

The Effect of Education on Knowledge, Attitude and Practice of Patients with Vaginitis

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Abstract: Vaginitis is said to be an inflammation of the vagina that is mostly coming with symptoms such itching, burning, malodorous discharge, unusual redness and edema, dyspareunia and leucorrhoea and it is one of the most common reasons for medical referring of women. The purpose of this study was to evaluate the effect of education on knowledge, attitude and practice of patients with vaginitis. In this interventional study, 63 women referring to Shahid Rajaei health center of Kermanshah, Iran (who filled out the questionnaires completely) were randomly divided into intervention and control groups. Our data collection tool was a questionnaire regarding demographic characteristics, knowledge, attitude and practice of vaginitis that was completed through interview. Information was collected through pre-test and post-test with the time interval of 2 months after intervention. The intervention was considered as an individual training session for 45 minutes. Informations were analyzed with SPSS using independent t-tests, chi-square and Fisher's exact test. The findings of the current study indicated a significant increase in mean score of knowledge, attitude and practice of the patients in the intervention group. This study suggests that education for women in this low social class is better to be individually and finally that the planners and health authorities should provide programs and teaching methods appropriate to each group. In addition, if the hygienic pads for low-income areas are provided in cheaper prices, we can hope to reduce the rate of infection in women.

Key words: Vaginitis • Training Program • Knowledge • Attitude • Behavior

INTRODUCTION

Vaginitis is the vaginal infection that is commonly along with symptoms such itching, burning, malodorous

discharge, unusual redness and edema, dyspareunia and leucorrhoea which are accompanied by three main factors of *Candida*, *Trichomonas vaginalis* and bacteria [1]. Vaginitis is the most common cause of referrals to

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gynecology and obstetrics, leading 10 million women to visit a doctor annually [2]. The incidence of vaginal candidiasis is growing in many developing countries and research in Iran, shows similar images of candidiasis vaginitis in women [3] as it is the world's leading cause of disability in many women over the age of reproduction [4]. Approximately, 75% of the women experience candidiasis vaginitis at least once in their life and nearly 45% of them suffer two or several times within a year. In America candidiasis vaginitis occurs approximately 13 million in a year and its incidence has increased over the last decade in America and Europe [5]. Early detection and treatment of vaginitis is important, because lack of timely and appropriate treatment of these infections can cause serious problems such as pelvic inflammatory diseases and chronic pain, infertility, premature birth and risk of HIV infection [6, 7]. According to WHO, about 172 million new cases of trichomoniasis are reported each year in the world [8]. A study in Peru showed that 77% of women who have been studied were suffering from vaginitis [9]. A few studies in Iran especially in the community have been performed in the ways of vaginitis. A study in 1380 in Ardebil showed that according to the clinical examination, the prevalence of bacterial vaginosis, trichomoniasis and *Candida* was 13.4, 3.4 and 10.3% respectively [10] and in Shokouhi *et al.* [11], 20.7% of the patients had candidiasis. Education in health is one of the key components of primary health care and one of the most vital health care requirements for women that must be considered much more in the primary health care system, particularly maternal and child health [12]. In addition to treatment, for controlling *Candida* infections, it is necessary to have education and counseling in sexual behavior and reproductive health [13]. Pathogen detection of vaginitis, can be available through evaluating the complaints of patients, physical examination and laboratory methods, but according to the WHO, these tests are not readily available in developing countries or they are not economically possible to do. In addition, restrictions on access to health services, low levels of awareness and cultural barriers are the reasons of delayed treatment [14]. Cultural barriers and vaginal examination difficulties in many cases cause women not to refer and sometimes the treatments are made with regard to the complaints. In Iran there have not been any population based studies in relation to the education of people with vaginitis. Therefore, this study aimed to determine the effect of education on knowledge, attitude and behavior of

vaginitis patients and it was hoped that the results are considered by responsible people in order to assess the educational services in health centers and to provide better services.

MATERIALS AND METHODS

This study was performed in an interventional manner on patients referring to Shahid Rajaei health center of Kermanshah in 1392. 70 participants were randomly selected. The criterion for entering the study was having vaginitis and the criterion for quitting was unwillingness to continue participation in the study. The data collection tool was an anonymous and coded questionnaire which was divided in two parts including demographic information and questions about the assessment of knowledge structure (14 questions), attitude (8 questions) and patients' performances (10 questions). To scientifically validate the questionnaire, a content validity was used and to determine the reliability, the questionnaire was completed by 15 participants in the clinic (except patients in the study) and the Cronbach's alpha coefficient for awareness was 0.90, for attitude was 0.72 and for the performance it was 0.79. Women under study were divided randomly into two groups of intervention and control. The pre-test questionnaire was completed by the researcher during the interview. The educational program consists of vaginitis definition, cause, types, methods of detection and treatment, complications and the importance of controlling were presented for the intervention group of patients with vaginitis. The curriculum includes a 45-minute individual training session. The patients were also provided educational pamphlets. The site was the training class in Shahid Rajaei clinic. 2 months after classes, post-test questionnaires was completed by the researcher for patients in the intervention and control groups. According to unwillingness of some people to participate in the post-test, finally 63 of them filled out the questionnaires completely. Collected Data were analyzed using SPSS software and applying Kolmogorov-Smirnov test, independent t-test, chi-square and Fisher's exact test. For the purpose of the research ethics at the starting point, its goal and confidentiality were explained to the patients. They enrolled with full satisfaction. Furthermore, although the control group was not under the educational intervention, after completing the test, necessary information about their disease was informed to them.

RESULTS

Two groups of intervention (29 patients) and control group (34 patients) were similar in terms of educational level, occupation and marital status (Table 1). In terms of age, the mean age of intervention group was 31.24 ± 10.05 and for the control group was 26 ± 7.34 years.

In terms of weight, the mean weight was 63.2 ± 10.1 in intervention group and 62.9 ± 15.3 for control group and we did not have a significant difference between the two groups ($p=0.935$). There was no significant statistical difference corresponding to the scores of knowledge, attitude and practice of vaginitis disease in both control and intervention groups before training. But after the intervention, these scores became more in the intervention group than the control group and a significant difference was observed. The scores for knowledge and attitude of patients in intervention group after the training had a significant difference to its previous status ($p<0.001$) and of course this increase was observed in control group too. Also, the performance of the intervention group showed a significant increase compared to its previous status ($p=0.002$), while the control group showed no significant difference before and after intervention (Table 2).

DISCUSSION AND CONCLUSIONS

In this study, knowledge scores between the intervention and control groups compared to each other toward vaginitis had no significant difference before and after training and after intervention, the scores of intervention group became more than control group and the difference became significant. Majlesi *et al.* [15], also in their study-the effect of health education on knowledge, attitude and performance of women of reproductive age with fungal vaginitis demonstrated that the education has an increasing effect on knowledge. Since the purpose of this study was at a low level in terms of education and social status and it was hard for them to gather and present, training was conducted individually in the clinic and this caused increasing in patients' level of knowledge.

Tabeshian and Farah [16] studied the effect of education of the Pap Smear test on teachers of the schools in Esfahan and showed that the mean scores of knowledge of the women teachers after the program was increased, indicating a significant effect on the level of awareness in women's education. Another important variable in healthy behavior is people's attitude or belief.

Table 1: Distribution of demographic profiles in two groups of intervention and control

	Control Group		Intervention Group		P-value
	N	%	N	%	
Education					
Uneducated	1	2.9	5	17.2	0.219
Primary	12	35.3	8	27.6	
Guidance	14	41.2	8	27.6	
High School or Diploma	7	20.6	7	24.1	
	0	0	1	3.4	
Occupation					
Employed	1	2.9	0	0	0.54
Housekeeper	33	97.1	29	100	
Marital Status					
Single, divorced or deceased spouse	1	2.9	2	6.9	0.440
Married	33	97.1	27	93.1	

Table 2: The scores of knowledge, attitude and performance in both intervention and control groups before and after intervention

	Control Group Mean \pm SD		P-value	Intervention Group Mean \pm SD		P-value
	Before Intervention	After Intervention		Before Intervention	After Intervention	
Knowledge Score	1.46 ± 0.55	1.82 ± 0.48	< 0.001	1.15 ± 0.23	1.8 ± 0.35	< 0.001
Attitude Score	1.31 ± 0.24	1.5 ± 0.33	0.001	1.05 ± 0.11	1.46 ± 0.25	< 0.001
Performance Score	2.73 ± 0.3	2.81 ± 0.27	0.2	2.61 ± 0.22	2.81 ± 0.35	0.002

Researchers believe that having information and knowledge alone is not sufficient to perform self-care behaviors, but the thought and attitude about a disease is an important factor to do or not to do a preventive measure and thoughts lead to behavior and action [17]. In connection with the attitude in this study, there was no significant difference between the intervention and control groups before the intervention, but after training, the attitude in the intervention group had an increase toward the disease. Majlesi *et al.* [15], also examined people's attitudes toward disease in the intervention group and observed that it had a significant increase.

In this study, after education, it was the performance that showed a significant increase compared to its previous status in intervention group, while in control group, this difference was not statistically significant. Dori pour *et al.* [18] in their study evaluated the impact of health education in the first and second level of prevention of infection by *Trichomonas*, *Candida* and vaginal herpes and showed significant increase after the intervention compared to its previous status in relation to health care by women.

Performing this research indicates that education for women of this area who have a low level of education and social class, leads to better results in individual mode and if the necessary trainings are presented in low-income areas and low-cost healthy pads are provided through health centers, because most of the infection in women of the group is due to low level of knowledge and attitude and using fabrics and not applying healthy pads, we hope that the infection rates in women will be reduced soon.

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