

# SEXUALLY TRANSMITTED INFECTIONS IN MEN IN THE PRISON SYSTEM: INTEGRATIVE REVIEW

## INFECCÕES SEXUALMENTE TRANSMISSÍVEIS EM HOMENS NO SISTEMA PRISIONAL: REVISÃO INTEGRATIVA

## INFECCIONES DE TRANSMISIÓN SEXUAL EN HOMBRES EN EL SISTEMA PENITENCIARIO: REVISIÓN INTEGRADORA

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How to cite this article: Oliveira JA, Sousa AR, Araújo IFM, Almeida LCG, Almeida MS, Borges CCL, et al. Sexually transmitted infections in men in the prison system: integrative review. Rev baiana enferm. 2022;36:e38071.

**Objective:** to know the scientific production on Sexually Transmitted Infections and the involvement of men in the prison system. **Method:** integrative review performed in the SciELO, LILACS, Web of Science and MEDLINE databases using six methodologically systematized steps. **Results:** the scenario of Sexually Transmitted Infections among men in the prison system was characterized by the continuity of the elevation of risk factors, male vulnerability, fragility in sex education and interfaced with behavior, sexual practices and identities and patterns of masculinity. It presented limitation of health promotion actions and disease prevention, governance problems and institutionalization of coping measures, chronicity of health neglects and inequities. **Conclusion:** the scientific production on Sexually Transmitted Infections pointed out weaknesses in health care and in the levels of literacy in men's health, which are added to the maintenance of hegemonic masculinity and the severe commitment of human rights.

**Descriptors:** Prisoners. Sexual Health. Reproductive Health. Men's Health. Public Health.

*Objetivo:* conhecer a produção científica sobre as Infecções Sexualmente Transmissíveis e o acometimento aos homens no sistema prisional. *Método:* revisão integrativa realizada nas bases de dados SciELO, LILACS, Web of Science e MEDLINE mediante o emprego de seis etapas sistematizadas metodologicamente. *Resultados:* o cenário

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*das Infecções Sexualmente Transmissíveis entre homens no sistema prisional caracterizou-se pela continuidade da elevação de fatores de risco, vulnerabilização masculina, fragilidade na educação sexual e fez interface com o comportamento, as práticas e as identidades sexuais e os padrões de masculinidade. Apresentou limitação das ações de promoção da saúde e prevenção de agravos, problemas de governança e institucionalização de medidas de enfrentamento, cronicidade das negligências e iniquidades em saúde. Conclusão: a produção científica sobre as Infecções Sexualmente Transmissíveis apontou fragilidades na atenção à saúde e nos níveis de literacia em saúde masculina, que se somam à manutenção da masculinidade hegemônica e ao grave comprometimento dos direitos humanos.*

*Descritores: Prisioneiros. Saúde Sexual. Saúde Reprodutiva. Saúde do Homem. Saúde Pública.*

*Objetivo: conocer la producción científica sobre Infecciones de Transmisión Sexual y la implicación del hombre en el sistema penitenciario. Método: revisión integradora realizada en las bases de datos SciELO, LILACS, Web of Science y MEDLINE utilizando seis pasos metodológicamente sistematizados. Resultados: el escenario de Infecciones de Transmisión Sexual entre los hombres en el sistema penitenciario se caracterizó por la continuidad de la elevación de los factores de riesgo, la vulnerabilidad masculina, la fragilidad en la educación sexual y la interfaz con el comportamiento, las prácticas sexuales y las identidades y patrones de masculinidad. Presentó la limitación de las acciones de promoción de la salud y la prevención de enfermedades, los problemas de gobernanza y la institucionalización de las medidas de afrontamiento, la cronicidad de las negligencias e inequidades en salud. Conclusión: la producción científica sobre Infecciones de Transmisión Sexual señaló debilidades en la atención de la salud y en los niveles de alfabetización en la salud de los hombres, que se suman al mantenimiento de la masculinidad hegemónica y al severo compromiso de los derechos humanos.*

*Descriptorios: Prisioneros. Salud Sexual. Salud Reprodutiva. Salud del Hombre. Salud Pública.*

## Introduction

The vulnerability to Sexually Transmitted Infections (STIs) of population groups in prison situations is expressive and constant. Complex factors have permeated the potential for infection, exposure to risk and the generation of impacts on sexual practices, especially barriers to access to prevention measures, such as condom use. Thus, this scenario becomes essential for the deepening of investigations<sup>(1)</sup>.

A study that includes prison information concluded that in 2016, the prison population was more than 700,000 and the prison occupancy rate was 197.4%, with a deficit of 358,663 vacancies. In Brazil, the increase in the prison population has been exponential; most people come from a less favored class, low educational level and low purchasing power<sup>(2)</sup>. Between 2000 and 2016, the rate of imprisonment increased 157%<sup>(3)</sup>.

This population growth in prisons faced the managerial and budgetary inability of state governments to provide resources to act in the face of health problems, in addition to insufficient public policies to promote the improvement of management and humanization of the system<sup>(4)</sup>.

Thus, according to the Health Legislation in the Penitentiary System, there are many diseases that affect subjects deprived of liberty, among them, in particular, are tuberculosis, STIs, human immunodeficiency virus/Acquired Immunodeficiency Syndrome (HIV/AIDS), hepatitis and leprosy. This scenario of infectious diseases is dissonant to the general indices of the Brazilian population, which is affected by Chronic Noncommunicable Diseases (CNDs)<sup>(5)</sup>. Sexual health care for men in prison is an emerging and necessary agenda to guarantee the rights already guaranteed by the national constitution<sup>(6)</sup>.

The risk of contracting STIs increases when masculinity constructions structure ideas that the male has less concern with the care of himself and trivializes the risk of contracting diseases or transmitting them to other people<sup>(6)</sup>. Considering that prison is an environment of male predominance, gender issues are present and should be seen as a factor that influences men's risks and the way they perceive and use their bodies<sup>(2)</sup>.

Thus, it is worth mentioning that STIs, when they infect men deprived of liberty, are not restricted to this space, because intimate visits continue and dissemination takes place, thus increasing the number of infected<sup>(7-8)</sup>. Considering that the theme presented is a relevant impact on public health, it is necessary to produce information that supports professional practices. Furthermore, there are few investigations that reflect on sexual health, in addition to health problems<sup>(7)</sup>.

To guide the study, the following question was elaborated: What is the sexual health situation of men in deprivation of liberty?

In the light of the above, this study aims to know the scientific production on Sexually Transmitted Infections and the involvement of men in the prison system.

## Method

Integrative review whose methodological path was guided by six stages: identification of the problem; establishment of criteria for inclusion and exclusion of studies, together with bibliographic research; definition of the information to be extracted and the categorization of the studies; evaluation of selected productions; analysis of the results; and presentation of the review with the synthesis of knowledge capable of elucidating evidence<sup>(9)</sup>.

The first stage corresponded to the elaboration of the research question. This questioning of the study was organized according to the PICOS strategy, in which the “P” defines the population, context and/or problem situation; “I” defines the intervention of interest; the “C”, if necessary, defines a comparison intervention in the case of clinical research; O” is the desired or unwanted result of what is intended; and the “S”, the type of study. Thus, the following structure was considered: P – men; I – sexual and reproductive health; C – situation; O – prison system; S – integrative review.

For the search strategy, the Descriptors in Health Science (DeCS) were chosen, which best fit the guide question and the research

objective, i.e.: Prisoners; Sexual Health; Reproductive Health; Men’s Health. The crossings with the terms were performed in pairs and in threes, interconnected by the Boolean operators AND and OR: Prisoners; Sexual Health; Reproductive Health; Men’s Health. The crossings with the terms were performed in pairs and in threes, interconnected by boolean operators AND and OR: Prisoners AND Sexual Health AND Reproductive Health AND Men’s Health; Prisoners AND Sexual Health AND Reproductive Health; Prisoners AND Sexual Health OR Reproductive Health; Prisoners AND Sexual Health; Prisoners AND Reproductive Health; Prisoners AND Men’s Health; or just the descriptor Prisoners, without the use of Boolean operators.

The search and selection of studies were carried out between May and June 2020, through the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES) in the electronic bases Scientific Electronic Library Online (SciELO), Latin American and Caribbean Literature in Health Sciences (LILACS) and Web of Science, access identified by access to the platform provided by the University.

The studies were included, according to the following criteria: original article, fully available, in Portuguese, English or Spanish, which answered the question of the research, with time frame. The period between 1989 and 2020 was chosen to establish coherence with that of the promulgation of the Federal Constitution of 1988, here understood as a reference framework for the definition of the guidelines for the Prison Health Policy, conceived in 2009<sup>(10)</sup>. Repeated publications, abstracts of congresses, editorials, monographs, dissertations and theses were excluded, as well as investigations with a design or objective that were not explicitly, or that were not directly related to the object of this study.

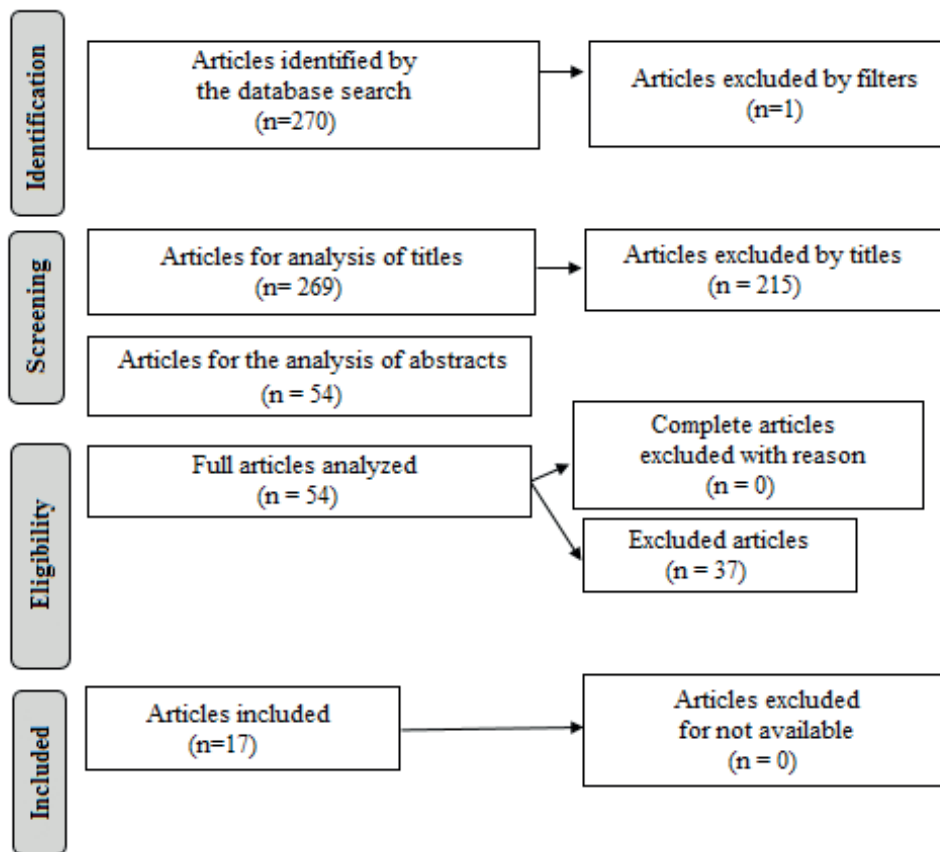
The descriptors were used in the databases and the review was performed by peers, guided by a checklist previously prepared by the authors, an instrument that allowed compiling and synthesizing information, for further

presentation with discussion and analysis of the findings. After compiling the relevant data from each study, the information was presented in the form of a sinoptic table, consisting of the following information: title, year of publication, language of origin and publication, authors, country of origin, journal, level of evidence, objective, methodology, main results, final considerations or conclusions and recommendations, if any.

The results were verified by the researchers, obeying the following ordering: reading of the

titles, verification of inclusion criteria, reading of abstracts and reading in full of the productions, for later inclusion in the review, with the intention of reducing or preventing the probable systematic errors or biases in the measurement of studies, by misunderstandings in the interpretation of the results and/or by the design of the studies, accuracy of the method and reliability of the results. Next, the flowchart of the study selection process (Flowchart 1) is presented.

**Flowchart 1** – Process of inclusion and exclusion of studies in the integrative review. Salvador Bahia Brazil – 2020



Source: Created by the author.

The selected articles were guided by a checklist previously prepared, and the results were checked and the disagreements resolved by consensus. Then, they were submitted to the second analysis by PhD researchers in the area, in the following order: reading of titles, verification of inclusion criteria, reading of abstracts and reading in full of the productions

for later inclusion in the review, with the intention of reducing probable systematic errors or bias in the measurement of studies, by misunderstandings in the interpretation of the results and in the design of the studies, in order to ensure the accuracy of the method and the reliability of the results.

With regard to ethical and legal aspects, publications from national and international journals whose authors were cited at all times when the articles were mentioned were used, in order to safeguard the copyright established by Law N 9,610 of February 19, 1998<sup>(11)</sup>. Thus, because it is not a study with subjects and/or animals, it was not necessary to submit the Research Project to an Ethics and Research Committee (CEP).

## Results

The sample consisted of 17 studies published between 1989 and 2020. The investigations were conducted mostly in Brazil (12), followed by countries such as Belize (1) and the Caribbean (1) in Central America; Lesotho (1) and South Africa (1) in Africa; and Venezuela (1) in Latin America, published in English, Portuguese and Spanish, in public health journals, available in the SciELO (7), LILACS (8) and Web of Science (1) databases, with a higher number between 2000 and 2020.

The study designs had a quantitative approach, using structured interviews and blood sample collection for examinations as data collection. Data analysis was performed by statistical means, through the construction of graphs and tables, with absolute and relative frequencies. The

target population consisted of young adult men deprived of liberty in the prison system.

The scientific productions related to STIs among men in the prison system emphasized multiple dimensions, that is: elevation and continuity of risk factors for STIs and male vulnerabilization caused by incarceration. There was a weakening in the knowledge and health literacy of men in prison on STIs; weaknesses in sex education and gender relational discussions; hegemonic masculinity norms and the relationship with STIs.

Knowledge on the subject revealed a focus directed to affective and sexual practices and the relationship with STIs; sexual identity and the relationship with STIs; seroprevalence for Human Immunodeficiency Virus (HIV) in the prison space; and emphasis on viral hepatitis and syphilis. It was also observed the limitation of health promotion actions and prevention of infectious diseases in the prison context; criticism of governance and institutionalization of coping measures; and chronicity of neglect and inequities in health.

The following is the characterization of the main findings in the literature researched by title and year of the article, journal, country of publication, database and language and main results (Chart 1).

**Chart 1** – Characterization of articles by title, year, journal, country of publication, database, language and main results (continued)

Article Title/Year	Journal/Country of publication/ Database/Language	Main Results
Seroprevalence and factors associated with human immunodeficiency virus and syphilis in inmates in the State of Pernambuco, Brazil. 2014 <sup>(12)</sup> .	<i>Ciência &amp; Saúde Coletiva</i> . Brasil. SciELO. Portuguese.	Regarding sexual health, specifically with regard to HIV infection and syphilis, it was possible to identify that the seroprevalence for these diseases was low, and infected men had good health condition and absence of diseases. Associated risk factors for the acquisition of HIV and syphilis were identified: drug use, tattooing, having had trucker occupation, sexual intercourse with men at any time, or if submitted to blood transfusion/ blood products. The prevalence of HIV infection was high with the association with the practice of homosexual relationship, use of injectable drugs and blood transfusion. Regarding the factors associated with seropositivity for syphilis, a higher prevalence was observed in men who had sexual intercourse with other men and had STIs. The risk of this type of infection was age-related; each year's increase increased the risk of exposure. Condom use in sexual relations was low among men, who reported not using or using it only a few times during these practices. Referrals to a referral center for monitoring purposes, monitoring of viral load, as well as seeking treatment with antiretrovirals were offered to the seropositive public.
Correlation between HIV and HCV in Brazilian prisoners: evidence for parenteral transmission inside prison. 2000 <sup>(13)</sup> .	<i>Revista de Saúde Pública</i> . Brasil. Web of Science. English.	The analysis of the health situation focused specifically on sexual health care, focused on identifying the prevalence of infections. The presence of hepatitis C, syphilis and HIV was the highest rise, affecting young men with 2.8 years of detention. Among the factors associated with HIV, HCV seropositivity, injecting drug use and prolonged incarceration time were identified. A higher correlation of seroprevalence between HIV and Hepatitis C was observed than in comparison with syphilis. Regarding transmission to HIV, the route was related to both sexual and parental risks. The markers found for HIV transmission were hepatitis C and syphilis. Based on the findings, the activated manifestation of HIV and the use of intravenous injectable drugs as probable transmissibility routes were presented.

**Chart 1** – Characterization of articles by title, year, journal, country of publication, database, language and main results (continued)

Article Title/Year	Journal/Country of publication/ Database/Language	Main Results
Prevalence of HIV-1/2, HTLV-I/II, hepatitis B virus (HBV), hepatitis C virus (HCV), <i>Treponema pallidum</i> and <i>Trypanosoma cruzi</i> among prison inmates at Manhuaçu, Minas Gerais State, Brazil. 2000 <sup>(14)</sup> .	<i>Revista da Sociedade Brasileira de Medicina Tropical.</i> Brazil. SciELO. English.	The sexual situation of men represented in the study demonstrated the determination of seropositivity to HIV virus infection, HTLV, hepatitis B and C, <i>Treponema Pallidum</i> , <i>Trypanosoma Cruzi</i> in the criminal set. The rates of positivity for hepatitis B and C virus, syphilis, Chagas disease, HIV and HTLV were confirmed; this in comparative analysis between prisoners and non-prisoners submitted to serological tests. Being a blood donor was a seroprevalence for HIV, hepatitis B and C. The men investigated were smokers, consumed alcohol and other drugs, such as marijuana, cocaine (instilled and/or intravenously) and other multiple substances. With regard to sexual practices, homosexual practices were identified, which, for a number of men, began after the deprivation of liberty. The body tattoos performed in the prison itself, with the sharing of needles and inks, were present among the inmates, with a significant number. In the field of physical health, men presented small health problems, such as superficial fungal and bacterial infections, scabies and mild arterial hypertension.
Research of Antigen and Antibodies from Retroviruses, CMV and HBV among Prisoners of the Penitentiary Complex of the Region of Campinas, SP, Brazil. 1998 <sup>(15)</sup> .	<i>Revista do Instituto de Medicina Tropical de São Paulo.</i> Brasil. SciELO. English.	The panorama of the sexual health situation of men identified the presence of multifactorial risks and unhealthy conditions in the prison system. Co-transmission of HIV, HTLV-1, hepatitis B and Herpesviridae was co-transmitted, as cytomegalovirus (CMV). A high correlation of HIV infection was found with HBsAg-positive reactions. In relation to anti-HTLV-1 and/or 2, reactive elevation among anti-HIV serum was identified.
Seroprevalence and risk factors for hepatitis B virus infection by AgHBs and ANTI-HBs markers in blood prisoners and primers. 1990 <sup>(16)</sup> .	<i>Revista de Saúde Pública.</i> Brasil. SciELO. Portuguese.	The study indicated, in the context of sexual health, a high risk for hepatitis B virus infection. Blood transfusion risk factors were found as risk factors for this disease; use of medications and injectable drugs; presence of tattoos; positivity for VDRL (Venereal Disease Research Laboratory); advance of STIs and homosexual and bisexual relationship, when compared to prisoners with the population of blood donors, revealing the increase in seroprevalence for hepatitis B virus infection, increased prevalence with age in both populations studied. However, the prison population presented higher seroprevalence rates for this type of cause, configuring incarceration as a significant associated risk factor.

**Chart 1** – Characterization of articles by title, year, journal, country of publication, database, language and main results (continued)

Article Title/Year	Journal/Country of publication/ Database/Language	Main Results
Seroprevalence and risk factors for syphilis in the prison population of Goiás. 1989 <sup>(17)</sup> .	<i>Revista do Instituto de Medicina Tropical de São Paulo.</i> Brasil. LILACS. Portuguese	When analyzing issues directed to sexual health, it was possible to verify the advance of STIs, such as syphilis. The men reported not having performed the VDRL test for detection, demonstrated difficulties in distinguishing syphilis from other STIs. Bisexuality proved to be a statistically significant risk factor for syphilis.
HIV prevalence and risk factors in a Brazilian Penitentiary. 2007 <sup>(18)</sup> .	<i>Caderno de Saúde Pública.</i> Brasil. LILACS. English.	There was an inverse association between HIV infection and the total duration of the sentence, with a higher prevalence among inmates with sentences of five years or less. Serious crimes (homicide, drug trafficking) involving long periods of imprisonment may not necessarily be associated with HIV-risk behavior, and less serious crimes (possession of illicit drugs or weapons, petty theft) are often motivated by the need to support drug addiction. This situation may be linked to other risky behaviors, such as multiple partners and unprotected sexual intercourse. Previous use of non-injectable illicit drugs, such as marijuana, cocaine and crack, was noted separately or in combination. Within the prison system, the use of drugs occurred by injectable route, in the presence of sharing of needles and syringes. HIV infection was higher in men with a lower socioeconomic profile and schooling.
Human Immunodeficiency Virus Seroprevalence among Inmates of the Penitentiary Complex of the Region of Campinas, State of São Paulo, Brazil, 1999 <sup>(19)</sup> .	<i>Memórias do Instituto Oswaldo Cruz – Fiocruz.</i> Brasil. LILACS. English.	Regarding the prevalence of HIV among inmates, the study showed a higher percentage of positive results in maximum security penitentiaries when compared to the detention center. After confirmation of positive serology by the MEIA test, the results were submitted to the WB test to confirm the results. The study did not identify a correlation between age and the prevalence of HIV seropositivity. Thus, during incarceration, the age factor did not present itself as determinant for HIV infection. Prisoners of any age group are exposed to the same risk factors. The tests were retested five and seven months later for those who presented negative results in the first evaluation. Of these, the reactivity was low, with the maintenance of the initial result in most of them.



**Chart 1** – Characterization of articles by title, year, journal, country of publication, database, language and main results (continued)

Article Title/Year	Journal/Country of publication/ Database/Language	Main Results
Predictive markers for hepatitis C virus infection among Brazilian inmates. 2009 <sup>(20)</sup> .	<i>Revista da Sociedade Brasileira de Medicina Tropical. Brasil. SciELO. English.</i>	Regarding the prevalence of HCV, a low percentage was evidenced in relation to the sample that performed the blood test for infection. The infection was prevalent in mature men, mean of 36 years, with at least one of the following risk factors: tattooing, heterosexual relationships and having STIs. A small portion of the inmates reported another contributing risk factor for HCV infection and transmission: the use of injectable drugs with sharing of syringes. However, most of the detainees reported having sex under the influence of illicit drugs. Only one of the inmates reported having sexual relations with men, which made it impossible to correlate this variable with HCV infection.
HIV seroprevalence among male prison inmates in the six countries of the Organization of Eastern Caribbean states in the Caribbean (OECS). 2009 <sup>(21)</sup> .	West Indian Medical Journal. Caribbean countries. LILACS. English.	Regarding the prevention of HIV/AIDS infection in the penal system, in a majority of the criminal system, the detainees reported that they had not undergone rapid HIV/AIDS testing before incarceration; less than half of them tested rapidly for HIV/AIDS after entering the prison system. Although early detection in incarceration does not occur, the prevalence of HIV/AIDS among those deprived of liberty is minimal in view of the total sample.
Assessment of knowledge and attitudes about HIV/AIDS among inmates of Quthing Prison, Lesotho. 2007 <sup>(22)</sup> .	West Indian Medical Journal. South Africa-Lesotho. LILACS. English.	HIV/AIDS infection was investigated according to the perception of the detainees. It was evidenced as the potential for HIV infection, according to the interviewees, situations such as: sexual intercourse, blood transfusion or sharing of syringes with infected people. In addition, inmates recognized activities of daily living as potential risks to contamination, such as sharing cups. They were unaware of the risk of breastfeeding infection among infected women. As for the preventive measures adopted, they revealed effective sexual abstinence, considering it a barrier against contamination, as well as fidelity in marital relationships and sexual practices with virgin people. They were also unaware of the signs and symptoms related to the infection. A minority reported chronic diarrhea, swollen lymph nodes, fever, loss of appetite, and weakness, such as related injuries. They said there was no cure, and reported that people with HIV/AIDS should be isolated from social life, due to social stigma with infection and lack of knowledge about forms of prevention and infection.

**Chart 1** – Characterization of articles by title, year, journal, country of publication, database, language and main results (continued)

Article Title/Year	Journal/Country of publication/ Database/Language	Main Results
HIV seroprevalence and associated risk factors among male inmates at the Belize Central Prison. 2009 <sup>(23)</sup> .	<i>Revista Panamericana de Salud Publica.</i> <i>América Central-Belize.</i> LILACS. English.	The analysis focused on HIV seroprevalence among men in a prison context, identifying an association between young men who had sex with other men. The public investigated revealed a previous history of STIs and reported a presentation of symptoms in the three months prior to the arrest.
High prevalence of hepatitis C infection in a Brazilian prison: identification of risk factors for infection. 2001 <sup>(24)</sup> .	The Brazilian Journal of Infectious Diseases. Brazil. LILACS. English.	The scope of investigation on sexual health was directed to seroprevalence for hepatitis C virus infection, through the presentation of risk factors such as: age under 28 years, history of past arrests, current incarceration greater than 130 months, positive VDRL test and illicit drug use prior to admission. There was a high HIV seroprevalence, but in a smaller number for hepatitis C virus, affecting more men who used intravenous drugs.
Baja prevalencia de la infección por el virus de la hepatitis C en una población de reclusos, Maracaibo, Venezuela. 2009 <sup>(25)</sup> .	<i>Biomédica.</i> <i>Venezuela.</i> LILACS. Spanish.	Regarding the investigation of hepatitis C virus infection, the study showed low prevalence. For this type of infection, the study identified associated risk factors such as intravenous therapy, drug use, and unprotected sexual practice.
Observational study of continuity of HIV care following release from correctional facilities in South Africa. 2020 <sup>(26)</sup> .	BMC Public Health. South-Africa. SciELO. English.	The study showed that the link to care was self-reported by 227 participants (64%) and the link to care could be verified by 121 (34%). At most, 47% of the participants did not have a lapse in the supply of antiretroviral drugs. The beginning of treatment during incarceration showed a tendency to increase the self-reported bond after release to care. Age >35 years was associated with increased connection to care, while the diagnosis of HIV outside the correctional environment and the onset of ART during incarceration showed trends of association with the increased linkage to care. The results of the study are the first description of retention in care after the release of the correctional facility in an African environment and indicate high levels of wear and tear during the transition from correctional to community care. The onset of ART within the correctional facility did not impair the post-release connection to care.

**Chart 1** – Characterization of articles by title, year, journal, country of publication, database, language and main results (conclusion)

Article Title/Year	Journal/Country of publication/ Database/Language	Main Results
HIV prevalence in recently incarcerated adult males in the Federal District, Brasilia, Brazil. 2020 <sup>(27)</sup> .	<i>Revista da Sociedade Brasileira de Medicina Tropical.</i> Brasil. SciELO. Portuguese	When analyzing a sample composed of 455 adult newly incarcerated men, who underwent rapid tests and were submitted to oral sample collection in the period prior to their admission to the prison system, it was found that the estimated frequency of positive tests was 0.88%, with a 95% confidence interval, which revealed that the increase in HIV infection rates resulted from the admission of individuals with positive tests, without health care and adequate clinical follow-up. Thus, the investigated public evolved by coinfecting other people in the prison system, since the study showed a derisory rate entering the system with a negative diagnosis for HIV.
Knowledge of the prison population about sexually transmitted infections. 2020 <sup>(28)</sup> .	<i>Revista Gaúcha de Enfermagem.</i> Brazil. SciELO. English.	When 158 participants were investigated, there were misunderstandings regarding the identification, prevention, treatment and forms of transmission of Sexually Transmitted Infections, and greater doubt and/or knowledge about the identification of diseases, such as penile lesions. Urinary infection and syphilis were the infections less identified by men, which worsened in the case of gonorrhea, which they stated did not recognize as STIs. Prevention methods were also little known. Some men were unaware of how to prevent gonorrhea. Regarding the prevention highlighted by the investigated public, the use of condoms and the contraceptive pill was discreetly identified, while the majority stated that they did not know about prevention measures. In addition, the forms of contagion, transmission and treatment were problematic, because men showed ignorance. Misconceptions regarding syphilis were identified, such as prevention measures, such as interrupted intercourse. Difficulties in the recognition of sypholytic lesions and forms of treatment were also recognized in the study. More satisfactory results were revealed in relation to HPV and genital herpes, diseases that men showed to have more knowledge of, but had difficulties in recognizing the lesions caused by the infection.

Source: Created by the author.

## Discussion

When analyzing the literature on the subject, we highlighted, as intentionality of the original studies, the interest in the relationship of HIV and other STIs in association with the time of confinement, blood transfusion, use of illicit drugs, injectable and non-injectable drugs,

sharing of needles and syringes with infected people, tattoos and piercings. In addition, knowledge on the subject revealed broad emphasis on other risk factors, including: sexual practice with other men, homosexual, bisexual relationship, unprotected sexual practice, history of STIs, result of positive VDRL and having been a truck driver.

Thus, there was a gap in knowledge related to the dimension of sexual and reproductive health of men, which was restricted to the clinical and epidemiological dimensions of STIs. On the other hand, when analyzing aspects related to sexual behavior and/or affective relationships and sexual identities, studies, although to a lesser extent, treated bisexuality as a statistically significant risk factor for syphilis infection. Regarding sexual intercourse, a higher prevalence of HIV, syphilis and hepatitis B infection was observed<sup>(29-31)</sup>.

With regard to STIs that most affect the male population in the prison environment, HIV, syphilis, Herpesviridae, hepatitis B and C, cytomegalovirus and HTLV were identified. However, when the coverage and/or control of these STIs were observed, in some groups studied, there was no previous rapid tests, which resulted in greater exposure, the continuity of the permanence of risk factors for STIs and greater male vulnerabilization in the context of incarceration.

A study conducted in Venezuela<sup>(6)</sup> revealed a low prevalence of hepatitis C in the prison population studied, while another investigation<sup>(15)</sup> showed greater notoriety for HIV, especially among men in prison in maximum security penitential conditions, when associated with those in detention centers, which may indicate variations and the non-convergence of existing studies in relation to the most prevalent STIs in this public prison environment.

Also on the dimension of men's involvement by specific type of STIs, the findings of this integrative review summarized that such infections were analyzed for the correlation between them, which revealed the existence of a greater relationship between seroprevalence, HIV and hepatitis C than with syphilis<sup>(29,32-33)</sup>. This result allows us to infer that there is concomitance of STIs in men in prison situations, which may favor the permanence of co-infection and the increase of unfavorable outcomes to their immunological and health condition, becoming a problematic and noteworthy aspect for clinical

practice in this scenario. It is added the fact that there was co-transmission of HIV between HTLV, hepatitis B and herpes.

In close relation to the context of the prevalence of STIs, such as the relationship of co-infection and/or co-transmission in the prison environment, it is important to highlight the fragility in knowledge and literacy in health, more specifically in sexual health, on the part of men. This is related to low socioeconomic levels, the number of years of detention, the adoption of harmful habits, such as smoking, alcohol and other drug abuse, which proved to be even more complicating factors for the unfavorable evolution of STIs, through high exposure and low humoral protection<sup>(34-36)</sup>.

Also on the dimension of male knowledge in the prison context in relation to STIs, a study that analyzed men's knowledge and perception of problems related to sexual health revealed beliefs about the potential for contamination, which led the deprived of liberty to imagine that it is possible to transmit the infection through the sharing of personal objects and that social isolation of infected people should occur. In addition, men were unaware of other forms of transmission to the HIV virus, such as that which occurs through breastfeeding<sup>(30)</sup>.

Thus, these results also corroborate the findings synthesized in this review, which pointed to the existence of significant weaknesses in sex education, evidenced in discussions related to gender issues, in the norms and standardizations of hegemonic and patriarchal masculinity, which have compromised the advancement of men in relation to measures to prevent STIs and the adoption of safe sexual behaviors.

In view of this scenario, it is important to highlight that the means of prevention used in sexual relations, such as condom use, are low among men, and much of the problem is related to the low condition of sexual health literacy on the subject. However, new evidence has drawn attention to other reasons presented by men not to use condoms, denouncing, for example,

the lack of distribution of this device in the prison environment<sup>(32)</sup>.

The condition of deprivation of liberty was pointed out as a significant risk factor associated with the presence of injuries to male sexual health, especially regarding vulnerability to STIs. Thus, attention is drawn to the fact that the situation of confinement in the prison environment of the investigated institutions proved to be inhuman and unhealthy, imposing on these men the conditioning risk situation<sup>(37-38)</sup>.

The knowledge about the health of the prison population, regarding the risk factors associated with STIs, has pointed out, especially in the Brazilian context, the significant exposure to HIV, which emerges as the most impact in this investigated group, becoming worthy of greater debates in the field of collective health and Nursing<sup>(33-34)</sup>. Such vulnerability to HIV in the prison environment is still confronted with other problems, such as the unhealthy conditions of physical structure and hygiene of prisons, the increase in transmission of other diseases, such as tuberculosis, which explains the precariousness of the prison system and the expansion of neglect and inequities in health<sup>(30-31)</sup>.

In convergence with the dimension previously discussed, the relationships of sexual identity, sexual practices and behaviors were presented in the studies, although discreetly, in some contexts, by the relationship of retrograde, outdated and stigmatizing temporalities. However, aspects, such as pointing out the variable sexual "orientation" as a risk factor for STIs, especially in bisexual and homosexual relationships, have been highlighted in the studies. The categories Homosexual and Bisexual were related to the progressive growth of STIs cases, however, the Heterosexual category was also identified, which, in the 1990s, proportionally exceeded the number of cases of STIs in homo/bisexual exposure, even when compared to the population using injectable drugs<sup>(30,35)</sup>. In this sense, regarding the practice of homoerotic and/or homoaffective sexual intercourse in prisons, specific nuances such as "transient homosexuality", power-based gender relations were localized<sup>(35-36)</sup>. Thus, the

findings pointed to the relationship between the transmission of infectious diseases contracted in homosexual sexual relations in prisons and the strong relationship with the patterns of masculinities and hegemonic behaviors that may be involved, being able to explain phenomena, such as the multiplicity of partners and the inappropriate use of condoms. Therefore, there is a need for greater attention, especially regarding the strengthening of health education, the promotion of the guarantee of safe sexual practice and access to health promotion, which guarantee sexual rights and the free exercise of sexuality<sup>(36,39-41)</sup>.

It was also evidenced the fragility of men in prison situation regarding the adoption of healthy and safe sexual habits, returning to the condition of imprisonment, which implies even more in a bad outcome in relation to STIs. It was noticed in the studies that men are distancing themselves from the measures of control of injuries, such as the performance of rapid tests for the diagnostic detection of STIs, available and easily accessible in health units, as well as the use of condoms in sexual relations, for example. This situation has been associated with the hegemonic model of masculinity<sup>(39)</sup>, which imprints ideas and stereotypes of invulnerability, which, in turn, becomes harmful to the subjects themselves, when not questioned<sup>(40)</sup>, even in extreme conditions, such as the advent of the pandemic of a new infectious disease such as Covid-19<sup>(41)</sup>.

As for sexual identities, sexual practices and behaviors in the context of the male prison situation, the scientific, technical/operational and practical investment in the production of nursing and health care should be directed towards overcoming health risks. This should occur especially in the STIs scenario, in order to reduce early the appearance of complications, making it possible to strengthen the actions to control injuries and expand the work based on prevention and health education in this context<sup>(42)</sup>. Thus, an effective action of managers, public agents and health professionals directed to the prevention and coping of STIs for the improvement of well-being, quality of life and

epidemiological control of existing diseases has been essential. These actions should take place taking into account the intersectoriality and dialogue of man's health with other public policies<sup>(43-46)</sup>.

In view of the panorama presented, we emphasize the need to strengthen government actions, expand the financing of health strategies, structure the care network and their respective lines of care<sup>(32-33)</sup>, aiming at progress and articulation between the National Policy of Integral Attention to Men's Health (PNAISH) and the National Policy for Integral Health Care of People Deprived of Liberty in the Prison System (PNAISP)<sup>(10)</sup>, both instituted and in force in Brazil.

A limitation of this study is that the apprehension of the findings discussed in the research was restricted to the sources available in indexed databases, which may limit the scope of other productions available in the field of health and with interface in the human sciences, such as the legal area, for example. Moreover, the use of keywords and synonyms was not used in the strategies of search for manuscripts, restricting itself to descriptors.

However, as a contribution, it is noted that the collected material revealed theoretical density and responded positively to the meeting of knowledge and content on the theme of STIs among men in the prison system. The findings of this study are capable of synthesizing, in the literature, the scientific knowledge about STIs and the involvement of men in the prison system. Its novelty is in the meeting of knowledge on the subject, which is able to contribute with essential subsidies for the design of an overview of the specificities of the problem.

## Conclusion

The integrative review demonstrated that the emphasis of the knowledge produced on the subject is directed to the exposure of the increasing elevation and the permanent continuity of the risk factors present among these men for STIs, such as the characteristics of male vulnerability caused by incarceration.

Furthermore, the integrative synthesis of the literature has unseen the fragility of knowledge and health literacy of men in prison situations about STIs, in addition to those present in sex education and gender relational discussions, as well as the interfaces between hegemonic masculinity norms and STIs.

The knowledge on the subject provided by the review also revealed an expressive focus directed to affective and sexual practices, which weave connections with sexual identities and the relationship with STIs, especially in the relationship of homosexuality and bisexuality. It should be taken into account that the sample contains studies from the 1980s, which are still strongly associated with the stigmatization of HIV and sexual and gender minorities. HIV seroprevalence was observed in the prison space and emphasis on viral hepatitis and syphilis. It was also noticed the limitation of health promotion actions and prevention of infectious diseases in the prison context, as well as criticism of governance and institutionalization of coping measures and chronicity of health neglects and inequities.

It was recognized that the scientific production on Sexually Transmitted Infections among men in the prison system expresses weaknesses in health care and levels of literacy in men's health. In addition, it was demonstrated the maintenance of hegemonic patterns of masculinities associated with gender stereotypes and the serious commitment of human rights in the context of incarceration.

The care provided to men in prison requires, in addition to the institutional structuring of the prison system, the qualification of human resources of the prison system. This qualification should include health professionals, of whom nurses and their nursing team are part, in order to ensure the integrality of care with a focus on health promotion and on the prevention, protection, control and treatment of STIs in this system. Thus, it is recommended to strengthen health education actions aimed at men's health and the incorporation and valorization of the specificities that take place in prison spaces in the most different scenarios.

Also on these implications, more specifically for nursing practice, attention is drawn to the strengthening of nursing in the prison system, as a way to advance in the development and consolidation of good nursing practices in this environment. However, it is recommended to expand the national and international review in other databases, sometimes restricted to health, and to compare studies conducted between men and women deprived of liberty, to assist in the strategic and methodological definition and analytical basis of future empirical studies.

### Collaborations:

1 – conception, design, analysis and interpretation of data: Josias Alves de Oliveira, Anderson Reis de Sousa and Isabella Félix Meira Araújo;

2 – writing of the article and relevant critical review of the intellectual content: Anderson Reis de Sousa, Lílian Conceição Guimarães de Almeida, Márcio Soares de Almeida, Cléa Conceição Leal Borges and Álvaro Pereira;

3 – final approval of the version to be published: Josias Alves de Oliveira, Anderson Reis de Sousa and Cléa Conceição Leal Borges.

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Received: August 1, 2020

Approved: September 15, 2020

Published: March 4, 2022



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