maintaining the stability of vaginal flora. The vaginal discharge is also made of vaginal epithelial cells that may be white or cloudy occurs due to the hyperplasia of the vaginal mucosa and increased production of mucus by the endocervical glands. The increased acidity leads to the growth of many organisms. The current research finding observed that Among 30 samples, most of the women, 12(40%) were aged between 20-30 years, 21(70%) were non-vegetarian, 28(90%) had no habits, 24(80%) were aged between 12-14 years at the time of menarche, 15(50%) had regular and irregular menstrual flow, 20(66.7%) were aged < 18 years the time of marriage, 27(90%) had practised permanent sterilization, 17(56.7%) had no abortions, 19(63.3%) were aged between 46-50 years at the time of menopause, 24(80%) had gynaecological problems and

26(96.6%) were under biomedicine treatment. The present study supported by Jaspreet Kaur, *et. al* (2014), conducted a study on perception and knowledge about leucorrhea in a slum dwelling South Asian community on the journal of family and reproductive health. This article states the result of socio-demographic variables, 23.0% were in the age group of 25-29 years, 22.5% were in the age group of 30-34 years, and 20% were 20-24 years, 32.7% were on 40-44 years and 2.8 were on the age group of 45-49 years. About 70% of them were perusing government jobs and 30% were in public sectors. Almost universally 97% were aware of leucorrhea and the level of perception is different and varied with socio-demographic variables.<sup>11</sup> The results interrupts that, the level of symptoms in the pretest was 16(53.33%) had moderate symptoms, 8(26.67%) had severe symptoms and 6(20%) had mild symptoms. Whereas in the post-test, 18(60%) had moderate symptoms and 12(40%) had mild symptoms and none of them was severe. The level of itching in-test shows that 1(56.67%) had severe itching, 7(23.33%) had moderate itching and 6(20%) had mild itching. Whereas in the post-test, 14(46.67%) had moderate itching, 12(40%) had mild itching and 4(13.33%) had severe itching among women with leucorrhoea. The present study is supported by Manjot Kaur *et. al* (2017) conducted a study and published them in an Indian journal with a topic on the pre-experimental study to assess the effectiveness of coriander seeds water on leucorrhea among the women [15-45] in selected reside community Ludhiana. 60 samples have been used and estimated through post-test. This study states 55% were in

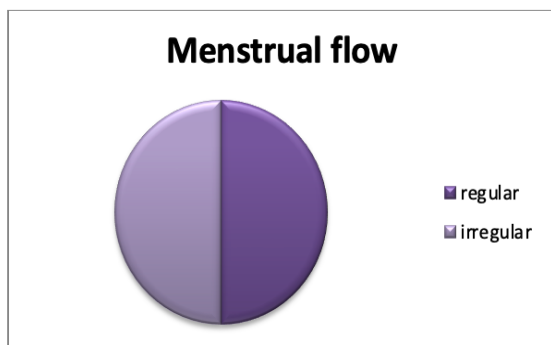
mild leucorrhoea and it is estimated 56.6% in the posttest. 455 were of moderate cases in pretest and gradually decreased to 43.3% in the post-test.<sup>12</sup> Table 1 depicts that the pretest mean score of symptoms was 21.53 with a standard deviation of 5.34 and the post-test mean score of symptoms was 17.83 with a standard deviation of 3.96. The calculated paired 't' test value of  $t = 3.022$  was found to be statistically significant at  $p < 0.01$  level. It also depicts that the pretest mean score of itching was 6.23 with a standard deviation of 2.61 and the post-test mean score of symptoms was 4.27 with a standard deviation of 1.74. The calculated paired 't' test value of  $t = 3.079$  was found to be statistically significant at  $p < 0.01$  level. This study revealed that oaked coriander seeds, water has a significant effect on the reduction of vaginal discharge.

The present study is also supported by Nasir A, Ibrahiim, who conducted a study to assess the effect of coriander seeds on reproductive parameters on female mice and resulted that, their significant reduction in the size of the ovary in the female mice after consumption of coriander seeds water.<sup>13</sup> Karanvir Singh suggested the best home remedies for vaginal discharge in Chandigarh Ayurvedic and Panchakarma Centre where he suggested taking coriander seeds powder to control the level of vaginal discharge.<sup>14</sup> Effective home remedies for Leucorrhoea, consumption of soaked water of coriander seeds overnight, can reduce the symptoms of Leucorrhoea.<sup>15</sup>

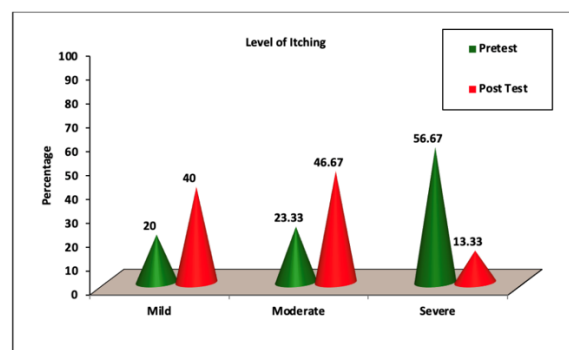
**Table 1: Comparison of pretest and posttest level of symptoms and itching among women with Leucorrhoea**

Variables	Knowledge	Mean	standard Deviation	Paired 't' test Value
Symptoms	Pretest	21.53	5.34	$t = 3.022$ $p = 0.005$ S**
	Post Test	17.83	3.96	
Itching	Pretest	6.23	2.61	$t = 3.079$ $p = 0.005$ S**
	Post Test	4.27	1.74	

N = 30, \*\*p < 0.01, S – Significant



**Figure 1: Frequency and percentage distribution of menstrual flow**



**Figure 2: Assessment of the level of symptoms and itching among women with leucorrhoea**

**CONCLUSION**

From the results of the present study, it was concluded that coriander seeds, water has a significant effect on the reduction of symptoms of Leucorrhoea. Thus, this intervention can be used as an effective home remedy, which is cost-effective and easily affordable.

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