Revista de Ciencias Médicas de Pinar del Río
ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

ORIGINAL ARTICLE

Proyecto de intervención para reducir la infertilidad asociada a las infecciones de transmisión sexual

Joel Ramón Sánchez Portela[1], **Delia Rosa Díaz Rodríguez**[2]

[1]Artemisa Faculty of Medical Sciences. Comandante Pinares General Teaching Hospital. San Cristóbal. Cuba.
[2]Artemisa Faculty of Medical Sciences. Municipal Department of Hygiene and Epidemiology. San Cristóbal. Cuba.

Citación: Sánchez Portela JR, Díaz Rodríguez DR. Proyecto de intervención para reducir la infertilidad asociada a las infecciones de transmisión sexual. Rev Ciencias Médicas [Internet]. 2026 [citado: fecha de acceso]; 30(2026): e6824. Disponible en: http://revcmpinar.sld.cu/index.php/publicaciones/article/view/6824

Recibido: 02 de julio de 2025
Aceptado: 05 de agosto de 2026
Publicado: 05 de septiembre de 2026

ABSTRACT

Introduction: infertility is a significant health problem associated with declining fertility rates and population aging, with sexually transmitted infections representing one of its main modifiable risk factors.
Objective: to evaluate the effect of an intervention project aimed at reducing infertility associated with sexually transmitted infections in the municipality of San Cristóbal.
Methods: an experimental community intervention study was conducted in the municipality of San Cristóbal between March 2022 and 2025. Participants included individuals aged 15 to 49 years and their partners, randomly assigned to a study group (367 individuals; 105 couples) and a control group (358 individuals; 102 couples). Data collection instruments and a personalized educational strategy were implemented. Knowledge levels, the incidence of infertility and sexually transmitted infections, associated complications, and economic impact after implementation of the intervention project were assessed. Results were analyzed using statistical tests, in accordance with bioethical principles.
Results: infections most closely associated with infertility were gonorrhea, chlamydial infection, and trichomoniasis. Sexually transmitted infections decreased by 62,2 % in the intervention group. The proportion of participants with a high level of knowledge increased from 23,4 % to 74,3 %. In addition, hospital costs were reduced, particularly those related to medication use.
Conclusions: early identification of risk factors, signs, and symptoms of sexually transmitted infections, together with systematic educational actions, contributed to reducing associated infertility, improving population knowledge, and decreasing complications and healthcare-related costs.

Keywords: HEALTH KNOWLEDGE, ATTITUDES, PRACTICE; SEX EDUCATION; SEXUALLY TRANSMITTED DISEASES; RISK FACTORS; INFERTILITY.

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

INTRODUCTION

Population aging is one of the notable changes occurring worldwide. It is estimated that by the year 2050 there will be more adults than children and young people in the world. Estimates made by international organizations consider that, by 2050, approximately 22 % of the world population will be made up of people over 60 years of age, which will increase by 32 % in the case of developing countries.[1]

In Latin America, population aging has been deepening in recent decades and will continue to do so even more in the near future. Specifically in this region, the proportion and absolute number of people aged 60 years or older will increase steadily in all countries in the coming decades.[2] Cuba is a country that is aging at an accelerated rate; this demographic and social reality has constituted an achievement to which science must respond comprehensively. Living to more advanced ages has undoubtedly been good news; but it is also a challenge, since the probabilities of living with dependency have increased.[3]

The decline in birth rates is one of the elements that has contributed to population aging. For decades the world has observed this decrease and its impact on aging with concern. Despite the efforts of several countries to reverse this indicator, the result is not the desired one.[4] The most relevant aspects of the demographic transition in Cuba are the slow rate of population growth and the notable decline in fertility. The decline in birth rates is a demographic prognosis that has been fulfilled for the current Cuban population.[5]

Among the factors influencing low birth rates is infertility. The World Health Organization (WHO) urges that infertility be considered a global health problem. Internationally, 15 % of couples of reproductive age are considered infertile, representing between 60 and 80 million infertile couples, with pelvic inflammatory disease being one of the causes that contribute most significantly. Infertility is defined as the inability of the couple, whether one or both members, to conceive over a period of twelve months, maintaining stable sexual relations and without the use of contraceptive methods. Its etiology may be primary, when there is an inability to achieve spontaneous gestation from the beginning of relations without contraceptive use, and secondary, when the inability to achieve spontaneous gestation occurs after a conception.[6]

It is estimated that in 20-30 % of cases the cause of infertility is male and in about 50 % the cause is due to female conditions, with the remaining percentage caused by a combination of male and female factors.[7] We consider that, in current medical practice, risk sexual behaviors and the signs and symptoms associated with sexually transmitted infections are not adequately explored, and generally it is the patients who come to request our service, often at advanced stages and after having undergone incorrect treatments that do not include their sexual partners, which causes important alterations in the reproductive system of both sexes. Taking into account the above, the present research was conducted with the objective of evaluating the effect of an intervention project to reduce infertility associated with sexually transmitted infections in the municipality of San Cristóbal.

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

METHODS

An experimental study, of the community intervention type, was conducted with the objective of reducing infertility associated with sexually transmitted infections (STIs) in the municipality of San Cristóbal, in the period from March 2022 to March 2025. The universe consisted of all persons of sexually active age (15-49 years) of the San Cristóbal Basic Work Group and, within this, the total number of recognized formal and informal couples.

A random sample was defined for the formation of the study group (sexually active persons n=367; couples n=105) and control group (sexually active persons n=358; couples n=102). All sexually active persons and all couples within this age group who expressed interest in participating were included, excluding from the sample persons who at the time of the study had an active STI and couples who were being treated at the municipal infertility consultation, those in which at least one of the members had been diagnosed with an STI, or those in which one of the members was 50 years of age or older.

Data were obtained from the family and individual health histories existing in the medical offices, the municipal infertility consultation, hospital clinical histories, and epidemiological surveys existing in the STI consultation.

An instrument was designed (Annex 1), which was applied to the members of the study group at each planned consultation, with the purpose of early identifying risk sexual behaviors and the signs and symptoms associated with STIs.

Patients who did not present positive elements once the instrument was applied were scheduled for evaluations on a quarterly basis. Those who presented risk elements were scheduled for consultations every two months, and those who reported any sign or symptom of sexually transmitted infection were followed up monthly during the first three months after diagnosis and treatment, as were those who reported risk behaviors, once these were eliminated.

All cases included in the research with clinical symptoms were referred to the Syndromic Management consultation located in the health area and the protocols in force in the National Strategic Program (PEN) were applied.

Members of both groups were surveyed at the beginning and at the end of the study to measure the modification in the level of knowledge about these infections (Annex 2). A score was given to each question (10 points), allowing the degree of knowledge existing between both study groups to be classified once the intervention concluded, classified as follows: High knowledge: 70-100 points and low knowledge: less than 69 points.

An instrument was designed and applied (Annex 3) to provide face-to-face training in the consultation itself to all patients belonging to the study group, adapting it to the average duration of a medical consultation. The incidence of infertility associated with STIs and the diagnosis of sexually transmitted infections by age groups and sex were evaluated. In turn, the modification of the level of knowledge about sexually transmitted infections at the beginning and end of the study was analyzed.

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

The incidence of complications associated with STIs in both groups was compared, and the economic impact related to the need for diagnostic means, antibacterial treatments, and hospital stay in both groups was established.

The research received approval from the Scientific Council and the Ethics Committee of the institution. The confidentiality of the information obtained was respected, used only for scientific purposes. The principles of bioethics as established in the Declaration of Helsinki were respected.

RESULTS

After the intervention, a significant decrease in the incidence rate of infertile couples was observed in the study group (161,9 x 10^3), compared with that recorded in the control group (441,1 x 10^3). A decrease in the percentages of infertile couples was observed in all ages in the study group, with ages between 30-34 years contributing the highest number of infertile couples in both groups.

Table 1. Prevalence of infertile couples at the end of the intervention study

Age	Study group (n=105)			Study group (n=102)		
	Infertile couples			Infertile couples		
	No.	%	Rate (10^3)	No.	%	Rate (10^3)
15-19	0	0	0	0	0	0
20-24	0	0	0	1	100	9.8
25-29	4	30,7	38,0	9	69,2	88,2
30-34	8	24,2	76,1	25	75,7	245,0
35-39	3	37,5	28,5	5	62,5	49,0
40-44	1	16,6	9,5	5	83,3	49,0
45-49	1	100	9,5	0	0	0
Total	17	27,4	161,9	45	72,5	441,1

The presence of STIs was more frequent in couples in the control group than in those in the study group, with 45 (44,1 %) and 17 (16,2 %) cases, respectively. Among the STIs diagnosed, chlamydiasis was the most frequent infection (40,3 %), followed by gonorrhea (19,4 %) and trichomoniasis (14,5 %). Herpes virus represented 9,7 % of cases. The distribution of STIs between both groups did not show a statistically significant association with infertility ($X2=1,38$; $p\geq0,05$).

A considerable reduction of STIs was evidenced in the general sample of the study group (24,4 %), compared with the control group, representing a decrease of 46,3 %. In both groups, infections due to gonorrhea, herpes virus, and syphilis were the most representative. The female sex had the highest incidence.

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

After the educational intervention, the study group showed a substantial improvement in the level of knowledge (Figure 1). The proportion of participants with a high level of knowledge increased from 23,5 % before the intervention to 74,3 % after it, representing an increase of 50,8 percentage points. In contrast, the control group showed a less marked variation, going from 23,2 % to 29,4 % of participants with a high level of knowledge at the end of the study. At the same time, the low knowledge category decreased in the study group from 76,5 % to 25,7 %, while in the control group it only decreased from 76,8 % to 70,6 %. The modification of the level of knowledge in the study group was statistically significant according to McNemar's test for related samples ($X2=151,38$; $p < 0,05$). Likewise, the comparison of the final results between the study group and the control group showed significant differences using Pearson's X2 test ($X2= 4.363$; $p < 0,05$).

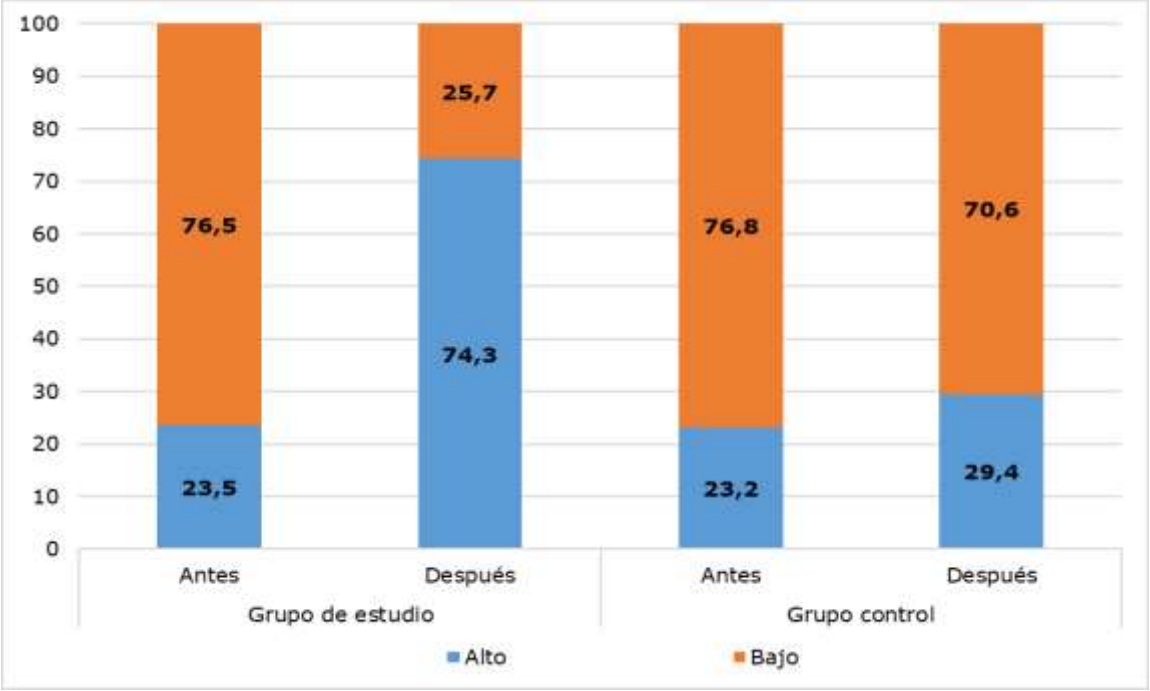

Fig. 1 Modification of the level of knowledge before and after the intervention in sexually active persons

Total expenses showed an important reduction between both groups (Figure 2), decreasing by 39,6 % in the study group. The item that showed the greatest reduction was that associated with medication consumption, decreasing by 56 %.

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

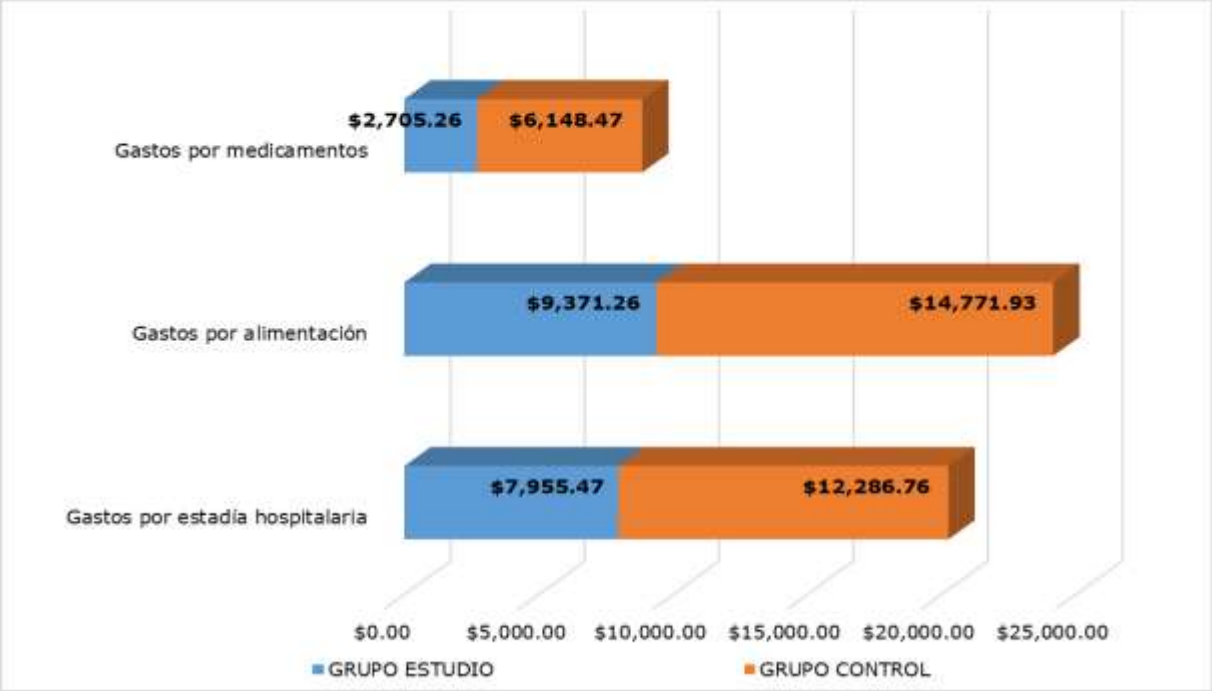

Fig 2. Economic impact of the intervention program in both groups.

DISCUSSION

An important reduction of infertility associated with sexually transmitted infections was reported in the study group, linking this to the application of the instrument designed for the identification of risk behaviors related to these infections and the signs and symptoms in sexually active persons, which generally goes unnoticed by patients and professionals, because most sexually transmitted infections have no symptoms or only mild symptoms that may go unrecognized.[8] The results obtained by using an instrument that allows rapid identification of risks and clinical manifestations of these infections corresponded with those obtained by Malca Herrera and Changlio Roas.[9]

Despite achieving a considerable reduction in the association between infertility and sexually transmitted infections, infertility continued to prevail in the age group between 30-34 years. These results coincide with those obtained by Torres Pérez and collaborators,[10] in their study on infertility in Las Tunas; and by Fleites and collaborators,[11] in Villa Clara province.

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

We consider that this is due to the early onset of sexual relations, which has been established in adolescence between 14-15 years, without due knowledge about the use of protection means, which is also related to the low availability of these in distribution centers,[12] associated with a greater number of sexual partners and a longer time of exposure to the germs responsible for these infections, with the consequent damage to the reproductive system.[13] Also contributing to infertility is the delay in the decision to have the first child, which has been increasing in our country, according to the results obtained by Alfonso Fraga,[14] prolonging the time of identification and treatment of sexually transmitted infections and the damage.

The observed decrease in infertile couples in the study group was directly related to the reduction in the prevalence of sexually transmitted infections in general. The infections that showed the greatest decrease were gonorrhea and chlamydia. Chlamydia infection is considered the most frequent cause of sexually transmitted infection in the world and the germ most frequently associated with infertility produced by tubal obstruction, with high antibody titers detected in more than 70 % of cases, being the microorganism that most commonly causes damage to the upper genital tract. This infection is called silent disease, because the infection is very common in its asymptomatic form.[15]

Gonorrhea is considered the second cause of sexually transmitted infection most associated with cervicitis and pelvic inflammation in women, producing approximately 87 million infections per year in the world, significantly affecting the upper genital tract in prolonged infections.[16]

Another microorganism that achieved an important decrease was Trichomonas vaginalis, which was confirmed in studies conducted by Rojas Rivero and collaborators,[17] as an important infectious cause associated with infertility, identifying it in 10 % of the women studied and showing a high relative risk related to infertility.

The reduction of sexually transmitted infections in the study group in relation to the control group was notable. The application of the face-to-face training instrument that was systematized in each control performed had a decisive influence on this behavior, which was measured annually during the intervention and evidenced improvements in each evaluation. These results correspond with those obtained by Carvajal Beltrán and collaborators,[18] in their intervention. The reduction in the number of cases has also represented a decrease in the total number of contacts, managing to modify the epidemiological chain in a timely manner, with the consequent reduction of associated secondary cases, by providing preventive treatments to them.[19]

The impact on the modification of the level of knowledge was notable in the study group, grouping the highest percentage of these in the high knowledge level, which was directly associated with the face-to-face training actions carried out stably in all controls and field visits to its members. Similar results were obtained in the study conducted by Peraza Rodríguez,[20] in the prevention of scabies in preschoolers.

Economically, the decrease in hospital costs observed in the study group was considerable, which is directly associated with the reduction in the number of patients who, as a consequence of complications related to sexually transmitted infections, required admission due to the magnitude of the damage. The decrease in expenses for medications and food is conditioned by the decrease in the number of admitted patients, allowing these resources to be used in other care.[21]

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

CONCLUSION

The intervention project proved to be effective in reducing infertility associated with sexually transmitted infections in the studied population. The prevalence of infertile couples was significantly lower in the study group compared with the control group, evidencing the favorable impact of the actions implemented. The educational strategy developed produced a substantial improvement in the level of knowledge, by increasing the proportion of participants with high knowledge. These results confirm that systematic health education and early identification of risk factors constitute fundamental tools to prevent STIs and their reproductive consequences.

Conflict of interest
There are no conflicts of interest.

Author contributions
JRSP: responsible for data collection, research design, epidemiological study, and application of the instruments DRDR: responsible for the development of the discussion of the results obtained.

Funding source
No funding was received for the conduct of the research.

BIBLIOGRAPHIC REFERENCES

1. Agost Felip MR, Martín Alfonso L, Moreno Sandoval A. Políticas públicas sobre envejecimiento poblacional promulgadas en el contexto internacional, europeo y español entre 1982-2017. Rev Cubana Salud Pública [Internet]. 2021 [citado 23/06/2026]; 47(1): e2266. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-34662021000100017&lng=es

2. Arias C, Soliverez C, Bozzi N. El envejecimiento poblacional en América Latina: Aportes para el delineamiento de políticas pública. Revista Euro latinoamerica de Análisis Social y Político. Universidad de San Juan [Internet]. 2020 May [citado 15/04/2025]; 1(2): 11-23. Disponible en: https://www.researchgate.net/publication/359612690_envejecimiento_poblacionalen_America_Latina_Aportes_para_el_delineamiento_de_politicas_publicas

3. Ramos Monteagudo AM, Yordi García MJ. El cuidado de las encuestas nacionales de envejecimiento poblacional en Cuba. Anales de la ACC [Internet]. ene.-mar. 2023 [citado 15/04/2025];13(1). Disponible en: https://www.researchgate.net/publication/366812035_El_cuidado_en_las_encuestas_nacionales_de_envejecimiento_poblacional_en_Cuba

4. Román-Lazarte VE, Fernández-Fernández MF, Huanco-Apaza DD. Embarazo en adolescentes. Análisis de natalidad en Perú y su relación con el Índice de Desarrollo Humano. Ginecol. obstet. Méx. [Internet]. 2022 [citado 15/04/2025]; 90(8): 629-638. Disponible en: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0300-90412022000800629&lng=es

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

5. Gran Álvarez MA, López Nistal LM. El descenso de la natalidad en cuba. Rev Cubana Salud Pública [Internet]. 2003 Jun [citado 15/04/2025]; 29(2): 132-138. Disponible en: https://www.redalyc.org/pdf/214/21429208.pdf

6. Villanueva-Ccoyllo Sheyla B, Roldan-Arbieto Luis. Factores de riesgo para infertilidad en mujeres en un Hospital Peruano. Rev. Fac. Med. Hum. [Internet]. 2020 Abr [citado 15/04/2025]; 20(2): 186-192. Disponible en: http://www.scielo.org.pe/scielo.php?pid=S2308-05312020000200186&script=sci_abstract

7. Cox CM, Thoma ME, Tchangalova N, Mburu G, Bornstein MJ, Johnson CL, et al. Infertility prevalence and the methods of estimation from 1990 to 2021: a systematic review and meta-analysis. Hum Reprod Open [Internet]. 2022 Nov 12 [citado 15/04/2025]; 2022(4):hoac051. Disponible en: https://doi.org/10.1093/hropen/hoac051

8. Malpartida Ampudia MK. Enfermedades de transmisión sexual en la atención primaria. Rev Med Sinergia [Internet]. 2020 Abr [citado 03/05/2025]; 5(4): e405. Disponible en: https://doi.org/10.31434/rms.v5i4.405

9. Malca Herrera EL, Changlio Roas JJ. Conductas de riesgo e infecciones de transmisión sexual en mujeres en edad fértil. Rev Med Bisandrina [Internet]. 2021 Ago [citado 03/05/2025]; 15(3):11-18. Disponible en: https://revistas.unjbg.edu.pe/index.php/rmb/article/view/1155/1272

10. Torres Pérez M, Ortiz Labrada YM, Pérez Rodríguez M. Principales causas de infertilidad en parejas atendidas en consulta municipal, Policlínico Guillermo Tejas Silva de Las Tunas. Rev Eug Esp [Internet]. 2021 Abr [citado 01/05/2025]; 15(1): 30-42. Disponible en: https://eugenioespejo.unach.edu.ec/index.php/EE/article/view/140

11. Fleites A, Jiménez S, Álvarez MC, Vega MP, Monteagudo M, Cabrera R. Variables relacionadas con el éxito o fracaso de la inseminación artificial en Villa Clara. Rev Cubana Obstet Ginecol [Internet]. 2014 [citado 05/02/2018]; 40(4): 399-406. Disponible en: https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=58288

12. López Castro D, Rodríguez Aldana AM, Peña Figueredo M. Conductas sexuales de riesgo para infecciones de transmisión sexual en adolescentes. Revista Novedades en Población [Internet]. 2020 [citado 20/04/2021]; 16(31): 187-199. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1817-40782020000100187&lng=es&tlng=es

13. Brugo-Olmedo S, Chillik C, Kopelman S. Definición y causas de la infertilidad. Rev Colomb Obstet Ginecol [Internet]. 2003 Dic [citado 01/05/2025]; 54(4): 227-248. Disponible en: http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0034-74342003000400003&lng=en

14. Alfonso Fraga JC. El descenso de la fecundidad en Cuba: de la Primera a la segunda transición demográfica. Rev Cubana Salud Pública [Internet]. 2006 Mar [citado 03/05/2025]; 32(1). Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-34662006000100002&lng=es

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

15. Rojas Quintana PDR, Guedez Villalobos DD, Reyes Pérez AM, Chávez González N, Rivas Alpízar E. Prevalencia de la chlamydia trachomatis en pacientes sometidas a técnicas de reproducción asistida. Cienfuegos, 2016-2018. Medisur [Internet]. 2023 Abr [citado 06/05/2025]; 21(2): 301-308. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1727-897X2023000200301&lng=es

16. Antorn M, Manel Casanova J, González Talla X. Infecciones de transmisión sexual en la mujer. Rev Formación Médica Continuada en Atención Primaria [Internet]. 2020 Mar [citado 07/05/2025]; 27 (3_S1): 38-43. Disponible en: https://doi.org/10.1016/j.fmc.2020.03.005

17. Rojas Rivero L, Sarracent Pérez J. Caracterización parcial de aislamientos de Trichomonas vaginalis. Estudios relacionados con la virulencia y la patogenicidad. [Tesis]Instituto de Medicina Tropical "Pedro Kourí" Ciudad de La Habana. Editorial Universitaria; 2004

18. Carvajal Beltrán JF, Palacios Veranes A, Aguilera Díaz K, Del Río Pérez O. Efectividad de una intervención educativa sobre infecciones de transmisión sexual en adolescentes militares. MyS [Internet] 2023 Oct [citado 08/05/2025]; 2023: 308-315. Disponible en: https://maestroysociedad.uo.edu.cu/index.php/MyS/article/view/6137

19. Pérez Mesonero R, Gonzalo Catalá A, González Muñoz P, González Rey P, Fuertes de Vega I. Recomendaciones de expertos de la AEDV sobre los aspectos legales en el manejo de las infecciones de transmisión sexual. Actas Dermo-Sifiliográficas [Internet]. 2024 Dic [citado 08/05/2025]; 115 (10): 974-986. Disponible en: https://www.sciencedirect.com/science/article/pii/S0001731024001856

20. Peraza Rodríguez MD. Intervención educativa para la prevención de la escabiosis dirigida a representantes de preescolares de 5-6 años. Vive Rev. Salud [Internet]. 2020 Dic [citado 08/05/2025]; 3(9): 122-128. Disponible en: http://www.scielo.org.bo/scielo.php?script=sci_arttext&pid=S2664-32432020000300002&lng=es

21. López Veranes FN, Valenzuela Rodríguez CR, Rodríguez Chirino MW, Cosme Casulo J, Ricardo Cobas MDC. Economic effect of the average hospital stay increase. MEDISAN [Internet]. 2011 Nov [citado 08/05/2025]; 15(11): 1540-1547. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1029-30192011001100006&lng=es

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e6824

ANNEXES

Annex 1. Epidemiological survey

RISK ASSESSMENT

1. Sexual partner with a sexually transmitted infection in the last three months: Yes__ No___
2. More than one sexual partner in the last three months: Yes___ No____
3. New sexual partner in the last three months: Yes___ No____

CLINICAL SYMPTOMATOLOGY

1. Have you presented lower abdominal pain: Yes___ No____
2. Have you felt frequent and constant pain during sexual relations: Yes___ No____
3. Have you presented abnormal vaginal discharge or odor: Yes___ No____
4. Have you had more than two spontaneous abortions: Yes___ No____
5. Have you presented urethral discharge: Yes___ No____
6. Have you presented ulcerative lesions or warts on the genitals, mouth, or anus: Yes___ No____
7. Have you presented lesions on the palms of the hands in the last three months: Yes No 8. Have you presented pain or burning when urinating and/or ejaculating: Yes No 9. Have you presented lesions or sores in or around the mouth: Yes No 10. Have you presented itching, pain, discharge, or anal bleeding: Yes No
8. Have you received information about sexually transmitted infections? No Yes Where: School Family Media Friends Doctor and family nurse or other health professional
9. Which of the following diseases do you consider a sexually transmitted infection? Syphilis Gonorrhea HIV/AIDS Genital herpes Trichomoniasis Chlamydiasis Hepatitis B Condylomas
10. Can you tell at a glance if a person has a sexually transmitted infection? Yes No Sometimes
11. How are sexually transmitted infections transmitted? Vaginal sex Anal sex Oral sex Skin-to-skin contact Using public toilets Wearing another person's clothes Sharing needles
12. Do you know how to use a condom to prevent a sexually transmitted infection? Yes No
13. Do you think it is possible to have a sexually transmitted infection without presenting symptoms Yes No
14. What behaviors increase the risk of having a sexually transmitted infection? Sex without a condom Multiple sexual partners Consuming drugs or alcohol Prostitution
15. Do you believe that early diagnosis improves treatment and reduces contagion? Yes No
16. Do you believe it is possible for a person to have a sexually transmitted infection and not transmit it to another person if they have unprotected sex systematically? Yes No
17. Can sexually transmitted infections be causes of infertility in the couple? Yes No

Annex 3. Guide for face-to-face training

1. Inform which are the most frequent sexually transmitted infections.
2. Explain the transmission routes of sexually transmitted infections, their incubation periods, and which are the most frequent signs and symptoms.
3. Inform about the use of the condom as a means of protection against sexually transmitted infections.
4. Explain the importance of declaring all contacts and undergoing immediate treatment.

CC-BY-NC- 4.0