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Original article

Intervención educativa gestionada por especialistas en enfermería comunitaria para modificar factores de riesgo de vulvovaginitis en adolescentes

Educational intervention managed by specialists in community nursing to modify risk factors for vulvovaginitis in adolescents

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Resumen

Introducción: En la práctica médica, las infecciones vaginales representan un problema de salud frecuente en nuestro medio.

Objetivo: Valorar la efectividad de una intervención educativa gestionada por especialistas en enfermería comunitaria para modificar factores de riesgo de vulvovaginitis en adolescentes.

Método: Se realizó un estudio cuasiexperimental con adolescentes del consultorio 15 del policlínico de Mataguá, en Cuba. La población de estudio estuvo constituida por 48 adolescentes. Se analizaron las variables edad, hacinamiento, estudio en escuelas internas, nivel de conocimientos de las adolescentes antes y después de la intervención y forma de aseo de los genitales. Los resultados se organizaron en tablas y gráficos después de su procesamiento.

Resultados: La edad que predominó fue de 12 a 14 años; la mayoría de las adolescentes vivían con hacinamiento y asistían a escuelas internas. Un número elevado manifestó no haber recibido información previa sobre el tema. Antes de la intervención, la mayoría de las adolescentes dormían acompañadas, realizaban de forma incorrecta el lavado de los genitales y desconocían con qué frecuencia debían hacerlo. Después de aplicar la intervención educativa, se elevó el nivel de conocimientos sobre estos aspectos.

Conclusiones: La intervención educativa fue satisfactoria, ya que alcanzó diferencias significativas en el nivel de conocimientos antes y después de la misma. Se recomienda extenderla al resto del universo de estudio y aplicar los procedimientos llevados a cabo en esta investigación a otros adolescentes cuyas necesidades de conocimientos pudieran ser similares.

Palabras clave: Vulvovaginitis; medicina del adolescente; enfermeras especialistas; factores de riesgo

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Abstract

Introduction: In medical practice, vaginal infections represent a frequent health problem in our environment.

Objective: To assess the effectiveness of an educational intervention managed by community nurse specialists to modify risk factors for vulvovaginitis in adolescents.

Methods: A quasi-experimental study was carried out with 48 adolescents from clinic 15 of the Mataguá polyclinic in Cuba. The variables age, overcrowding, study in boarding schools, level of knowledge of the adolescents before and after the intervention, and way of genital hygiene were analyzed. The results were organized in tables and graphs after processing.

Results: The predominant age range was 12 to 14 years; most adolescents lived in overcrowded conditions and attended boarding schools. A high number reported not having received prior information on the subject. Before the intervention, most of the adolescent girls slept in company, did not wash their genitals properly, and did not know how often they should do it. After applying the educational intervention, the level of knowledge on these aspects increased.

Conclusions: The educational intervention was satisfactory since it achieved significant differences in the level of knowledge before and after the intervention. It is recommended that it be extended to the rest of the study universe and that the procedures carried out in this research be applied to other adolescents whose knowledge needs could be similar.

Keywords: Vulvovaginitis; adolescent medicine; specialist nurses; risk factors.

Introduction

In medical practice, vaginal infections represent a frequent health problem, with 95% of patients presenting for consultation due to vaginal discharge.[1,2]

The vaginal ecosystem is a complex system of microorganisms interacting with host factors that maintain this balance. Therefore, it is important to know which factors control the delicate balance of the vaginal ecosystem and which can disrupt it.[3-5]

The term vulvovaginitis includes any inflammatory process affecting the vulva or vagina, usually accompanied by vaginal discharge[6,7]. Nonspecific vulvovaginitis or vulvovaginitis due to mixed bacterial flora is undoubtedly the most frequent in prepubertal girls.[8,9]

In some countries, there have been changes in infection patterns as a result of changing sexual behaviors. In the United States alone, 4 to 8 million cases of Gardnerella are reported each year.[10] In Cuba, it is an infection that is diagnosed in 5 to 15 % of women attending gynecology consultations.[11]

In the last three years, a total of 1,083 adolescents were seen at the provincial

infant and adolescent gynecology office; vulvovaginitis was the leading cause in adolescents aged 12 to 19 years.

Vulvovaginal irritation is caused by the absence of labial fat pads and pubic hair protecting the external genitalia. The labia minora are opened when the girl squats and the tissues inside the hymenal ring are exposed; in addition, the proximity of the anal orifice to the vagina allows the transfer of fecal bacteria to the vulvovaginal area. Likewise, masturbation may be a contributing factor.[12,13]

Vaginal sepsis in adolescents has increased its incidence in the health area of the Mataguá polyclinic in recent years, so it was decided to conduct this study to assess the effectiveness of an educational intervention managed by community nurse specialists to modify risk factors for vulvovaginitis in adolescents.

Method

A quasi-experimental study was conducted during the year 2020, with the participation of adolescents between 12 and 19 years of age from the Family Medical Clinic - 15 (CMF-15) of the Mataguá polyclinic, belonging to the municipality of Manicaragua, in Cuba. The study population consisted of 48 adolescents; it was not necessary to apply sampling since we worked with 100% of those involved belonging to the aforementioned health area. Inclusion, exclusion, and exit criteria were established, which are described below:

- **Inclusion criteria.** Adolescents who gave consent to participate in the study and who received approval from their legal guardians.
- **Exclusion criteria.** Failure to complete the data collection instruments.
- **Exit criteria.** Failure to participate in all of the work sessions held.

The research was conducted with the prior request for informed consent from all participants and their legal guardians. In addition, the research project was evaluated and received the approval of the institution's ethics committee. Likewise, the present manuscript received the consent of the scientific board to be published.

The general data of the participants were obtained through a form that was applied before the intervention, through which information was collected regarding age, characteristics of the home, and the school they attended. Later, to determine the level of knowledge of the adolescents regarding the presence of vulvovaginitis, a ten-question questionnaire was applied, including six open and four closed questions. This was validated by its previous application in a sample similar to that of the study.

Based on the responses and the theoretical cores detected as deficient, an educational intervention was designed. The methodology used was mainly based on the following educational techniques: my name, dramatization, group dynamics, video debates, and practical demonstrations. For the execution of the activities, two groups of 24 adolescents were organized; the selection of the members of each group was done randomly by listing the names in alphabetical order. Once the groups were formed, 12 work sessions were planned and carried out for six months (two sessions per month) in the social circle of the same village, on alternate Saturdays, with a duration of 50

minutes each. The content of this strategy was evaluated before its application by 15 experts using Barraza's method.

Once the strategy had been implemented, the questionnaire was applied again, which made it possible to evaluate the level of knowledge of the adolescents concerning the topic in question. The assessment of the effectiveness of the educational intervention applied was carried out three and six months later. The data were computed and processed using the SPSS 15.0 statistical package for Windows, by calculating absolute and relative frequencies, as well as percentages.

In addition, for a better understanding of the information, it was presented in tables and statistical graphs. For the analysis and interpretation of the results, percentage analysis was used, and nonparametric statistical tests such as chi-square of goodness of fit for difference of proportions and McNemar were applied to determine changes in respondents' answers before and after the educational intervention. Test statistics (x2) and their associated significance (p) were determined taking the following as criteria:

p > 0.05: No significant difference
p < 0.05: Significant differences exist
p < 0.01: Highly significant differences exist

Since we were dealing with two paired samples (the individual seen as his or her control before and after the intervention) and quantitative response variables, we used the Wilcoxon non-perimetric test to determine significant differences and, therefore, whether the intervention had an effect.

Results

The predominant age group in the sample was 12-14 years old with 25 adolescents, representing 52.10% (Table 1).

Table 1. Distribution of CMF-15 adolescent girls by age group

Age group	No.	%
12-14 years	25	52.10
15-17 years	14	29.20
18-19 years old	9	18.70
Total	**48**	**100**
	$X^2 = 8.37$	p = 0.015

Source: Survey

When the presence of overcrowding was analyzed among the CMF-15 adolescent girls in the initial survey, it was found in 39 of them (81.30 %).

Table 2 describes with whom the adolescent girl slept concerning the number of bedrooms in the house, before and after the educational intervention. A total of 81.30 % of the adolescents lived in a bedroom with more people. After the educational intervention, this behavior was modified in 37 adolescents (77%), while 11 (23%) continued with the same behavior.

Table 2. Distribution of adolescent girls according to who they slept with before and after the educational intervention

Who does the teenager sleep with?	Before		After	
	No.	%	No.	%
Alone	9	18.7	37	77
Accompanied	39	81.3	11	23
Total	**48**	**100**	**48**	**100**
			$X^2 = 31.0$	p = 0.000

Source: Survey

Table 3 shows the links with in-house: 42 of the adolescents (87%) attended institutions of this type at the time of the study, and only 6 (12.70%) were not linked to them.

Table 3. Linkage of CMF-15 adolescents to in-house institutions

Enrolled in boarding schools	No.	%
Yes	42	87.50
No	6	12.50
Total	**48**	**100**
	$X^2 = 27.0$	p = 0.000

Source: Survey

The knowledge of the adolescents about the correct hygiene of the genitalia before and after the educational intervention is shown in Table 4, where it is observed that, before the intervention, 33 adolescents, representing 68.70 %, performed it incorrectly, and 15 (31.20 %) performed it correctly. After the intervention, 100 % knew and performed hygiene correctly.

Table 4. Knowledge of CMF-15 adolescent girls about correct genital hygiene

Knowledge about correct genital hygiene	Before		After	
	No.	%	No.	%
Correct	15	31.25	48	100
Incorrect	33	68.75	0	0
Total	**48**	**100**	**48**	**100**
			X2 = 31.0	p = 0.000

Source: Survey

The frequency of genital hygiene was another factor to be evaluated before and after the educational intervention. According to the results obtained, 40 adolescents (83 %) performed genital hygiene with the wrong frequency before the intervention; after the intervention, 100 % managed to perform genital hygiene with the correct frequency.

Concerning the results of the question about having previously received educational talks on the subject of vulvovaginitis, only 5 adolescents, representing 10.40 %, had received some guidance on the subject before the educational intervention.

The effectiveness of the educational intervention to modify risk factors for vulvovaginitis in adolescents was verified by the researchers at the end of the intervention. The intervention was effective in all the adolescents: 3 months after the intervention was implemented, the level of knowledge remained the same in the adolescent population, as it was at 6 months.

Often, overcrowding of the home or disregard for the vulnerability of adolescent girls to vulvovaginal conditions means that they share rooms, and even beds, with adults; this often explains the origin of sepsis due to indirect contact of the genitals of adolescent girls with the normal secretions of adults.[9]

Due to its anatomical characteristics, the genital apparatus is exposed to various diseases, among them[10,11] vulvovaginitis, which has been recognized in recent years as one of the most frequent, so sleeping in the company of others is recorded as an important risk factor that was modifiable when carrying out the educational work, achieving that most of the adolescents slept alone at the end of the intervention.

Another factor that tends to influence the occurrence of vulvovaginitis in adolescents is attendance at boarding institutions, due to the hygienic conditions of the sanitary facilities and the characteristics of the water used, in line with other studies conducted.[13]

Also, the literature consulted suggests that changes in the pH of the vagina due to an imbalance between lactobacilli and microflora, allowing the predominance of pathogenic germs, are conducive to infection. In addition, the vaginal flora is also affected by the action of antibiotics, douching, alkaline secretion during menstruation, alkaline soaps, poorly controlled diabetes, use of oral contraceptives, sexual activity, use of tight-fitting nylon or lycra clothing and poor hygiene habits, which coincides with the data obtained in the study. Therefore, it was possible to improve the level of knowledge of the adolescents on the correct hygiene of the genitals by adequately explaining the anatomophysiological reasons favoring infection, always promoting genital hygiene from front to back, to avoid the dragging of germs that are common from the anal region to the vulva.[7]

Some authors state that excessive personal hygiene increases the frequency of sepsis; others affirm that in adolescents these rules are not followed. We found significant differences between both stages of the research, which coincides with other works reviewed.[8,10]

The adolescents' lack of information on the subject of vulvovaginitis risk factors was due to scheduling problems, since often the time established by the health personnel in the area did not coincide with the adolescents' available schedule; other times due to lack of observance because they did not feel threatened by this entity in their family environment or because they were unaware of the implications that this could have on their present and future health. Our criteria coincided with those put forward by other authors.[12]

Conclusions

The educational intervention managed by community nursing specialists aimed at modifying risk factors for vulvovaginitis in

adolescents at the Family Medical Clinic 15 in Mataguá, Cuba, was effective in the entire population studied.

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