



Category: Applied Research in Health and Medicine

ORIGINAL

## Characterization of the infertile couple attended at the Municipal Infertility Clinic of the municipality of Pinar del Río

### Caracterización de la pareja infértil atendida en la Consulta Municipal de Infertilidad del municipio Pinar del Río

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**Cite as:** Lescalle Ortiz Y de la C, González Bencomo B, Casabella Martínez S. Characterization of the infertile couple attended at the Municipal Infertility Clinic of the municipality of Pinar del Río. SCT Proceedings in Interdisciplinary Insights and Innovations. 2025;3:525. DOI:<https://doi.org/10.56294/piii2025525>

Submitted: 12-09-2025

Reviewed: 27-11-2024

Accepted: 03-01-2025

Published: 05-01-2025

Editor: Emanuel Maldonado 

#### ABSTRACT

**Introduction:** infertility, although it does not constitute a risk for the life of the individual, has repercussions on population growth, as well as on the psyche of the individual.

**Objective:** to characterize couples diagnosed with infertility.

**Method:** observational, descriptive, cross-sectional study in 256 infertile couples attended at the Municipal Infertility Clinic of the municipality of Pinar del Río. In order to obtain the information, the individual Clinical Histories of the infertile couples were reviewed. Descriptive statistics were used.

**Results:** secondary infertility predominated (70,7 %). The most affected age group in both sexes was 32 to 37 (females: 43,7 %, males: 41,7 %). Couples with female infertility predominated (n=147 couples; 57,4 %). As an etiological factor, tubal disorders predominated in females (36,3 %) and in males, organic disorders of the testes (30,07 %). The predominant associated diseases were obesity (women: 21 % vs men: 9,8 %), Diabetes Mellitus (women: 7,9 % vs men: 6 %). A total of 158 patients were diagnosed with STI (59,4 %). Smoking predominated as a toxic habit in both sexes.

**Conclusions:** secondary infertility is common in infertile couples, affecting both men and women of reproductive age, with a greater affectation of the most common female part, tubal disorders being the main cause. In men, organic disorders of the testes are usually the main etiology.

**Keywords:** Infertility; Risk Factors; Infertile Couple.

**RESUMEN**

**Introducción:** la infertilidad, si bien no constituye un riesgo para la vida del individuo, tiene repercusión en el crecimiento poblacional, así como en la psiquis del individuo.

**Objetivo:** caracterizar las parejas con diagnóstico de infertilidad.

**Método:** estudio observacional, descriptivo, transversal en las 256 parejas infértiles atendidas en la Consulta Municipal de Infertilidad del municipio Pinar del Río. Para la obtención de la información se realizó la revisión de las Historias Clínicas individuales de las parejas infértiles. Se empleó estadística descriptiva.

**Resultados:** predominó la infertilidad secundaria (70,7 %). El grupo de edades más afectado en ambos sexos fue el de 32 a 37 (fémias: 43,7 %, hombres: 41,7 %). Predominaron la parejas con infertilidad femenina (n=147 parejas; 57,4 %). Como factor etiológico, en el sexo femenino predominaron las afecciones de las trompas (36,3 %) y en los hombres las afecciones orgánicas de los testículos (30,07 %). Las enfermedades asociadas predominantes fueron la obesidad (mujeres: 21 % vs hombres: 9,8 %), la Diabetes Mellitus (mujeres: 7,9 % vs hombres: 6 %). Un total de 158 pacientes presentaron diagnóstico de ITS (59,4 %). Como hábito tóxico predominó el tabaquismo en ambos sexos.

**Conclusiones:** en la pareja infértil la infertilidad secundaria es común, afectando a hombres y mujeres en edad reproductiva, con una mayor afectación de la parte femenina más común, siendo las afecciones de las trompas la principal causa. Por su parte, en el hombre, las afecciones orgánicas de los testículos suelen ser la principal etiología.

**Palabras clave:** Infertilidad; Factores de Riesgo; Pareja Infértil.

**INTRODUCTION**

Currently, infertility is a health problem that affects about 10% of couples of reproductive age worldwide. In Latin America, around 80 million women are reported in clinics that treat this pathology.<sup>1</sup>

The term infertility presupposes the existence of an adequate anatomy and an altered physiology that negatively affects the possibility of pregnancy or its successful completion, establishing an inability to reproduce that can only be solved by medical treatment.<sup>2</sup>

In the field of reproductive health, infertility implies an impairment that does not compromise the physical integrity of the individual or threaten his or her life. However, such an impairment can hurt the individual's development, producing frustration and weakening the personality since most couples consider having children a goal.<sup>3</sup>

The importance of infertility as a health problem can be analyzed from different points of view. Infertile couples often require numerous, sometimes sophisticated, clinical and laboratory examinations over months. The likelihood of finding a treatable cause is variable but rarely high. Couple infertility is recognized as a medico-social reproductive health problem worldwide.<sup>4,5</sup>

Infertility is recognized as "a disease of the Reproductive System defined by the inability to achieve a clinical pregnancy after 12 months or more of unprotected sexual intercourse." in many cases, it is not possible to provide evidence of any disease that causes it, the suffering, anguish, and despair that afflict couples unable to conceive. These situations have become a real and frequent problem faced by health professionals.<sup>5-7</sup>

Several studies suggest that couples often experience isolation, guilt, fear, anxiety, anger, depression, and uncertainty, as well as relationship problems ranging from communication to sexuality, which is why infertility is considered a life crisis. Therefore, it should also be understood in the psychological order, given its impact on the couple as the initial cell of the family and as the maximum involved.<sup>6,7</sup>

In general, one-third of infertility cases are due to diseases in men, another third to diseases in women, and the other third to a combination of both male and female factors, i.e., female-derived causes may account for about 50% of cases.<sup>8</sup>

As women age, the risk of infertility rises because of declining egg quality and ovulatory function and because of an increased risk of disorders such as endometriosis, leiomyomas, and tubal disease. Advanced paternal age may also contribute to infertility due to a reduction in the quality and quantity of sperm produced.<sup>9</sup>

Several emerging factors are cited as key to this increase: environmental influences, new sexually transmitted diseases, declining male fertility, trends of postponing pregnancies to older ages, and changes in sexual orientation, among the main ones. These vary from one country to another and among groups within the same country due to living conditions, diet, health care, education, genetic inheritance, and use of medications.<sup>5</sup>

In Cuba, couples with difficulties in conceiving a pregnancy can attempt gestation assisted by the intervention of highly qualified professionals and with the guarantee of first-level technological equipment.<sup>10,11</sup> There are more than 100,000 couples with reproductive difficulties and about 1,500 couples awaiting high-tech assisted reproduction techniques.<sup>12</sup>

In support of the above, it is evident that, despite the great efforts made to guarantee attention to infertile couples, this continues to be a problem for the Cuban population due to the increase in the incidence and demand for them. The present research was carried out to characterize the couples with infertility diagnoses who attended the Municipal Infertile Couple Attention Consultation of Pinar del Río during the period from January 2022 to May 2024.

## **METHODS**

An observational, descriptive, transversal study was carried out on the new infertile couples who attended the Municipal Infertility Clinic of the municipality of Pinar del Río in the period between January 2022 and May 2024 to determine the factors associated with this condition.

The universe consisted of 256 infertile couples who were attended in our municipality during the study period and are still being followed up.

The present study included all the infertile couples of new entrances belonging to the municipality of Pinar del Río during the period to investigate and that have attended the Municipal Consultation of this pathology and that showed their agreement with being the object of investigation of this study.

In order to obtain the information, a review of the individual medical records of infertile couples filed in the municipal infertility clinic was carried out. The following variables were studied: type of infertility in women, cause of infertility according to sex, cause of infertility according to etiological factor by sex, obstetric history, personal pathological history, history of sexually transmitted infections (STI), and toxic habits.

Once the data collected had been reviewed, a database was prepared for automated processing and analysis. Descriptive statistics were used to analyze the information by calculating absolute and relative percentage frequencies.

Based on the provisions of the Declaration of Helsinki 44 for conducting research studies on human beings, the couples were informed that their participation was voluntary, that it would not represent any commitment, and that they would be free to accept it. They explained that the data obtained would only be used for research purposes and that the information provided would be anonymous. To this end, they were asked to sign the informed consent form.

The principles of bioethics were followed during the development of the research, and the approval of the Ethics Committee of the Policlínico Universitario Docente “Pedro Borrás Astorga” was requested.

## RESULTS

A predominance of secondary infertility was identified (70.7%), followed by primary infertility (29.3%).

The most affected age group in the female sex was 32 to 37 years with a total of 112 women for 43.7 % of the total number of women studied, followed by the group of 26 to 31 years with 79 patients representing 29.7 %. In the male sex, the age group between 32 and 37 years predominated with 107 patients for 41.7% (Table 1).

**Table 1.**

Table 1. Age groups by sex				
Age groups (years)	Female		Male	
	No	%	No	%
< 20	5	1,9	2	0,8
20 - 25	27	10,2	16	6,0
26 - 31	79	29,7	58	21,8
32 - 37	112	43,7	107	41,7
38 y mas	33	12,4	73	27,5

Source: own elaboration.

When the causes of infertility were classified according to sex, a predominance of couples with female infertility was identified (n=147 couples; 57.4 %), followed by male infertility (n=69; 26.9 %) (Table 2).

**Table 2.**

Table 2. Type of infertility by sex		
Cause Of Infertility	No	%
Female	147	57,4
Men's	69	26,9
Mixed	35	13,6
Unknown	5	1,9
Total	256	100

Source: own elaboration.

When analyzing the etiological factors leading to infertility according to sex, tubal disorders (36.3%) were found to be the most common in females, while in males it was organic disorders of the testicles (30.07%) (Table 3).

**Table 3.**

Table 3. Causes of infertility according to etiological factor			
Sex	Causes	No	%
Female	Tubal Conditions	93	36,3
	Ovarian Conditions	66	25,7
	Uterine disorders	51	19,9
	Mixed	43	16,7
	Unknown	13	5,07
Male	Organic Testicular Conditions	77	30,07
	Erectile Dysfunction & Premature Ejaculation	32	12,5
	Combined	96	37,5
	Unknown	61	23,8

Source: own elaboration.

In patients treated for secondary infertility, a history of childbirth was collected in 123 women (67.9%) and of miscarriage in 58 (32.04%).

The predominant associated diseases were obesity (women: 21 % vs. men: 9.8 %), diabetes mellitus (women: 7.9 % vs. men: 6 %), followed in women by asthma (4.8 %), hypothyroidism (4.1 %) and hypertension (1.9 %). In men, it was followed by hypertension (4.9%), bronchial asthma (1.9%) and hypothyroidism (1.9%).

When analyzing the total number of patients seen for known and referred Sexually Transmitted Infections (STI), diagnosed and reflected in the clinical history and diagnosed in the infertility consultation, according to sex, a total of 158 patients presented STI (59.4 %).

**Table 4.**

<b>Table 4. Presence of Sexually Transmitted Infection (STI) by gender</b>						
ITS	Men		Women		Total patients with ITS	
	No	%	No	%	No	%
Known and referred	26	9,8	53	19,9	79	29,7
Diagnosed and reflected in HC	5	1,9	10	3,8	15	5,6
Diagnosed in Infertility consultation	8	3,0	56	21,0	64	24,1
Total	39	14,6	119	44,7	158	59,4

Source: own elaboration.

In relation to toxic habits we found a predominance of smoking in both sexes, followed by coffee consumption. Smoking in men had values of 74 for 59 % and in women 59 for 22 %. Caffeine had values of 61 for 22.9 % in men and 47 for 17.7 % in women (Table 5).

**Table 5.**

<b>Table 5. Toxic habits by sex</b>						
Toxic Habits	Men		Women		Total	
	No	%	No	%	No	%
Alcohol	55	20,7	13	4,9	68	25,6
Coffee	61	22,9	47	17,7	108	40,6
Smoker	74	27,8	59	22,2	133	50
More than one	39	14,7	37	13,9	76	28,6

Source: own elaboration.

## CONCLUSIONS

Secondary infertility predominated in the couples attended, with a greater impact on the female sex. Tubal affections were the predominant etiological cause in females and organic affections of the testicles in males. Women with previous childbirths and abortions presented a higher incidence of the development of secondary infertility. The most affected age group in both sexes was 32 to 37 years, representing approximately half of the cases. Obesity and diabetes were the most prevalent personal pathological antecedents. The most common toxic habits in both sexes were smoking and coffee intake.

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#### **FINANCING**

None.

#### **CONFLICT OF INTEREST**

None.