

Factors associated with morbidity and mortality from Acquired Immunodeficiency Syndrome (AIDS) in people deprived of liberty

Fatores associados à morbimortalidade da Síndrome da Imunodeficiência Adquirida (AIDS) em pessoas privadas de liberdade

Factores asociados a la morbilidad y mortalidad por Síndrome de Inmunodeficiencia Adquirida (SIDA) en personas privadas de libertad

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Abstract

Objective: To evaluate the factors associated with morbidity and mortality from acquired immunodeficiency syndrome (AIDS) in people deprived of their liberty. **Methodology:** This is an integrative literature review, with searches in the database: *Scientific Electronic Library Online* (SciELO), *Medical Literature Analysis and Retrieval System Online* (Medline) and *Latin American and Caribbean Literature in Health Sciences* (Lilacs). The descriptors used consisted of "Acquired Immunodeficiency Syndrome" and "Prison", combined with the boolean operator AND. The inclusion criteria considered studies referring to the period between 2018 and 2023, available in full. Articles not related to the proposed topic were excluded. **Results:** Considering the criteria set out, 11 articles were selected, among the 58 found. **Discussion:** Health aspects were highlighted, emphasizing the association between AIDS morbidity and variables such as hepatitis, tuberculosis, drug abuse and co-infections. Social, economic, and educational factors were also addressed, indicating the impact of overcrowded prisons, low socioeconomic status, and lack of sexual education. The analysis of the selected literature highlights the vulnerability of incarcerated individuals and the need for specific attention to prevent the spread of HIV. **Conclusion:** HIV morbidity and mortality in prisons is related to health, economic and social factors, including risky practices such as tattoos and needle sharing. The need for additional research to understand the epidemiological profile is highlighted.

Keywords: Acquired immunodeficiency syndrome; Prisons; HIV-1; Indicators of morbidity and mortality.

Resumo

Objetivo: Avaliar os fatores associados à morbimortalidade da síndrome da imunodeficiência adquirida (AIDS) em pessoas privadas de liberdade. **Metodologia:** Trata-se de uma revisão integrativa da literatura, com buscas nas bases de dados: *Scientific Electronic Library Online* (SciELO), *Medical Literature Analysis and Retrieval System Online* (Medline) e *Literatura Latino-Americana e do Caribe em Ciências da Saúde* (Lilacs). Os descritores utilizados consistiram em "Acquired Immunodeficiency Syndrome" e "Prison", combinados com o operador booleano AND. Os

critérios de inclusão consideraram estudos referentes ao período entre 2018 e 2023, disponíveis na íntegra. Artigos não relacionados ao tema proposto foram excluídos. Resultados: Considerando os critérios dispostos, foram selecionados 11 artigos, dentre os 58 encontrados. Discussão: Destacaram-se aspectos de saúde, enfatizando a associação entre a morbidade da AIDS e variáveis como hepatite, tuberculose, abuso de drogas e coinfeções. Fatores sociais, econômicos e educacionais também foram abordados, indicando o impacto de prisões superlotadas, baixo nível socioeconômico e falta de educação sexual. A análise da literatura selecionada ressalta a vulnerabilidade dos indivíduos encarcerados e a necessidade de atenção específica para prevenir a disseminação do HIV. Conclusão: A morbimortalidade por HIV em prisões está relacionada a fatores de saúde, econômicos e sociais, incluindo práticas de risco como tatuagens e compartilhamento de seringas. Destaca-se a necessidade de pesquisas adicionais que visem compreender o perfil epidemiológico.

Palavras-chave: Síndrome da imunodeficiência adquirida; Prisões; HIV-1; Indicadores de morbimortalidade.

Resumen

Objetivo: Evaluar los factores asociados a la morbilidad y mortalidad por el síndrome de inmunodeficiencia adquirida (SIDA) en personas privadas de libertad. Metodología: Se trata de una revisión integradora de la literatura, con búsquedas en las bases de datos: *Scientific Electronic Library Online* (SciELO), *Medical Literature Analysis and Retrieval System Online* (Medline) y *Literatura Latinoamericana y del Caribe en Ciencias de la Salud* (Lilacs). Los descriptores utilizados consistieron en "Síndrome de Inmunodeficiencia Adquirida" y "Prisión", combinados con el operador booleano AND. Los criterios de inclusión consideraron estudios referidos al período comprendido entre 2018 y 2023, disponibles en su totalidad. Se excluyeron artículos no relacionados con el tema propuesto. Resultados: Considerando los criterios expuestos, se seleccionaron 11 artículos, entre los 58 encontrados. Discusión: Se destacaron aspectos de salud, destacando la asociación entre la morbilidad del SIDA y variables como hepatitis, tuberculosis, abuso de drogas y coinfecciones. También se abordaron los factores sociales, económicos y educativos, indicando el impacto de las prisiones superpobladas, el bajo nivel socioeconómico y la falta de educación sexual. El análisis de la literatura seleccionada destaca la vulnerabilidad de las personas encarceladas y la necesidad de atención específica para prevenir la propagación del VIH. Conclusión: La morbilidad y mortalidad por VIH en las cárceles está relacionada con factores sanitarios, económicos y sociales, incluidas prácticas de riesgo como los tatuajes y el uso compartido de agujas. Se destaca la necesidad de realizar investigaciones adicionales para comprender el perfil epidemiológico.

Palabras clave: Síndrome de inmunodeficiencia adquirida; Prisiones; VIH-1; Indicadores de morbimortalidad.

1. Introduction

Globally, the human immunodeficiency virus (HIV) remains an important public health problem. According to the World Health Organization (WHO), HIV has claimed 40.4 million lives so far. By the end of 2022, 630,000 people had died from HIV-related causes and 1.3 million people had contracted the Human Immunodeficiency Virus (WHO, 2022).

There is no cure for HIV infection. However, with access to effective prevention, diagnosis, treatment, and care, including treatment for opportunistic infections, HIV infection has become a manageable chronic health condition. This allows people living with HIV to lead long and healthy lives (Pan American Health Organization, 2023).

It is estimated that 39 million people are living with HIV (UNAIDS). However, the prevalence of HIV is higher among populations engaging in risky behaviors. Among the populations at risk, certain groups stand out, including sex workers, homosexuals, transgender people, illicit drug users, and individuals deprived of their liberty. This concentration of the epidemic highlights its impact on the most vulnerable populations. (Knauth *et al*, 2020).

According to a study by Fair H. (2021), there are more than 10.77 million incarcerated people worldwide. In the global ranking, Brazil holds the third position for the largest prison population, following the United States (1.76 million prisoners) and China (1.69 million). Data from the National Secretariat for Penal Policies (SENAPPEN) indicate a total of 839,672 inmates in December 2023, with 649,592 of them being housed in physical cells across the 27 units of the Federation.

According to the Joint United Nations Program on HIV and AIDS (UNAIDS), the prevalence of acquired immunodeficiency syndrome (AIDS) among incarcerated individuals (1.4%) is higher than that of the general population (0.7%). Factors such as overcrowding in prison systems, inadequate assistance, lack of prospects, and risky behaviors such as needle sharing, unprotected sex, and sexual violence contribute to the increased vulnerability of these individuals to HIV and other sexually transmitted diseases (Ministry of Health, 2009).

Given the high prevalence of HIV in the prison environment and the significant risk of transmission, correctional

facilities can serve as opportune places for diagnosing and treating the infection. Therefore, this study aimed to evaluate the factors associated with the morbidity and mortality of acquired immunodeficiency syndrome (AIDS) among incarcerated individuals through a literature review. The objective is to provide an overview and provoke reflections on the proposed theme.

2. Methodology

The present study constitutes an integrative review of the literature, formulated through the protocol (PRISMA) *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (Page MK *et al.*, 2020). This type of study is recognized for its broad scope and synthesis of results, as well as its ability to recommend future research and offer critical approaches to the themes in question (Cronin & George, 2020). Thus, the study was conducted in several stages: formulating the guiding question, conducting a literature search in databases, selecting relevant studies, extracting data, analyzing the data, and presenting the findings.

Initially, the guiding question was formulated as follows: "What are the factors associated with morbidity and mortality from acquired immunodeficiency syndrome (AIDS) among incarcerated individuals?" This formulation followed the PICO strategy, where the population (P) consisted of patients with acquired immunodeficiency syndrome, the comparison (C) was made in relation to other sexually transmitted diseases, and the outcome (O) represented the consequences that this disease has had on the studied population. Since it was not an interventional study, the item (I) was not used.

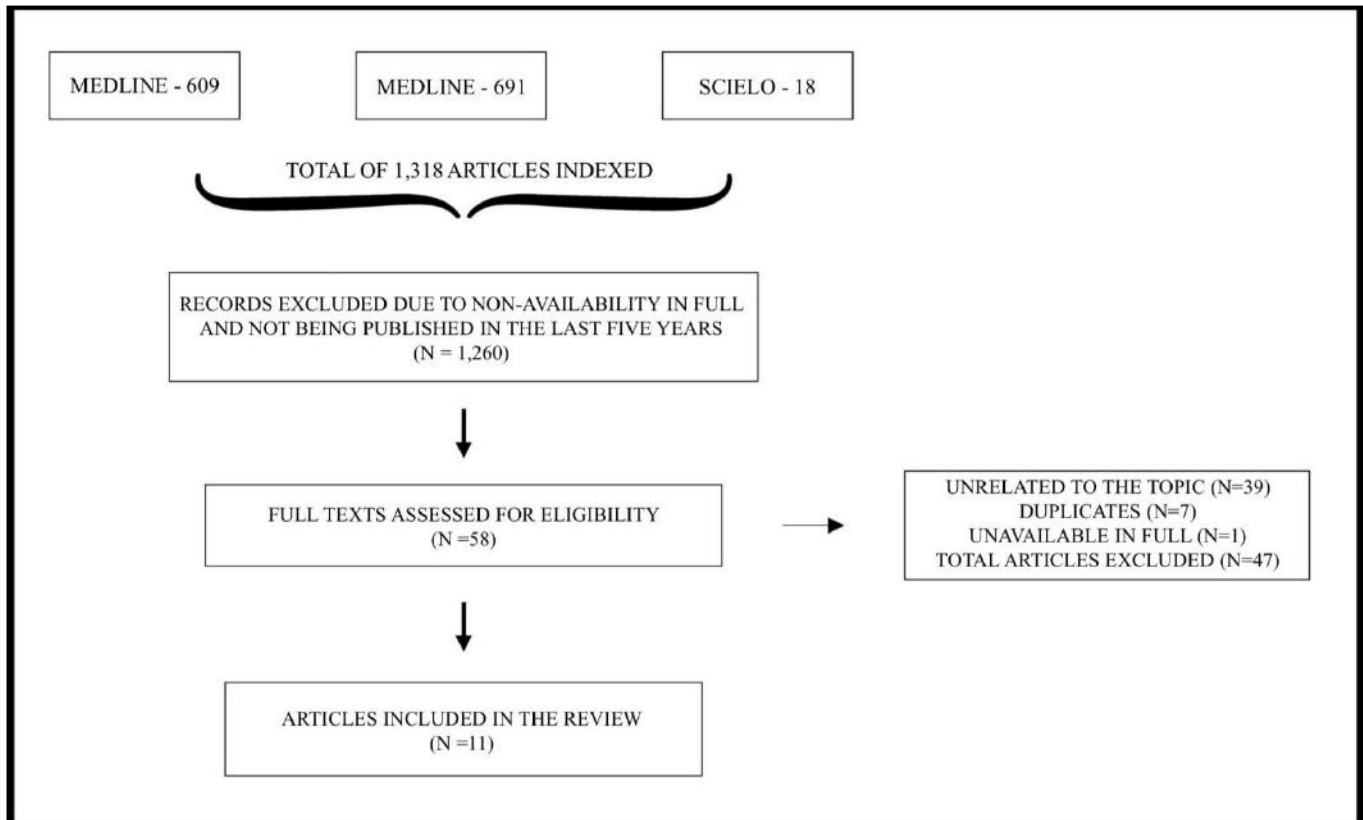
The survey was carried out in January 2024 with a search in three bases: *Scientific Electronic Library Online* (SciELO), *Medical Literature Analysis and Retrieval System Online* (Medline), accessed via PubMed and *Literatura Latino-Americana e do Caribe em Ciências da Saúde* (Lilacs), accessed via Regional Portal of the Virtual Health Library. Search strategies were used in each database separately with terms previously registered in the Health Sciences Descriptors (DeCS) vocabulary. The terms chosen were "Síndrome da Imunodeficiência Adquirida", "Acquired Immunodeficiency Syndrome", "Prisões", "Prisons" searched in English and Portuguese and interspersed with the Boolean operator AND.

Studies published within the last 5 years and available in full were included in the analysis. The selected studies were required to be available in English, Portuguese, or Spanish. Studies that focused on acquired immunodeficiency syndrome outside the prison environment, those that did not align with the proposed topic, and gray literature such as dissertations, institutional technical reports, government documents, theses, or monographs were excluded from the study.

3. Results

From the combinations previously discussed, a total of 1,318 studies were identified in the databases. After narrowing down the publication date range to between 2019 and 2023 and applying the filter for full availability, 1,260 studies were excluded. This left 58 articles that were further analyzed by reading their titles and abstracts. Out of these, 39 were excluded as they were not relevant to the topic, 7 were duplicates found in multiple databases, and 1 article remained unavailable in full even after applying the filter. In this way, the final sample resulted in 11 articles according to the (Figure 1). The articles accessed on (MedLine) were available in English, (SciELO), Portuguese and English and (Lilacs) English, Spanish and Portuguese.

Figure 1 – Flowchart of studies discarded and selected for the construction of the study.



Source: Magalhães *et al.* (2023).

Table 1 addresses the 11 works eligible for the study according to title, author/year of publication, country in which the study was carried out and main findings regarding factors related to morbidity and mortality due to AIDS in people deprived of their liberty.

Table 1 - Description of selected studies.

AUTHOR/YEAR	TITLE	COUNTRY/ REGION	SYNTHESIZED RESULTS
Navarro R.C; Cataño C.R. /2023.	Factors associated with sexually transmitted diseases amongst female prison inmates in Peru.	Peru	The use of inhalable drugs, the prevalence of hepatitis and tuberculosis, and the inefficiency of public policies for control and family planning programs are important concerns.
Camillo et al. /2020.	Factors associated with death from tuberculosis and HIV/aids in prisons: integrative review.	Indonesia, Brazil, United States and South.Africa.	Abusive use of alcohol and intravenous drugs, tuberculosis, lack of knowledge regarding the disease itself, structural racism, and social exclusion.
Pillay N; Chimnga D e Hout M. C. V. / 2021.	Gender Inequality, Health Rights, and HIV/AIDS among Women Prisoners in Zimbabwe.	Zimbabwe	Detainees' lack of knowledge about their own HIV status, use of chemical substances, low literacy, and poverty.
Bosworth et al. / 2021.	HIV/AIDS, hepatitis and tuberculosis-related mortality among incarcerated people: a global scoping review.	Africa, Asia, Europe, North America, Latin America and Caribe.	Acquired Immunodeficiency Syndrome, tuberculosis, co-infection with HBV or HCV.

Fuge T.G; Tsourtos G e Miller E.R. / 2021.	Various structural factors influenced early antiretroviral therapy initiation amongst HIV infected prisoners: a qualitative exploration in South Ethiopia	Ethiopia	Difficulty in accessing the test, delay in receiving the test results, lack of clarity in explaining the condition, difficulty in accessing health units thanks to the security system and concern about the breach of privacy regarding the infection made early initiation of ART difficult. Education and support of other inmates and HIV screening in the prison environment facilitated early adherence to ART
Ale-Ebrahim J. et al. / 2020.	Patterns of high-risk behaviors associated with HIV among male prisoners: A latent class analysis.	Ira	Five latent classes were defined for male prisoners, namely: low risk (20%), moderate risk (23%), injectable drug use (8%), heterosexual relationships/methamphetamine use (38%) and high risk (11%). The results revealed that high-risk sexual behaviors and the sharing of equipment such as injection syringes in prisons significantly influence the classification.
Jha et al. / 2023.	Prevalence of HIV among inmates in four states of north India: findings from the 16th round of HIV sentinel surveillance.	India	The overall prevalence of HIV infection among prisoners was 0.96%. The odds of being HIV-positive were significantly higher among inmates who had never been married, had been in prison for more than three months to a year, had a history of multiple incarcerations, had a history of injecting drug use, and had engaged in sexual relations with healthcare professionals.
Badowski M. E e Patel M./ 2022.	Evaluation of Immunologic and Virologic Function in Reincarcerated Patients Living with HIV or AIDS.	Chicago	Out of the 200 patients who were reincarcerated during the study period, 167 met the inclusion criteria. The rate of participants who were on antiretroviral therapy (ART) and achieved virological suppression decreased from 73% at the time of discharge to 49.7% at the time of reincarceration ($p < 0.01$). Among the 57 individuals who were not followed up, 39% had achieved serological suppression at the time of reincarceration.
Oliveira J. A. et al. / 2022.	Sexually transmitted infections in men in the prison system: integrative review.	Brazil, South Africa, Venezuela, Caribe, Lesoto.	The coexistence of sexually transmitted infections (STIs) among men in prisons contributes to the persistence of co-infection, particularly with HIV, HTLV, and HBV. The limited understanding of sexual health, coupled with lower socioeconomic status and prolonged periods of detention, increases exposure, and weakens immune protection, thereby exacerbating potential adverse outcomes.
Sanchez-Vanegas G et al. / 2020.	Prevalence of Syphilis, Hepatitis B and Human Immunodeficiency Virus in the male prison population in Bogotá, Colombia in 2019.	Colombia	In prisons, late diagnosis of AIDS, often accompanied by opportunistic infections, negatively affects prognosis, and increases treatment costs. The high incidence of sexually transmitted infections (STIs) and the association between tattoos and HIV highlight the vulnerability of prisoners. Overcrowding exacerbates the spread of the virus, necessitating the implementation of specific preventive measures.
Baeza M. V. G. et al. / 2019.	Clinical characteristics of people deprived of freedom with sexually transmitted infections in Bahia Blanca.	Argentina	The prison population faces challenges in accessing health services, which underscores the importance of addressing sexually transmitted infections (STIs) in prisons. Addressing STIs in prison environments is a matter of equity and human rights. Furthermore, inmates experience discrimination, which significantly affects their access to medical care.

Source: Magalhães *et al.* (2023).

It is noted that the studies were mostly carried out in underdeveloped countries and the years with the highest publications were 2020 and 2021 with 3 publications in each year.

4. Discussion

Considering that all the studies included in this review presented diverse analyses regarding the association between factors related to acquired immunodeficiency syndrome (AIDS) among incarcerated individuals in various national contexts, it is evident that health and social issues, as well as multifaceted aspects of AIDS, were addressed. The relevant factors were categorized into two topics: factors related to health and factors related to social, economic, and educational aspects.

4.1 Health-related factors

Navarro e Cataño (2023) highlighted a stronger association between morbidity and mortality from AIDS and variables such as hepatitis, as well as close contact with inmates suffering from tuberculosis. The latter, as demonstrated in numerous bibliographic studies, is frequently linked to opportunistic diseases. Therefore, the study reported a positive correlation between HIV infection and tuberculosis. The indiscriminate use of drugs, particularly inhalable drugs like cocaine derivatives, is associated with increased exposure to unprotected sexual practices, reduced psychological barriers, and instances of sex trafficking, particularly observed in women's prisons.

Women prisoners face additional challenges, such as co-infection in pregnant inmates through vertical transmission, the inefficiency of public policies for controlling and implementing family planning programs, and the limited availability of health services in detention centers. These factors worsen the provision of specialized care for women in need of attention. Similarly, the (LGBT) community, including lesbians, gays, transsexuals, and bisexuals, also requires special attention due to the high potential for health inequality and neglect in accessing healthcare services. (Navarro & Cataño, 2023).

Oliveira *et al.* (2022) identified that the coexistence of Sexually Transmitted Infections (STIs) among men in prison creates an environment conducive to the persistence of co-infection. The observation of co-transmission of HIV with viruses such as human T-lymphotropic (HTLV) and hepatitis B (HBV) adds to the complexity of this scenario. The prevalence of STIs in this prison environment is closely associated with the limited understanding of sexual health among men. This knowledge gap is influenced by factors such as low socioeconomic levels and prolonged periods of detention. These factors, in turn, increase exposure and reduce immunological protection, further exacerbating the likelihood of unfavorable outcomes.

According to Camillo *et al.* (2020) the excessive use of alcohol significantly contributes to mortality from sexually transmitted infections (STIs), particularly tuberculosis. This not only exacerbates unfavorable conditions but also hampers drug treatment and negatively impacts the nutritional health of the prison population, which is already weakened due to inherent incarceration conditions. Additionally, the excessive use of intravenous drugs has been identified as a predictor of mortality among AIDS patients.

In the study conducted in Zimbabwe, a country in Africa, the primary challenge concerning AIDS is the lack of knowledge among inmates about their own HIV status. However, even those who are aware of their status are unwilling to disclose it due to prejudice from prison authorities and fellow inmates. Conditions such as mental illness, substance use, and low literacy levels further impede prisoners' comprehension and understanding. (Pillay *et al.*, 2021).

In the study analyzing morbidity and mortality caused by infectious complications worldwide, the primary cause of death was the advanced stage of Acquired Immune Deficiency Syndrome (AIDS), followed by tuberculosis infection. Deaths related to co-infections with hepatitis B (HBV) and hepatitis C (HCV) were also observed, but they accounted for a smaller proportion. All infections are significant in the prison context, primarily due to the prevalence of injectable drug use. (Bosworth *et al.*, 2022).

In the study conducted in Iran, the most used drug among prison populations was methamphetamine (42%). Several studies have shown a correlation between methamphetamine use and engaging in high-risk sexual behaviors, both of which increase the likelihood of HIV infection. (Ale-Ebrahim *et al.*, 2020).

4.2 Social, economic and educational factors

According to the findings of Sánchez-Vanegas *et al.* (2019), in the context of incarceration, delayed diagnosis and the development of clinical conditions with opportunistic infections contribute to a worsened prognosis of AIDS, increased treatment costs, and a direct impact on the quality of life. Furthermore, the study identified a significant association between acquiring

tattoos in prison and HIV infection, highlighting the importance of addressing these risk behaviors and implementing effective preventive measures.

According to Navarro e Cataño (2023), prison overcrowding, poverty, and lack of knowledge about disease transmission mechanisms are directly associated with the transmission of STIs within the prison population.

Individuals deprived of liberty who are illiterate or have low educational attainment are more socially vulnerable. As a result, they may lack awareness about the disease itself, including its symptoms, transmission, treatment, and prevention. This lack of knowledge can increase the risk of mortality from such an illness. (Camillo *et al.*, 2020).

Camillo *et al* (2020) expressed that there is a pervasive presence of structural racism, social exclusion, and evidence of the consequences of violence both inside and outside the prison centers. The profile associated with the prison population is predominantly male, Hispanic, black, unmarried, and with an average age of 34 years.

Pillay *et al.* (2021) mentioned that developing countries share a common problem that exacerbates HIV infection, and this factor is particularly significant among the female population: poverty. Inadequate prison infrastructure, segregation, gender inequality, and the persistence of patriarchy contribute to the marginalization of this disease among women.

According to Fuge *et al.* (2021), morbidity and mortality are closely related to early adherence to antiretroviral therapy (ART). Within the prison environment, there are factors that can either hinder or facilitate treatment. Firstly, accessing testing is challenging, even when individuals present highly suggestive clinical symptoms, leading to delays in timely diagnoses. Difficulties in establishing a bond with the healthcare team also have a significant impact, resulting in delays in receiving test results and a lack of clarity in understanding the condition and treatment plan. Additionally, the prison's security system poses obstacles for inmates to access healthcare units for ongoing treatment, which can discourage them and lead to a belief that they are not infected. Furthermore, the refusal to transport inmates to healthcare facilities exacerbates these challenges.

Similarly, the fear of confidentiality breaches regarding their infection, whether due to visits to health units or the behavior of prison officers, leads to a reluctance to adhere to treatment. Conversely, when peers understand the severity of the condition and the importance of treatment, and provide support for adherence, treatment is more readily accepted, leading to reduced morbidity and mortality. (Fuge *et al.*, 2021).

The population deprived of liberty faces not only concrete challenges, such as difficulty accessing health services and overcrowding, but also subjective challenges, such as stigmatization. As highlighted by Baeza *et al.* (2019), Incarcerated individuals may suffer discrimination both inside and outside the prison system, which makes access to medical care significantly difficult.

5. Conclusion

HIV morbidity and mortality in people deprived of their liberty is related to health, social, economic, and educational aspects. Therefore, within the prison environment, activities such as tattooing, drug use involving shared syringes and/or unprotected sexual relations, as well as intimate contact resulting from overcrowding, can contribute to the co-infection of HIV and tuberculosis, as well as HBV, HCV, and/or HTLV. Moreover, there is a significant association between mortality and alcohol consumption. Difficulty in understanding the condition, which can be caused by illiteracy and poverty, along with the marginalization and stigmatization of the disease, challenges in early adherence to antiretroviral therapy (ART), conflicting relationships with the healthcare team, and lack of support from the prison security system are all crucial factors in addressing HIV morbidity and mortality.

Therefore, the present study provides insights into the overall health situation in worldwide penitentiaries, summarizing the major challenges that need to be addressed to improve the survival rates of incarcerated individuals with HIV/AIDS. It is

expected that this knowledge will lead to the implementation of healthcare interventions aimed at eliminating or reducing the identified modifiable risk factors.

Future research should investigate the epidemiological profile of factors contributing to HIV morbidity and mortality, with a particular focus on national and state differences, as well as gender disparities across different scenarios. This approach will enable us to understand which interventions are most effective in each region and, consequently, in each prison. By doing so, specific public health measures can be implemented.

References

- Ale-Ebrahim, J., Janani, L., SeyedAlinaghi, S. A., Farhoudi, B., Abbasi-Ghahramanloo, A., Sajadipour, M., & Motevalian, S. A. (2020). Patterns of high-risk behaviors associated with HIV among male prisoners: A latent class analysis. *Medical journal of the Islamic Republic of Iran*, 34, 109. <https://doi.org/10.34171/mjiri.34.109>
- Badowski, M. E., & Patel, M. (2022). Evaluation of immunologic and virologic function in reincarcerated patients living with HIV or AIDS. *Journal of correctional health care: the official journal of the National Commission on Correctional Health Care*, 28(3), 203–206. <https://doi.org/10.1089/jchc.20.07.0055>
- Bosworth, R., Borschmann, R., Altice, F. L., Kinner, S. A., Dolan, K., & Farrell, M. (2022). HIV/AIDS, hepatitis and tuberculosis-related mortality among incarcerated people: a global scoping review. *International journal of prisoner health*, 18(1), 66–82. <https://doi.org/10.1108/IJPH-02-2021-0018>
- Camillo, A. J. G., Ferreira, M. R. L., Bossonario, P. A., Andrade, R. L. P., Saita, N. M., Rezende, C. E. M., Arcêncio, R. A., & Monroe, A. A. (2022). Fatores associados à morte por tuberculose e HIV/aids em presídios: revisão integrativa. *Acta Paul Enferm*, 35. 10.37689/acta-ape/2022AR016066
- Cronin, M. A., & George, E. (2023) The Why and How of the Integrative Review. *Organizational Research Methods*, 26(1), 168-192. <https://doi.org/10.1177/1094428120935507>
- Estatísticas (2022). Programa Conjunto das Nações Unidas sobre HIV/Aids (UNAIDS). <https://unaids.org.br/estatisticas/>
- Fair, H., & Walmsley, R. (2021). *World Prison Population List*. World Prison Brief | an online database comprising information on prisons and the use of imprisonment around the world. https://www.prisonstudies.org/sites/default/files/resources/downloads/world_prison_population_list_13th_edition.pdf
- Fuge, T. G., Tsourtos, G., & Miller, E. R. (2021). Various structural factors influenced early antiretroviral therapy initiation amongst HIV infected prisoners: a qualitative exploration in South Ethiopia. *BMC public health*, 21(1), 1463. <https://doi.org/10.1186/s12889-021-11499-w>
- Grunfeld Baeza, M. V., Palomo, D. M., Arnaudo, M. C., Arena, M. C., Troccoli, M., D'Anuncio, V., & Arro, I. (2019). Características clínicas de personas privadas de libertad con infecciones de transmisión sexual en Bahía Blanca. *Revista de Salud Pública*, 23(3), 56–65. <https://doi.org/10.31052/1853.1180.v23.n3.23509>
- HIV and AIDS. (2023). *World Health Organization (WHO)*. https://www.who.int/news-room/fact-sheets/detail/hiv-aids?gad_source=1&gclid=Cj0KCQiAwbItBhDIARIsABiFYIIZjDfl6llVvk2asRAFFv8oKqa0kXx0sQKcEBjCGUWX-YTM48podi8aAlq5EALw_wc
- Informações gerais sobre o 14º ciclo (2023). *Secretaria Nacional de Políticas Penais (SANAPPEN)*.: <https://app.powerbi.com/view?r=eyJrIjoiYzZINWQ2OGUyYmMyNi00ZGVkLTgwODgtYjVkbWU0ODhmOGUwIiwidCI6ImViMDkwNDIwLTQ0NGMtNDNmNy05MwYyLTRiOGRhNmJmZThlMSJ9>
- Jha, S., Kant, S., Thakur, N., Kumar, P., Rai, S., Haldar, P., Kardam, P., Misra, P., Goswami, K., & Rajan, S. (2023). Prevalence of HIV among inmates in four states of north India: findings from the 16th round of HIV sentinel surveillance. *International journal of prisoner health, ahead-of-print*(ahead-of-print), 10.1108/IJPH-03-2022-0021. <https://doi.org/10.1108/IJPH-03-2022-0021>
- Knauth, D. R., Hentges, B., Macedo, J. L., Pilecco, F. B., Teixeira, L. B., & Leal, A. F. (2020). O diagnóstico do HIV/aids em homens heterossexuais: a surpresa permanece mesmo após mais de 30 anos de epidemia. *Cadernos De Saúde Pública*, 36(6), e00170118. <https://doi.org/10.1590/0102-311X00170118>
- Navarro, R. C., & Cataño, C. R. (2023) Factors associated with sexually transmitted diseases amongst female prison inmates in Peru. *Rev Esp Sanid Penit*. May-Aug;25(2):62-69. 10.18176/resp.00069
- Oliveira, J. A. de, Sousa, A. R. de, Araújo, I. F. M., de Almeida, L. C. G., de Almeida, M. S., Borges, C. C. L., & Pereira, Álvaro. (2022). Infecções sexualmente transmissíveis em homens no sistema prisional: revisão integrativa. *Revista Baiana De Enfermagem*. <https://doi.org/10.18471/rbe.v36.38071>
- OPAS - Organização Pan-Americana da Saúde. HIV/aids. <https://www.paho.org/pt/topicos/hivaids>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M. et al. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 372, n 71. <https://doi.org/10.1136/bmj.n71>
- Pillay, N., Chimba, D., & Hout, V. M. C. (2021) Gender Inequality, Health Rights, and HIV/AIDS among Women Prisoners in Zimbabwe. *Health Hum Rights*. 23(1), 225-236.
- Pittaluga, L., Santos, N., de Alencar Bezerra Oliveira, A. C., a Rabelo Campos, J., Gontijo, D., Estrela, T., Nogueira, F., Camargo da Costa, V., Avelar Almeida, C., & Maia, A. (2009). *Consulta Nacional sobre HIV/AIDS no Sistema Penitenciário*. https://bvsm.sau.gov.br/bvs/publicacoes/consulta_nacional_hiv_sistema_penitenciario.pdf.
- Sánchez-Vanegas, G., Rodríguez-Vallejo, D., Pinzón-Durán, A. C., Reina-Cifuentes, M. A., Monterrosa-Blanco, A., & Tiga-Segura, J. A. (2021). Prevalencia de Sífilis, Hepatitis B y Virus de Inmunodeficiencia Humana en población masculina privada de la libertad de un establecimiento carcelario en Bogotá-Colombia. Año 2019. *Infectio*, 114–119. <https://pesquisa.bvsalud.org/portal/resource/en/biblio-1250077>