



***Treponema pallidum*: perception of vulnerability to infection among female public safety workers in Goiás**

Treponema pallidum: percepção de vulnerabilidade à infecção pelas mulheres trabalhadoras da segurança pública de Goiás

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ABSTRACT

The study aimed to analyze the perception of risk of infection by *Treponema pallidum* among female public safety workers in Goiânia, capital of the state of Goiás. This is a qualitative, descriptive research involving 47 women through the administration of a semi-structured instrument. Content analysis method was used for analyzing the participants' narratives. Three thematic categories emerged from this analysis: General (Dis)knowledge about syphilis; Taboos regarding condom use in monogamous relationships; and New tools and health education. The main findings reveal a low perception of knowledge about syphilis, a sense of invulnerability, and low condom use among women in the police force. These results reinforce the need for effective intervention programs to prevent this infection, which has epidemic proportions and projections for an increase among female public safety workers.

Keywords: Police. *Treponema pallidum*. Health Vulnerability. Perception. Women.

RESUMO

O estudo objetivou analisar a percepção de risco para à infecção pelo *Treponema pallidum* em trabalhadores da segurança pública do sexo feminino, na capital do Estado de Goiás, Goiânia. Trata-se de pesquisa qualitativa, descritiva com 47 mulheres por meio da aplicação de instrumento semiestruturado. Para análise dos acervos das narrativas utilizou-se o método de análise de conteúdo. Verificou-se a emergência de 03 (três) categorias temáticas: (Des) Conhecimento geral sobre a sífilis; Tabus em relação ao uso de preservativo em relacionamento monogâmico; e Novas ferramentas e educação em saúde. Os principais achados revelam a baixa percepção de conhecimento sobre sífilis, a sensação de invulnerabilidade e a baixa adesão ao uso de preservativos entre as mulheres na força policial. Esses resultados reforçam a necessidade de programas eficazes de intervenção para prevenir essa infecção, que tem proporções epidêmicas e projeções de aumento, entre as trabalhadoras da segurança pública.

Palavras-chave: Polícia. *Treponema pallidum*. Vulnerabilidade em saúde. Percepção. Mulheres.



INTRODUCTION

Syphilis is a serious public health issue, still considered an epidemic in underdeveloped countries¹. The etiological agent of syphilis, the bacterium *T. pallidum*, subspecies pallidum, from the *Spirochaetaceae* family, is part of the group of Gram-negative anaerobic bacteria that exclusively infect humans^{1,2,3}. It has a spiral shape (10 to 20 turns), measuring about 5-20 mm in length and only 0.1-0.2 mm in thickness. It features an outer envelope with 38 layers of protection, three layers rich in N-acetylmuramic acid and N-acetylglucosamine molecules, and it lacks a cell membrane. It has flagella protruding from the distal end of the bacterium, found in the outer layer along the longitudinal axis. It moves by rotating its body around these filaments^{2,3}.

Annually, there is a frequent number of infections, and it is estimated that around 12 to 13 million people, across different age groups of both men and women, acquire the infection by *Treponema pallidum* (TP)².

In Brazil, from 2010 to 2020, there has been a progressive increase in the number of cases, totaling 78.5 cases per 100,000 inhabitants infected by TP. Preliminary national data from 2019 demonstrate a detection rate of approximately 72.8%, reaching 91,355 cases. Out of these notifications, 12,286 are in the Midwest region of Goiás, with the highest occurrence affecting males (7,848 cases). In the city of Goiânia, in Goiás, there were 1,512 notifications, of which 1,115 were men³.

These data are alarming, as prevention, screening, rapid diagnostic tests, diagnosis, and free, simple, and effective treatment have been available in the Sistema Único de Saúde (SUS, Brazil's Unified Health System) for decades, through Ordinance No. 3,242 of 12/30/2011⁴.

The term "public safety" was introduced for the first time in the Federal Constitution (FC) of 1937. Article 16, item V, established the Union's competence to guarantee well-being, order, tranquility, and public safety throughout the national territory. However, this FC generated tensions and divergences regarding the police functions and responsibilities, as there was already a law regulating the activities of military police, linking them to the federal units, assigning the Union a supervisory and control role through the Army^{5,6}.

Security-related values were expressed in the preamble of the 1988 FC when a Democratic State was established.

[...] aimed at ensuring the exercise of social and individual rights, freedom, security, well-being, development, equality, and justice as supreme values of a fraternal, pluralistic society without prejudice, founded on social harmony, and committed, in internal and international order, to the peaceful settlement of disputes [...]⁷.

In the context of public safety, it's crucial to consider the prevention of threats and violence in the short, medium, and long term. This preventive approach helps deter the occurrence of crimes and promotes a harmonious social coexistence⁵.

Article 144 of the 1988 FC establishes public safety as a duty of the State, a right, and a responsibility of all. According to the FC, public safety must be exercised to preserve public order, with this responsibility attributed to various agencies such as the Federal Police (FP), Federal Highway Police, Federal Railway Police, Civil Police (CP), Military Police (MP), and Military Fire Brigades⁷.

Studies conducted by Futino & Delduque (2020) highlight the vulnerability of public safety workers (PSW), who perform unique activities and are exposed to various risks. In addition to occupational hazards, these professionals also face structural factors related to their working conditions and organizations, their socio-professional relationships, professional recognition and development, as well as the balance between work and personal life. Furthermore, their functional development conditions are also affected^{8,9}.

Moreover, it is necessary to consider the behavioral and sexual aspects of PSWs. Several studies with these professionals, from various approaches, point to a relatively young, sexually active profile with multiple sexual partners, often without the use of protection^{8,9,10}.

According to Sherman et al (2015), many PSWs use their position of authority to gain access to women and men, with the common presence of hegemonic masculinity in this context due to historical and cultural particularities.

Thus, they constitute a vulnerable group, both individually and socially, requiring special attention concerning sexually transmitted infections (STIs). It is important to implement public policies directed at health promotion and disease prevention for this group of professionals, aiming to safeguard their health and well-being^{8,11}.

Especially regarding STIs, nurses play a crucial role in detecting, preventing, and combating the disease through educational strategies. It is essential for individuals to be aware of the risks and be capable of making conscious choices by adopting healthy behaviors. The nurse can contribute to this by empowering and sensitizing individuals for attitude change,

promoting self-care and family health¹². In this context, the present study aimed to analyze the perception of risk of infection by *Treponema pallidum* in female PSWs.

METHODS

STUDY DESIGN, POPULATION, AND LOCATION

Descriptive, exploratory study with a qualitative approach involving 47 female PSWs. Inclusion criteria were being female; attending the occupational health department of the Forensic-Scientific Police (FSP) of the State of Goiás; classified as a PSW according to the 1988⁷ FC; and workers engaged in ongoing labor activities with contact with individuals who have committed a crime. PSWs who were on leave or vacation during the data collection period, and individuals with hearing and/or speech impairments, were excluded from the sample.

The study was conducted in collaboration with the Occupational Health Department of the Forensic-Scientific Police of the State of Goiás, the State Department of Health of Goiás (SES), the Municipal Health Department of Goiânia (SMS), as well as the Public Safety Department of the State of Goiás (SSP-GO). It is part of the *Núcleo de Ações Interdisciplinares em HIV/Aids e outras doenças transmissíveis* (NUCLAIDS-CNPq, Center for Interdisciplinary Actions in HIV/AIDS and Other Communicable Diseases) of the School of Nursing of the Universidade Federal de Goiás (FEN/UFG).

The study was carried out in Goiânia, the capital of the State of Goiás. Located in the Brazilian Highlands, with a population of 1,555,626 inhabitants in an area of approximately 739 km², it is the second most populous city in the Brazilian Midwest¹³. According to the Ministry of Justice, the violence in Goiânia, along with its metropolitan region, is lower than the national average; however, it has grown in the same proportion as other areas of Brazil in recent years¹⁴.

ETHICAL ASPECTS

In this phase, data collection was carried out using a predetermined script consisting of four specific questions related to knowledge about syphilis. These questions aimed to delve into the realm of meanings of human actions and relationships, allowing for a deeper analysis

and valuing the subjectivity of the participants¹⁵.

The interviews, which had a duration of approximately 30 minutes, were recorded on an MP4 device in a private setting within the premises of the Instituto Médico Legal (IML, Institute of Forensic Medicine). Throughout the data collection process, special attention was given to the privacy and active listening of individuals, considering the potential discomfort and immersion of emotions stemming from a topic loaded with taboos and fears in an environment marked by intimidation. To preserve the participants' identities, their names were replaced with fictional nomenclatures alluding to feminine nouns related to the fields of law and public safety.

It is worth noting that this multicenter study followed the guidelines established in Resolution 466/12 of the Brazilian National Health Council (CNS), ensuring the reliability of the collected data¹⁶. Furthermore, it obtained the approval from the Research Ethics Committee of the Universidade Federal de Goiás, under protocol number CAAE: 80757617.9.1001.5078, and opinion number: 2.500.582 - Addendum 04, demonstrating the commitment to integrity and ethics in conducting the study.

The content analysis method was used for analyzing the collection of narratives of the PSWs, as well as the *ATLAS TI 5.2* software, specifically developed for qualitative data analysis¹⁵.

This article is part of the doctoral thesis entitled "TREPONEMA PALLIDUM INFECTION IN PUBLIC SAFETY WORKERS: PREVALENCE, ASSOCIATED FACTORS, AND PERCEPTION OF VULNERABILITY".

RESULTS

The study included 47 female PSWs; their sociodemographic characteristics are described in Table 1.

Table 1. Sociodemographic characteristics of PSWs in Goiânia - GO, 2020-2021

Variables	Women	
	N	%
Age Range		
≥20≤29	14	29.79
≥30≤39	20	42.55
≥40≤49	05	10.64
≥50≤59	02	4.26
≥60≤69	06	12.76
Race / skin color		
White	21	44.68
Mixed race	21	44.68

Black	03	6.38
Yellow	01	2.13
Indigenous	01	2.13
Yellow / Asian		
Marital status		
Single	31	65.96
Married	10	21.27
Common-law Marriage	01	2.13
Divorced	05	10.64
Education		
Complete Secondary Education	17	36.17
Incomplete Higher Education	07	14.89
Complete Higher Education	22	46.81
<i>Lato Sensu</i> Post-graduate education	01	2.13
Workforce		
CP	01	2.13
FP	02	4.26
MP	01	2.13
FSP	43	91.48
Position/role		
Autopsy Assistant	20	42.54
Federal Police Delegate	02	4.26
Forensic Expert	23	48.94
Civil Police Officer	01	2.13
Military Police Officer	01	2.13

Source: Prepared by Author, Goiânia, 2020.

The women's mean age was 42 years, with a minimum of 22 and maximum of 68 years. Most were single (n=31/65.96%), self-declared white (n=21/44.68%) or mixed race (n=21/44.68%), and with complete higher education (n=22/46.81%). FSP workers (n=43/91.48%) had the most participants in the study, especially those in the position of forensic expert (n=23/48.94%).

The analysis of the corpus gathered the narratives obtained during the interview process, as shown in Figure 1.

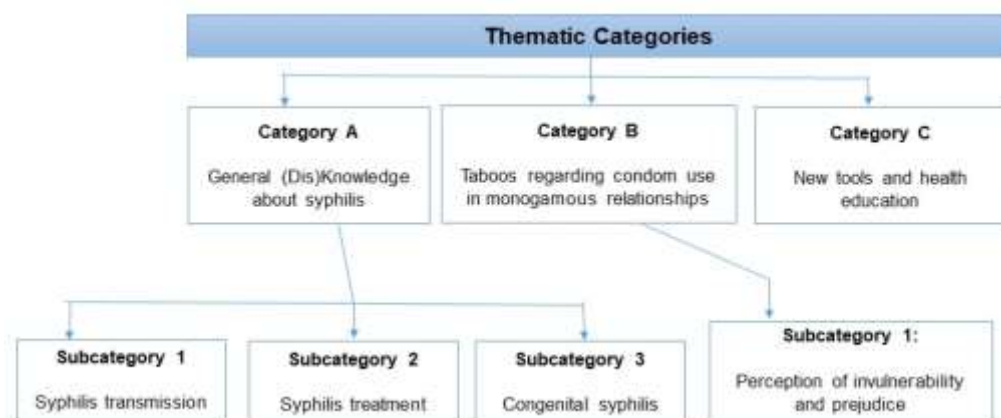


Figure 1. Representative scheme of thematic categories that emerged from interviews with female PSWs, related to their knowledge and perception of vulnerability to syphilis

Source: Research.

Three thematic categories emerged. The first category was identified as General (Dis)Knowledge about syphilis, with three subcategories: Syphilis transmission, Syphilis treatment, and Congenital syphilis. In the second category, Taboos regarding condom use in monogamous relationships, one subcategory emerged: Perception of invulnerability and prejudice. And the third and final category: New tools and health education.

CATEGORY A: GENERAL (DIS)KNOWLEDGE ABOUT SYPHILIS

Regarding basic knowledge about syphilis, it is observed that the participants presented themselves as having dubious and limited information. Most of them mentioned that it is a sexually transmitted disease, although they could not provide more details on the subject.

"(...) well, I only know that it's a sexually transmitted disease. I don't know much about it." (Confiança)

"It's a sexually transmitted disease!" (Comarca)

"(...) very little. No, what I know is (...) that it's a contagious and sexual disease." (Farda)

One fact that stands out is that there is still a minority which associates the disease with the streets and/or to a venereal disease strongly linked to prostitution.

"It's a venereal disease! One of those types you get on the streets! It's those things people do without concern for their health, only thinking of their sexual well-being. What I know is very basic." (Minuta)

"All I know is that it's a street disease!! Prostitutes probably have a lot of these diseases." (Marginalização)

There are those who express doubts and uncertainty about the concept, which could make them more susceptible to acquiring the infection.

"(...) a sexually transmitted disease. It causes a lot of bad things, if not diagnosed and treated early. It's caused by a virus, yes, it is! (...) at work, I am part of a risk group, yes! Here, there are very few restrictions, the risk is quite low." (Tropa)

"If I'm not mistaken, because it's been a while [pause for reflection and then laughter] (...) it's a disease caused by a virus and can be transmitted through sexual intercourse." (Tutela)

"I have information, but I'm a bit nervous because of the test, and I can't remember too well! But (...) I'll give it a shot (...) it's a street disease, venereal! One of those sexual diseases. One of those diseases caused by viruses, oh my, or would it be bacteria (...) I work with a vulnerable public, without much guidance, and we have a lot of contact with paperwork. But I think I'm mistaken... because it's most likely through sex." (Paz)

Only two participants had a clear and consistent general knowledge of what syphilis is.

"A sexually transmitted disease, right? And it has been plaguing the world, affecting people, and spreading through the population, especially the younger population! Oh boy, the younger ones are way too irresponsible. Now back to the question [laughs] (...) it's serious, it can kill, it can cause many lesions, from skin to neurological. It's crazy (...) Yes, through strong medication! It's antibiotics." (Brutalidade)

"From high school, oh, I remember that there was a difference, one was called 'chancroid', the other 'cancro duro' [a Portuguese synonym for syphilis], and one of them is rare, I don't know if that's related, and it's sexually transmitted. At the beginning it causes sores on the genital organs, which can last for about eight days or more, and then the sore disappears, that's basically what I remember. If my answer is correct, it's better to avoid getting it, you know? (...) the main route of contamination is sexual (...) not from the behavior I present. Sex, only with a condom." (Carreira)

Subcategory 1 – Syphilis transmission

When addressing issues related to means of transmission, the majority state that it's solely through sexual activity.

"Humm (...) you're asking if I know how you catch it? It's through [long pause to think]. Oh God [laughs]. Through sex, right? (Peça)

"Through sexual activity." (Penitenciária)

"Only through [pause to think] (...) uhm (...) sexual intercourse." (Força)

There are those who recognize other forms of contagion, such as sexual, blood-borne, and vertical.

"(...) sexual contact through blood by proximity, but I believe it's through direct contact!" (Sistema)

"(...) it's through unprotected sex. It can pass from the mother to the child when she's pregnant." (Ouvidoria)

"(...) as I mentioned earlier: the main one is sexual transmission. There are also cases of transmission from mother to child; through contaminated blood and/or droplets of it." (Precatória)

"Yes, there is! Syphilis can be transmitted through unprotected sexual activity, it can also be transmitted to the child during pregnancy or childbirth (vertical transmission), through contaminated blood or droplets of the same contaminated blood." (Radiopatrulha)

A small portion of the participants attempted to elaborate an answer to the transmission methods, although this response was often filled with doubts and sometimes incorrect and uncertain information.

"For me, it's mostly through sex! But I've even heard about babies born with it! Is that really possible? Oh well, we hear so many absurd things! Who knows if it's true." (Comarca)

"I believe it's through sex! But I've heard that even a mother can pass it on to her child when she's pregnant! But I'm not very sure about that information. Actually, most of what I know is through hearsay. (...) people talk too much [laughs]." (Duplicidade)

Subcategory 2 – Syphilis Treatment

Regarding the treatment, there were those who were unfamiliar with the topic.

"Regarding this question, I don't know either!! But anything that's bad usually has one, so I guess it has one too [laughs]." (Confiança)

"Yeah, I don't know about that(...) I guess I won't be much help (...) if I've heard about it, it was back in high school(...) When I was still studying! (...) there must be a treatment, right? Everything has treatment nowadays!" (Garantia)

There are those who associate strong medication, citing antibiotics as an example, although they can't identify which one.

"(...) I've heard of some antibiotics, but I don't remember." (Calúnia)

"Drugs, I think. (...) the kind that's very strong, like antibiotics, to kill all the bad stuff." (Investigativa)

There are some participants who describe the treatment by mentioning and identifying antibiotic therapy, and there's even one isolated case where the importance of prevention is emphasized when discussing the treatment.

"As far as I know, it exists. I've heard of antibiotics, and basically, what I know pertains cases with benzathine penicillin or some derivative of penicillin." (Execução)

"The main thing is prevention, but unfortunately (...) uhm (...) once you're infected, it's the antibiotic penicillin." (Operação)

Still regarding treatment, there are those who believe there is treatment, but think there might not be a cure.

"I think there is treatment, I can't say which one. Syphilis can probably be treated, but the cure [tilted her head, took a long pause](...) I don't know, because I've known cases in my family. I just didn't ask if they were cured." (Governança)

"No! [paused to think and sighed deeply]. (...) Oh God, now I'm not sure! I heard that either there's treatment or a cure, one of them exists, the other doesn't (...) I'm confused now [laughs]." (Instância)

Some participants manage to make the connection between syphilis treatment and the use of antibiotics, even identifying which antibiotic is used. Furthermore, there are those who relate the treatment to the specific administration of a certain antibiotic.

"I think it's through medication. However, I don't know the medicine, but I know that this medicine has to be strong. In fact, really strong! I even think it's some kind of antibiotic." (Polícia)

"Antibiotic therapy! (...) the drug of choice is benzathine penicillin." (Liberdade)

There is also one isolated case that emphasizes prevention as the main treatment measure.

"Yes! (...) prevention, which is through the use of condoms, avoiding unsafe sex, and also the use of medications like penicillin and other supportive treatments. I also think we should have some health education here [long pause for thinking] to make us more informed about many things and help everyone in general." (Luta)

Subcategory 3 – Congenital Syphilis

When asked about the risk of acquiring the disease, two isolated cases of congenital syphilis were mentioned by the women. The accounts of these cases demonstrated feelings of sadness, suffering, and indignation in the face of these situations.

"I've had it! I know exactly what it's like! It's an STD. Actually, nowadays they call it STI (sexually transmitted infection), I found out during my pregnancy, so I underwent treatment, thank God. My partner and I weren't married at the time (...) although being married nowadays is not a sign or guarantee of safety for anyone. Go figure, right? But I haven't caught anything else after I got married (...) the transmission is sexual, and it's the vertical type, the one they say is from the mother to the child during pregnancy, that's why it's important to strictly follow the treatment, and also to treat our partners, because otherwise, it's pointless (...) Benzathine penicillin! Oh, my friend, it hurts so much... Jesus... I still don't know of any other medication that hurts so much (...) I don't think I've caught any more infections of this kind because my husband almost died from the treatment (...) I thought that helped to stay sharp." (Investigativa)

"Well! It's a contagious disease that mainly affects you! And what a contagion, I tell you! I had it while pregnant! I discovered this syphilis during my pregnancy. I was in the first trimester. I underwent treatment. I had a steady partner, I talked to him, but he refused to undergo treatment. I was devastated! Then, in the second trimester, I got this crap again. That's when the healthcare team told me it affected the baby. I read about it in great detail. That's when I realized it was a Sexually Transmitted Disease that can go through three stages and cause irreversible damage. This time, I had to be firm with him. I had to assert myself. I had to say that if he didn't do the treatment, we couldn't stay together anymore. He did it very reluctantly, but he did. (...) I don't have any partner now. (...) there is transmission, yes, I know it all too well. It's sexual and from the mother to the baby, and the latter is sad, you know. Because when I was giving birth, I was infected again and ended up passing it on to my little baby, and that was one of the reasons for my separation. I had to be hospitalized for 10 days. (...) it's a very crazy antibiotic by the way. The famous and dreaded benzathine penicillin. I don't even like to remember that." (Liberdade)

Through the testimonies, it becomes evident that the participants lacked a conceptual understanding of what syphilis is. This realization is concerning given the severity of the disease. However, it's understandable, as syphilis often presents signs and symptoms that can go unnoticed, making its diagnosis challenging.

CATEGORY B: TABOOS REGARDING CONDOM USE IN MONOGAMOUS RELATIONSHIPS

It is possible to observe that amidst both positive and negative feelings and perceptions concerning the risks of acquiring the disease, women mention the negative aspect of their partners not using condoms:

"Well, I believe not. Simply because I'm married and have never experienced any of these diseases they call street diseases. Some issues have shown up in preventive exams, but I treated them properly and everything turned out fine. I even asked him to use condoms during intercourse, but he said I should take medication. You know those forbidden topics at home? [smiled with a hint of annoyance] (...) condoms are one of them! Unfortunately, this is very sad." (Garantia)

"No! I don't believe there's any risk. I have a steady partner who refuses to use condoms because it hinders pleasure. Actually, we used them only when we were dating. After we started living together, we ignored their use." (Duplicidade)

"It's hard to convince your husband to use condoms. (...) they never want to do it, they say there's no need for it, and it turns into an endless argument. [long pause to sigh and reflect with a positive nod] (...) to put an end to the argument, I always end up giving in, especially when he claims that condoms hinder his pleasure." (Investigativa)

Subcategory 1 – Perception of invulnerability and prejudice

When asked about the risk of contracting syphilis, most participants claim they do not feel vulnerable to this disease. They justify this perception based on different circumstances, such as being married or having only one sexual partner, as well as not considering themselves promiscuous. It's important to note that even though they don't use condoms in their sexual relationships, they believe these circumstances protect them from syphilis infection.

"(...) in my personal life, even less: I have only one partner. I'm married. And on top of that, I'm a missionary in the evangelical church [long and deep sigh]. I have three children. I've been sterilized for almost 2 years now. I don't even know what using a condom is like, I've never needed one, actually." (Legitimidade)

"No! I believe not, because I don't usually have such unsafe affairs [laughs]. I have a steady partner! [pause to think] well, I take some risks in the sense of not using or almost never using condoms (...) I don't consider myself

promiscuous. Certain diseases are common in prostitutes, or in women who don't value themselves. (Persuasão)

Additionally, there's a small group of participants who believe they are not at risk of contracting the disease due to the use of preventive measures. These women are convinced that their prevention practices are effective in reducing the risk of acquiring syphilis.

"In my personal life, no. Even though I'm single, I don't have sex without a condom. As the old saying goes: "You can't judge a book by its cover!" Am I right?" (Reintegration)

"(...) it's not a matter of the person's level of education. It depends on the responsibilities of practicing safe sex. In my case, I only have sex with a condom!" (Procuradoria)

CATEGORY C: NEW TOOLS AND HEALTH EDUCATION

A minority of the interviewees recognize the need for and importance of having health education initiatives in their workplaces, with the goal of providing comprehensive information about diseases. They believe that it is crucial to raise awareness and knowledge about diseases in all aspects, aiming for health prevention and promotion.

"(...) prevention, which includes condom use, avoiding unsafe sex, and the use of medications like penicillin and other supportive treatments. I also think we should have health education here(...) to keep us informed about many things and help the folks in general." (Luta)

"I'm familiar with prevention, which is condoms, and the form of treatment, which is through medication, likely antibiotics. Even though I'm a pharmacist, I can't remember the exact medication right now. We step away from the field, and we start to lose touch with things. I believe we need to keep studying, seeking knowledge, and participating in things. I don't know, in events that help us pursue health." (Tutela)

DISCUSSION

Compared to other countries, there are only a few studies related to the prevention and promotion of STIs in Brazil that target PSWs^{17,18,19,20}. Furthermore, it's evident that there's a shortage of studies emphasizing the association between health, quality of life, and knowledge of infectious diseases. Most of the studies involving PSWs focus on non-communicable chronic diseases or work-related illnesses due to protective activities (life and security)^{21,22}.

Additionally, it's observed that among the included public safety organizations, the MP is the group with the highest number of research, particularly related to work ergonomics^{23,24}. This study aimed to analyze the perception of vulnerability regarding syphilis among PSWs in a capital city of Central Brazil. Considering that syphilis is a disease with significant public health impact and is classified as an epidemic², it's believed that actions and measures focused on promotion and prevention can have a positive impact on the health and well-being of PSWs.

Furthermore, this study has an innovative character, especially regarding the corporations studied. Specifically, there's a predominance of participation from the Forensic-Scientific Police, followed by the Federal Police, Civil Police, and Military Police. Regarding the Forensic-Scientific Police, this is the first study addressing ISTs in this context and proposes the creation of a multidisciplinary and interdisciplinary clinic for these workers.

The study data corroborate with both national and international literature regarding the sociodemographic profile of the studied population. Most women were young, aged between 30 and 39 years, self-identified as white or mixed-race, and possessed higher level education^{18,19,20}. This research revealed low adherence to condom use with steady partners and occasionally with casual partners, reflecting unsafe sexual practices. This finding is also consistent with national and international literature addressing risky sexual behaviors, especially in relation to STIs^{25,26,27}.

Also regarding sexual practice without a condom, a significant increase is observed across various parts of the world, strongly suggesting a reduction in the effectiveness of preventive strategies^{28,29,20,21}. The low adherence to condom use is attributed to factors such as: increased optimism related to the effectiveness of antiretroviral treatment, the emergence of the internet as a potential risk environment for sexual encounters, and structural deficiencies in the organization of health services offered to this population^{25,29,30}.

Studies confirm the need to implement more effective communication strategies to prevent STIs and promote safe sexual practices. Interventions that aim for the prevention of HIV, STIs, and the use of legal and illicit substances during sexual practices must consider social environments, as studies demonstrate that such contexts influence condom use as well as other risky sexual behaviors^{27,29,30}.

A low level of knowledge about syphilis was evidenced, accompanied by uncertain and limited information. Furthermore, strong indications were noted within the police force of associating syphilis with street diseases and/or venereal diseases closely linked to prostitution.

The study showed unanimous awareness of the modes of syphilis transmission, linking it to sexual activity. However, transmissions through other routes were also reported, such as blood-borne (e.g., through needle sharing) and vertical (mother-to-fetus transmission during pregnancy) routes. These reports emphasize the importance of considering these different transmission routes when addressing syphilis prevention and control.

Regarding the perception of invulnerability and prejudice in acquiring STIs, participants risk unsafe practices for pleasure and even due to self-confidence or trust in their sexual partners. It's noticeable that their rank or position is a strong indicator for these women regarding secrecy about their sexual orientation and affective choices³⁰. Oliveira & Faiman (2019) showed that police officers of both genders feel recognized for their work and what it represents. On the other hand, there's also the paradox of being a respected figure of authority while also being a target of criticism and discredit.

FINAL CONSIDERATIONS

It is concluded that the low knowledge about syphilis, perception of invulnerability, and low adherence to condom use among female police officers is even more concerning than the general population. This result confirms that PSWs need effective intervention programs in preventing this infection, which has reached epidemic proportions and is projected to increase.

Furthermore, strategies should encompass individuals' perceptions of vulnerability, along with strengthening the disruption of organizational and social gender culture. For this, worker health clinics with counseling, testing, and early treatment appear to be an effective alternative.

The importance of conducting further research to identify associated factors and develop effective public policies for prevention and treatment is emphasized, not only for syphilis but also for STIs among PSWs. It is crucial to prioritize measures for the prevention and care for the sexual health of these professionals to ensure their health and well-being, and to maintain public safety.

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