Risk factors and preventive strategies for HIV / AIDS in men who have sex with men: Integrative Review

Fatores de risco e estratégias preventivas para o HIV/AIDS em homens que fazem sexo com homens: Revisão Integrativa

Factores de riesgo y estrategias preventivas para el VIH / SIDA en hombres que tienen sexo con hombres: Revisión Integrativa

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REVISA

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RESUMO

Objetivo: identificar os principais fatores de risco e as principais estratégias preventivas adotadas para o HIV entre Homens que fazem Sexo com Homens**. Método:** Revisão integrativa que utilizou as bases de dados Public Medline, Literatura Latino-Americana e do Caribe em Ciências da Saúde e Cumulative Index to Nursing and Allied Health Literature. Resultados: Os fatores de risco para o HIV mais prevalentes entre Homens que fazem Sexo com Homens são: múltiplos parceiros sexuais, relação sexual desprotegida, sífilis, uso de álcool e outras drogas, e sexo anal receptivo. As estratégias preventivas mais indicadas para essa população são: Profilaxia pré-exposição (PreP), tratamento como forma de prevenção (TasP), Testagem para HIV, uso consistente do preservativo e prevenção combinada. **Resultados:** Os fatores de riscos estão relacionados ao comportamento sexual e o uso de álcool e outras drogas e as estratégias preventivas concentram-se no emprego de medidas de prevenção combinadas. **Conclusão:** Os fatores de riscos para a infecção por HIV em HSH evidenciados foram: múltiplos parceiros sexuais, relação sexual desprotegida, sífilis, uso de álcool e drogas ilícitas, e sexo anal receptivo e como principais estratégias preventivas, PreP, TasP, Testagem para HIV, uso consistente do preservativo e prevenção combinada.
Descritores: Sorodianóstico da AIDS; Doenças Sexualmente Transmissíveis; Minorias Sexuais e de Gênero; Saúde do Homem.

ABSTRACT

Objective: to identify the main risk factors and the main preventive strategies adopted for HIV among Men who have Sex with Men. **Method:** Integrative review that used the databases Public Medline, Latin American and Caribbean Literature in Health Sciences and Cumulative Index to Nursing and Allied Health Literature. Results: The most prevalent HIV risk factors among men who have sex with men are: multiple sexual partners, unprotected sex, syphilis, use of alcohol and other drugs, and receptive anal sex. The most suitable preventive strategies for this population are: Pre-exposure prophylaxis (PreP), treatment as a form of prevention (TasP), HIV testing, consistent condom use and combined prevention. **Results:** The risk factors are related to sexual behavior and the use of alcohol and other drugs and preventive strategies are focused on the use of combined prevention measures.**Conclusion:** The risk factors for HIV infection in MSM were: multiple sexual partners, unprotected sexual intercourse, syphilis, alcohol and illicit drug use, and receptive anal sex and as main preventive strategies, PreP, TasP, HIV testing, consistent condom use and combined prevention.
Descriptors: AIDS serodianosis; Sexually Transmitted Diseases; Sexual and Gender Minorities; Men's Health.

RESUMEN

Objetivo: identificar los principales factores de riesgo y las principales estrategias preventivas adoptadas para el VIH entre Hombres que tienen Sexo con Hombres. **Método:** Revisión integrativa que utilizó las bases de datos Public Medline, Literatura Latinoamericana y del Caribe en Ciencias de la Salud e Índice Acumulado de Literatura en Enfermería y Afines en Salud. Resultados: Los factores de riesgo de VIH más prevalentes entre los hombres que tienen sexo con hombres son: múltiples parejas sexuales, sexo sin protección, sífilis, consumo de alcohol y otras drogas y sexo anal receptivo. Las estrategias preventivas más adecuadas para esta población son: Profilaxis pre-exposición (PreP), tratamiento como forma de prevención (TasP), prueba del VIH, uso constante del condón y prevención combinada. **Resultados:** Los factores de riesgo están relacionados con la conducta sexual y el uso de alcohol y otras drogas y las estrategias preventivas se centran en el uso de medidas preventivas combinadas.**Conclusión:** Los factores de riesgo para la infección por el VIH en HSH fueron: parejas sexuales múltiples, relaciones sexuales sin protección, sífilis, consumo de alcohol y drogas ilícitas, y sexo anal receptivo y como principales estrategias
Descriptores: serodianosis por SIDA; Enfermedades sexualmente transmisibles; Minorías sexuales y de género; Salud de los hombres.

REVIEW

Introduction

HIV / AIDS infection is considered a worldwide public health problem, due to its continuous growth and weak control. Although many achievements and advances have been achieved, coping with HIV remains a challenge due to clinical complexity, stigma, prejudice and opportunistic diseases.[1] Worldwide, it is estimated that 37.9 million people live with the virus.[2] Since the beginning of the epidemic in Brazil, from 1980 to June 2019, 966,058 AIDS cases in Brazil. The country has registered an average of 39 thousand new AIDS cases annually in the last five years.[3]

In the epidemiological context of AIDS, the population of men who have sex with men (MSM) is considered to be one of the most vulnerable, with a high number of cases of this disease in the categories of sexual exposure, homo and bisexual, despite showing a tendency towards stabilization. in recent years in Brazil. Such epidemiological data point to a worrying prevalence of 39.4% of cases of the disease resulting from sexual exposure in these categories.[4]

MSM are part of a group whose risk is much higher than others. The MSM population has a higher rate of HIV infection when compared to other populations.[5] Therefore, MSM has a higher prevalence than in the general population, as they are more vulnerable to infection not only from HIV, but also from other sexually transmitted infections STIs.[5-6]

Surveys have investigated the various factors that favor the transmission of HIV / AIDS in the MSM subgroup, such as the adoption of unprotected sexual practices, the acquisition of risky behaviors, and prejudice and discrimination, which makes MSM one of the populations most vulnerable in the context of the HIV / AIDS epidemic.[7-8]

Living with HIV today requires much more than just treating the disease. People living with HIV / AIDS constantly need to deal with transdisciplinary problems involving depressive symptoms, stigma, discrimination and the adverse effects of the therapeutic regimen.[9]

In view of this scenario, MSM are at increased risk of HIV infection when compared to heterosexual men. Once with HIV, the stigma tends to be more present and increases the identity of a "socially devalued group". The prejudice associated with not being heterosexual still restricts the public visibility of MSM and keeps them hidden from government prevention efforts, whether due to fear of discrimination or physical harm due to the disclosure of their sexual identity or behavior.[10-11]

The risk factors that increase the large number of registrations and infections due to this disease are related to barriers that hinder access to health services, such as sexual abuse, deprivation and violence.[12] Another risk factor is the lack of public policies aimed at key populations, recurring due to situations such as prejudice and discrimination, where those infected with the disease always suffer some type of social exclusion. In addition, the prevention of infection risks is one of the main obstacles to disease control in the MSM population. Because there are habits or options that vary according to the preference of sexual partners, prevention methods are adopted or ignored depending on the option of each person.[13]

Faced with the problem when considering the magnitude of this context, this study was guided by the research question: Are there risk factors and preventive strategies for HIV / AIDS in MSM available? To answer this question, this study aims to identify the main risk factors and the main preventive strategies adopted for HIV / AIDS in men who have sex with men.

Method

Integrative literature review, based on collecting and comparing data available in the literature, deepening the knowledge of the investigated theme. The integrative literature is a method that consists of the synthesis of results obtained through research on a given theme, in a systematic, orderly and comprehensive manner. And it has such name for providing more comprehensive information on a subject / problem, thus constituting a body of knowledge.[14]

Thus, the present review answers one or more questions explicitly for the identification, selection and critical evaluation of studies.[15] To this end, this investigation started from the following question: What are the risk factors and preventive strategies adopted for HIV / AIDS in MSM?

It is noteworthy that the integrative review is a specific method used to summarize the past of both empirical and theoretical literature, to provide a broad understanding of a given phenomenon, analyzing the knowledge already built on previous research.[16]

The literature search was carried out in the following databases: *Cumulative Index to Nursing & Allied Health Literature* - CINAHL, *National Library of Medicine and National Institutes of Health* - PubMed, Latin American and Caribbean Health Sciences Literature (LILACS). Data collection was carried out in the months of September and October 2019, by the researcher through access to the Higher Education Personnel Improvement Coordination portal. (CAPES).

The search was carried out in an uncontrolled manner, using descriptors indexed in the MeSH - *Medical Subject Headings* and DeCS - Health Sciences Descriptors, in Portuguese, English and Spanish: HIV, *male homossexuality, risk factors, prevention* with the following intersections: 1º association: HIV and "risk factors"; 2º association: HIV *and* "*male homossexuality*"; 3 º association: HIV *and prevention*.

The articles were classified according to clinical evidence as follows: level 1, the evidence comes from a systematic review or meta-analysis of all relevant randomized controlled clinical trials or from clinical guidelines based on systematic reviews of randomized controlled clinical trials; level 2, evidence derived from at least one well-designed randomized controlled clinical trial; level 3, evidence obtained from well-designed clinical trials without randomization; level 4, evidence from well-designed case-control cohort studies; level 5, evidence from systematic review of descriptive and

qualitative studies; level 6, evidence derived from a single descriptive or qualitative study; level 7, evidence from the opinion of authorities and / or expert committee report.[17]

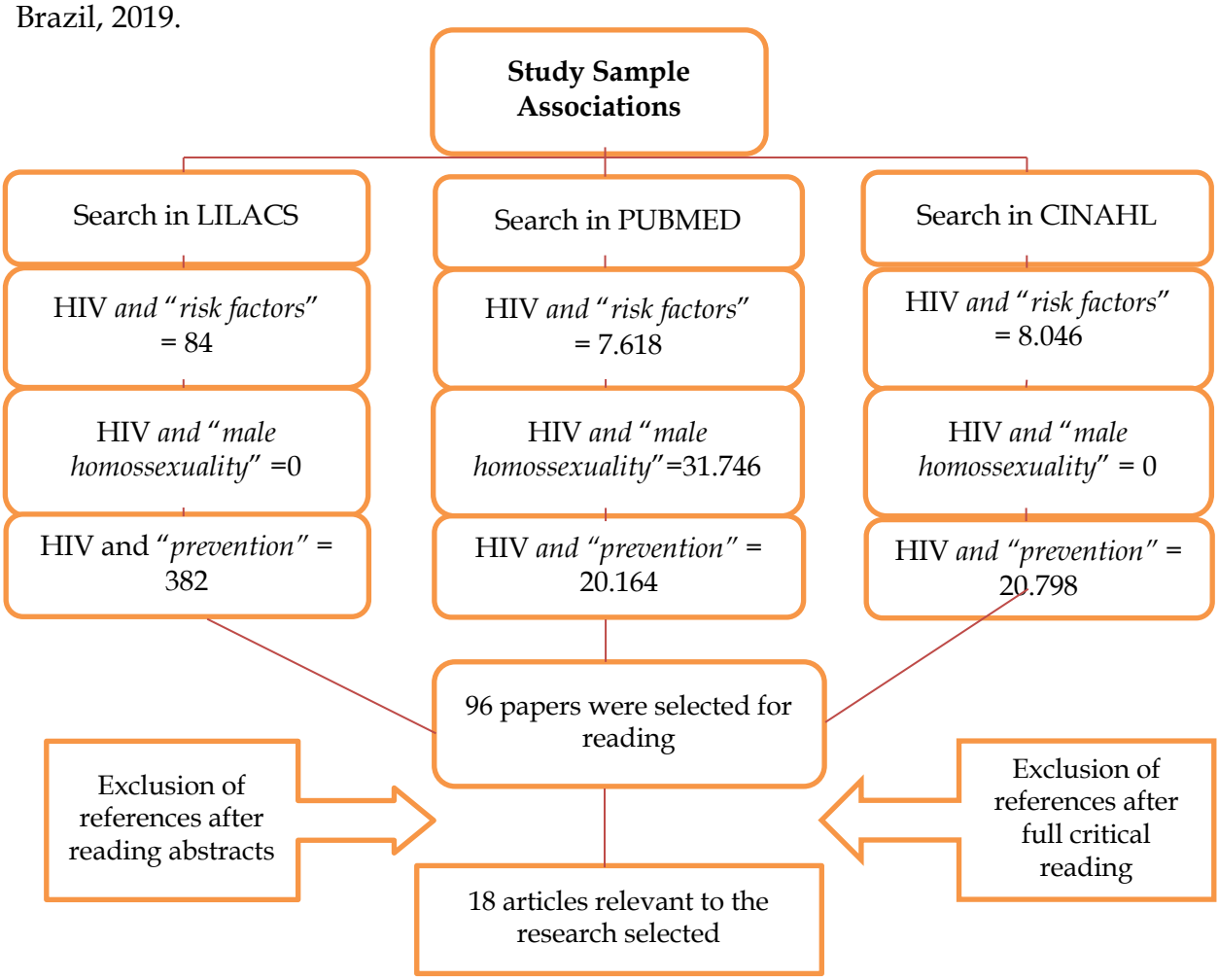
The following criteria were used for inclusion of references: works with free access published in CAPES databases, for coffee access, in the databases: PUBMED, LILACS E CINAHL, in the 2015-2019 period, containing abstracts available in full on the aforementioned databases and online for access. Exclusion criteria were: works with restricted access, publications outside the time frame, theses, monographs and incomplete texts or that did not correspond to the proposed theme.

To identify the selected works, a data collection table was created, with the following information: Identification of the article, namely: title, journal title, year of publication, authors, study location, study objective, methodological characteristics, level of evidence, main results, conclusion and observations, with the intention of organizing to verify their importance for the study and subject in question.

After completing the instrument for data collection, interpretations and analysis of the data were made, soon after, placed in a table with the main information, to perform the comparison of the selected articles. In view of the chosen bibliographies, all results were analyzed and interpreted using tables, charts and graphs, according to the need. Figure 1 shows the search for studies through associations. In the first association HIV *and* "*risk factors*", 15,748 references were found, of which 84 were published in the LILACS, 7.618 at PUBMED and 8.046 at CINAHL. In the second association HIV *and* "*male homossexuality*" 31,476 references were found, where there was no publication in the LILACS, 31.476 were published in PUBMED and just like in LILACS there were no publications in the CINAHL.

Through the association HIV *and prevention*, 41,344 references were found, 382 of which were published in LILACS, 20.164 at PUBMED and 20,798 at CINAHL. Among the references found, 96 papers were selected through the analysis of titles and abstracts for reading in full, where only 18 were identified as relevant to the study.

Figure 1 - Systematic layout of the works found in all associations, Maranhão, Brazil, 2019.



Results

After crossing the descriptors, it was possible to find a sample composed of 64 articles initially. Adopting the inclusion criterion related to the need for articles to be published in Portuguese, from the last 10 years and made available in its entirety, it was observed that, of this total, 31 met these criteria.

Making a more careful selection of the articles, it was observed that 19 had a different theme from the main theme that was the objective of this study, which is the importance of the hospital clinical pharmacy, as well as some of them were presented in duplicate, being, therefore, excluded. Finally, the final sample consisted of 12 articles, the results of which are shown in Table 1.

Table 1 - Summary of studies and their main results.

Author (year)	Objective	Method	Results	Conclusion
Bouças et al (2018)[4]	Analyze the impact of the accreditation process on hospital pharmaceutical care, aiming to identify evidence of changes and improvements in the service provided by the hospital pharmacy.	Focus groups were conducted with pharmacists and internal customers of the pharmacy service of 5 private hospitals in the State of Rio de Janeiro intentionally selected. Recordings were made, later transcribed, for analysis of the content of the dialogues and thematic categorization.	Accreditation resulted in investments of infrastructure and human resources, implementation of new processes and a discreet change in the pharmacist's performance, leveraged by the clinical pharmacy. It was observed that such modifications contributed to a continuous transformation of hospital pharmaceutical assistance, with a modest improvement in the efficiency, quality and safety of the service provided. When considering the final results, satisfaction was partial, since the cycle of pharmaceutical assistance is not yet complete, weakening the newly implemented processes in favor of the quality of care offered to the patient.	The impact on the overall performance of the hospital pharmacy was considered positive, allowing to conclude that the guidelines of the accreditation pointed the way for the development evaluated services, insofar as they demanded the fulfillment of the standards necessary for a pharmaceutical quality.
Farias et al (2016)[5]	Implement a clinical pharmaceutical service focused on the complete review of antineoplastic agents used in the treatment of hematological diseases.	An interventional study was carried out in a Brazilian tertiary teaching hospital in two different periods, based on the absence and presence of the clinical pharmaceutical service, respectively. This service consisted of pharmaceutical validation prescription medication antineoplastic agents (analysis of patient characteristics, laboratory tests, compliance with the therapeutic protocol and pharmacotechnical parameters). Inpatients and outpatients with hematological diseases were included.	There was an increase of 106.5% in the detection of problems related to medicines after the implementation of the service. Comparing the two periods, there was an increase in the age of the patients (26.7 years versus 17.6 years), a predominance of outpatients (54% versus 38%) and an increase in multiple myeloma (13% versus 4%) and non-Hodgkin's lymphoma (16% versus 3%). The most commonly encountered problems were related to the dose (33% versus 25%) and the day of the cycle (14% versus 30%). As for the clinical impact, the majority had a significant impact (71% versus 58%) and one could have been fatal in the second period. The main pharmaceutical interventions performed were dose adjustment (35% versus 25%) and medication suspension (33% versus 40%).	The pharmaceutical service contributed to the increase in the detection and resolution of problems related to drugs, being an effective method to promote the safe and rational medication antineoplastic agents.
Lima et al (2016)[6]	Describe and analyze guidance drug offered at discharge of patients transplanted.	A cross-sectional, descriptive and retrospective study was carried out, which used the records of the guidelines performed by the clinical pharmacist at the inpatient unit of the Renal and Liver Transplantation Service, Walter Cantídio University Hospital, in Fortaleza (CE), from January to July 2014. The following variables registered in the Database of the Clinical Pharmacy Service were analyzed: pharmaceutical guidelines at discharge, problems and negative results related to drugs, and pharmaceutical interventions performed.	The first post-transplant discharge involved the entire multidisciplinary team, with the pharmacist responsible for guiding the patient drug treatment. The average of hikes / month with orientation in the study period was 10.6 ± 1.3, totaling 74 guidelines. The prescribed clinical treatment had an average of 9.1 ± 2.7 drugs per patient. 59 drug-related problems were identified; 67.8% were related to the non-prescription of the necessary medication, resulting in 89.8% risk of negative results associated with medications due to an untreated health problem. The main intervention was the request for inclusion of the drug (66.1%), and 49.2% of the drugs involved acted in the digestive system / metabolism. All interventions were classified as appropriate, and 86.4% were able to prevent a negative result.	The orientation of the clinical pharmacist with the multiprofessional team at the time of the transplant patient's discharge is important, as it prevents negative results associated with pharmacotherapy, ensuring drug reconciliation and patient safety.
Fideles et al (2015)[7]	Analyze 3 years of clinical activities and pharmaceutical recommendations accepted during the pharmacist's daily routine in the adult intensive care unit.	An exploratory, descriptive, cross-sectional study was carried out from June 2010 to May 2013, in a tertiary teaching hospital, during which pharmaceutical recommendations were categorized and analyzed.	834 pharmaceutical recommendations were analyzed, which were classified into 21 categories. Pharmaceutical recommendations were mainly directed to doctors (n = 699; 83.8%), the most frequent being; dilution management (n = 120; 14.4%), dose adjustment (n = 100; 12.0%) and management of adverse drug events (n = 91; 10.9%). Comparing the periods, there was an increase, over the years, of pharmaceutical commendations with a greater clinical component	The role of the pharmacist in intensive care has evolved at the institution where the study was conducted, moving from reactive actions associated with logistics to effective clinical participation with the multidisciplinary team (proactive actions).

			and a decrease in those related to logistical aspects, such as the provision of medicines. The recommendations involved 948 drugs, with emphasis on anti-infectives for systemic use.	
Bernardi et al (2014)[8]	Report the process of computerization and systematization of pharmaceutical evaluations of medical prescriptions, as well as describe the profile of medical prescriptions and pharmaceutical interventions in an oncology hospital in southern Brazil.	The study was carried out from February 28 to November 11, 2011, in an oncology hospital. The collection was performed through the hospital's computerized system, taking into account the adult and pediatric inpatient wards. 3,221 medical prescriptions were evaluated, 28.0% of the total medical prescriptions in the period. A high rate of prescription of antibiotics (52.9%) and antineoplastic agents was evidenced (27.1%). Based on the evaluations, 284 pharmaceutical interventions (8.8%) were performed, mainly related to professionals doctors and pharmacists	Of the total, 93.7% of the interventions were considered adequate and accepted by the team.	The computerization process took place with good acceptance by the team, and the proper registration allowed the verification of the pharmacist's performance in the evaluations, reinforcing the importance of this professional for the multiprofessional team.
Penna (2014)[9]	Raise expectations of the health team regarding the role of the Clinical Pharmacist in the Institution's Pediatric and Neonatal ICUs to guide the actions that will be performed during the service implementation process.	Questionnaire application prepared by the Pharmaceutical Assistance Division to members of the Pediatric and Neonatal CTI team of HCFMRP-USP.	Fifty professionals were interviewed, including nursing assistants / technicians, nurses, physiotherapists, doctors and other professionals. Nursing assistants / technicians and physiotherapists showed a greater expectation with questions related to medication administration; for resident doctors and nurses the expectation revolves around issues related to medical prescription.	It was concluded that the service of Clinical Pharmacy in Intensive Care Units is a work still little known.
Paulo (2014)[10]	To better understand the steps taken by the medicine during its dispensing and distribution trajectory, the processes of each step of the flow and the most complex and important subprocesses, aiming at improvements and benefits both for health professionals and for the institution and, mainly, for the patient.	The data collection performed by the ethnographic method of description and observation of the phenomenon presented a context very close to the daily reality of the teams and provided a view of the complex scenario of the Hospital Pharmacy of the Health Complex of the Hospital das Clínicas of the State University of Campinas, São Paulo , from April to September 2010.	The professionals involved in dispensing and distribution, and even in the administration of medicines, make simple mistakes in these processes, usually associated with the lack of attention to the process and the distraction that the environment imposes on them, such as the large circulation of people, telephone service, exchange information between teams and others. Despite not being the object of this study, it is recognized that the hospital pharmacy work environment can indirectly contribute to medication administration errors, and other studies need to be carried out to better understand this scenario.	The study concluded that the medication dispensing and distribution flow includes 5 steps: (1) pharmacy warehousing, (2) preparation, (3) dispensing, (4) distribution in the wards and (5) return. There are 18 processes involved, and the critical points of greatest attention are the process of unifying medicines, sorting prescriptions, separating prescriptions and registering medications. It is vitally important to build a strategic plan focused on the prescription, distribution and dispensing of medicines, with short, medium and long term investments, with the objective of guaranteeing full safety to the users of the health system. He also concluded that the computerization of the Medical area, as in any activity, has become extremely important in updating and consolidating data, since in the hospital pharmacy, there are many areas in which the improvement of quality and productivity is associated with the use a more efficient computerized system in data processing and control, making it essential.
Nascimen-to et al (2013)[11]	Evaluate the existence of associations between variables in hospital pharmacy services.	30 variables from the Diagnosis project were used of Pharmacy Hospital in Brazil related to the general characterization of the hospital, general characterization of the hospital pharmacy service and stages of	The results indicated a direct relationship between fulfillment of activities and type of hospital and specialized pharmacists. The cluster analysis identified six groups related to the size of the hospital, with greater fulfillment of activities by hospital pharmacy services in large units and with	It was concluded that the techniques were able to identify associations and a concise list of variables for a comprehensive assessment of hospital pharmacy services in the country.

		pharmaceutical assistance. Dimension 1 of correspondence analysis multiple explained 90.6% of the variability, differentiating hospital pharmacy services according to the presence of activities, thus suggesting an axis of characterization of the structure of pharmacy services hospital.	pharmacists (more time dedicated to hospital pharmacy service and higher level of training).	
Rabelo e Borela (2013)[12]	The objective of this study was to propose the insertion of the pharmaceutical professional in the control of pain of oncological origin aiming at the rational use and monitoring of adverse reactions to medications.	For the effective control of pain, implementation of analgesic measures and evaluation of therapeutic efficacy of pain, the correct use of the World Health Organization (WHO) "Guide for Pain in Cancer" is essential, which provides guidelines for pain control in most patients with advanced cancer, and it is also essential to report the patient's painful experience to health professionals.	The scales for measuring pain combined with the protocol recommended by the WHO have proven to be an essential instrument for the rational use of medicines.	The pharmaceutical professional, in addition to fulfilling his current activity, is able to interact in multidisciplinary teams, assisting in the pain management of patients cancer, evaluating the length of this protocol established by WHO in pain control.
Miranda et al (2012)[13]	Demonstrate the role and importance of the clinical pharmacist in the First Care Unit in identifying, classification and survey of the number of interventions performed by the clinical pharmacist.	A retrospective study was carried out from January 1, 2010 to December 31, 2010, at the Morumbi First Care Unit of Hospital Israelita Albert Einstein. The interventions were carried out by the clinical pharmacist through work with the interdisciplinary team and active search in medical records, with the daily analysis of the medical prescription within eight hours (10 am and 7 pm) from Monday to Friday.	A total of 3,542 medical prescriptions were evaluated and 1,238 interventions occurred. The classifications and quantities of interventions were: route of administration: 105 (8.48%); frequency: 73 (5.89%); dose: 431 (35%); renal function: 14 (1.13%); compatibility: 50 (4%); dilution: 121 (9.77%); legibility: 39 (3.15%); pharmacovigilance: 7 (0.56%); adverse reaction to medications: 7 (0.56%); allergy: 35 (2.82%); infusion time: 76 (6.13%); indication: 52 (4.20%); drug reconciliation: 2 (0.16%); medicines via tube: 38 (3%); schedule: 7 (0.56%); protocol specific anticoagulants: 44 (3.55%); protocol specific hypoglycemic: 42 (3.99%).	The study allowed to demonstrate the importance of the clinical pharmacist working in the First Care Unit. For the classification and by the number of interventions performed, it was possible to observe that the Clinical Pharmacy Service had a great impact in increasing safety at patient and prevention adverse events.
Ferracini et al (2011)[14]	Demonstrate the development and contribution of the clinical pharmacy to the safe and rational use of medicines in a large tertiary hospital.	The work involved the participation of the clinical pharmacist in all issues related to the use of medicines in the hospital. In the beginning, it was related to the analysis of medical prescription, horizontal visit and implementation of protocols. Later, other activities were incorporated, such as: pharmacovigilance, participation in commissions and managed routines. After identifying the drug-related problem, the pharmacist contacted the doctor and, after the intervention, recorded the conduct on the prescription and / or on the patient's medical record.	There was an increase in the number of clinical pharmacists, reaching 22 in 2010. There was also an increase in the types and number of interventions performed (from 1,706 in 2003 to 30,727 in 2010) and we observed 93.4% adherence by the medical team in 2003, reaching to 99.5% in 2010.	The clinical pharmacy has shown a positive impact in relation to the number of interventions performed, promoting rational use of medicines and increasing patient safety. The pharmacist was inserted and guaranteed his space with the multidisciplinary team and in the patient safety process within the institution.
Borges Filho et al (2010)[15]	Highlight the contributions of the pharmacist and the hospital clinical pharmacy in the quest to reduce the use of human albumin by 20% with unsubstantiated indication at Hospital Israelita Albert Einstein.	During a period of 30 days (December, 2006), a preliminary prospective analysis was carried out using the medical prescriptions of patients with human albumin, and therapeutic indications were evaluated in relation to the guidelines established by ANVISA resolution RDC 115. Based on this information, an action project was prepared and a routine of daily monitoring of prescriptions by pharmacists was instituted as of January 2007.	From January to October 2007, 14,799 bottles of 20% albumin were consumed. Of these, 4,191 with unsubstantiated indication, corresponding to a loss of R$ 1.36 million. In 2008 (from January to October), 13,519 vials of 20% albumin were prescribed. Of these, 1,648 with unsubstantiated indication, which accounts for a loss of R$ 535 thousand. The ratio between the risk of loss and the amount consumed from January to October 2007 was 91.99. In the same period in 2008, it was 39.60. From January to October 2007, the average percentage of albumin prescribed with unsubstantiated indication was 28%. In the same period in 2008, this percentage dropped to 13%. A 54% reduction.	The Pharmacist's involvement in the process of verifying the indication and justification for the use of the medication represented the guarantee of safe rocesses for the patient, ensuring that he receives the right medication for the correct indication, thereby reducing the likelihood of adverse events and helping to reduce bureaucracy and expenses unnecessary in this institution.

Results

Table 01 shows that the references published in the English language represent 89% of the sample, being the language with the largest number of publications, while Portuguese was represented by 11% of the works and Spanish did not present any publication.

Table 1 - Distribution of the absolute number and percentage of studies, by language, Brazil, 2019.

Languages	Interges	%
English	16	89,0
Portuguese	2	11,0
Spanish	0	0,0
Total	18	100,0

Table 2 shows the distribution of the 18 articles selected according to their country of origin. Thus, 5 (28%) articles are from the United States, 5 (28%) from China and the other countries, India, Brazil, Thailand, Vietnam, Mali, Mozambique, Lebanon and France each have 1 (6%). It was demonstrated that the United States had a greater amount of research on the subject addressed.

Table 2 - Distribution of the absolute number and percentage of studies, by country of origin, Brazil, 2019.

Country of origin	Absolute Number	%
United States	5	28,0
China	5	28,0
India	1	6,0
Brazil	1	6,0
Thailand	1	6,0
Vietnam	1	6,0
Mali	1	6,0
Mozambique	1	6,0
Lebanon	1	6,0
France	1	6,0
Total	18	100,0

Looking at table 3, it can be seen that the PUBMED database, as shown in the table, stood out in relation to the other databases, contributing twelve articles, (67%) of all material used, however the LILACS AND CINAHAL databases also contributed significantly, with 11% and 22% respectively, although less frequently, they were fundamental to the study.

Table 3- Distribution of the absolute number and percentage of studies, by publication source, Brazil, 2019.

Source	Absolue Number	%
PUBMED	12	67,0
LILACS	2	11,0
CINAHL	4	22,0
Total	**18**	**100,0**

Table 1 represents a summary of the studies used in the sample that went through the analysis process, describing the author, year of publication, title of the article, methodological approach, degree of evidence and database and journal.

Chart 1 - Summary of the studies included in the integrative review, in the LILACS, PUBMED and CINAHL databases, in the period from 2015 to 2019, Brazil, 2019.

Author Database/Periodical Language	Year	Methodological Approach	Main Results
REISNER et al. Pubmed/ Journal of the International AIDS Society	2019	Quantitative	Of 857 MSMs, 55.2% had indications for PrEP. Risk Factors: Multiple sexual partners.
ARMSTRONG et al. Pubmed/ International Journal of Drug Policy	2015	Quantitative	In a sample of 420 MSMs, a third (37%) of men reported a history of anal sex with men, of which only 16% used a condom in the last anal sex.
DUAN et al. Pubmed/Drug and Alcohol Dependence	2017	Quantitative	Among MSM surveyed in 1935, 12.7% reported use of recreational drugs in the past six months. Recreational drug use was significantly associated with an increased risk of HIV and syphilis infections.
HE et al. Pubmed/BMC Infectious Diseases	2018	Quantitative	A total of 608 MSM were screened, 406 HIV-negative MSM. Prevalence of unprotected anal sex with regular male sexual partners, and non-regular male partners in the last six months was 53.9%, 23.6, respectively.
STRÖMDAHL et al. Pubmed/ Eurosuverillance	2015	Quantitative	A systematic review including five cohort studies (n = 8,825) reported that condom use reduced HIV transmission (relative risk (RR): 0.36; 95% confidence interval (CI) 0.20-0, 67) [27-32].
WILLIAMS et al. Pubmed/ American Journal of Public Health	2015	Systematic Review	Among HIV-positive MSM (n = 337), sexual intercourse between 12 and 16 years of age was positively associated with having more than 3 male partners in the last 6 months.
THIENKRUA et al. Pubmed/ AIDS Behavior	2018	Quantitative	HIV incidence was 7.4 per 100 person-years. In multivariable analyzes, reporting the use of a drug for erectile dysfunction in combination with drugs for clubs, having receptive or inserted and receptive anal intercourse with men, having hepatitis A infection, having rectal Chlamydia trachomatis, having hepatitis B infection before seroconversion HIV and not always reporting condom use with male partners is significantly associated with the incidence of HIV in MSM.
LE et al. Pubmed/ BMC Public Health	2016	Cohort Study	MSMs who practice receptive anal sex and who felt at risk of HIV infection, were at higher risk of HIV infection.
ZHANG et al. Pubmed/AIDS Care	2017	Quantitative	After considering possible confounding factors and time-varying effects, our models indicated that drug and alcohol use increases the risk of HIV in MSM.
CHAN et al. Pubmed/AIDS PATIET CARE and STDs	2015	Cohort Study	In a group of 538 MSMs, 7% had the highest prevalence of HIV and other sexually transmitted diseases, 16%),> 10 anal sex partners in the 12 months (69%), anonymous partners (100%), use of drugs / alcohol during sex (76%) and previous STDs (40%). MSM that can benefit most from PrEP includes those who have> 10 sexual partners

			per year, anonymous partners, drug / alcohol use during sex and previous STDs.
LAHUERTA et al. Pubmed/AIDS Behavior	2018	Qualitative	Factors associated with higher chances of HIV included younger age, receptivity to the last partner, breaking a condom during anal sex in the last 6 months.
LUO et al. Pubmed/BMJ Open	2015	Quantitative	The MSM population in Hangzhou has a high prevalence of HIV / syphilis infection, low perceived risks of HIV and more involvement in unsafe sex with their clients and partners, in addition to a low rate of condom use. These risk factors may explain your relatively high HIV / syphilis infection.
YANG et al. Pubmed/AIDS RESEARCH AND HUMAN REROVIRUSES	2016	Quantitative	MSM with a comprehensive knowledge of HIV had a reduced risk of diagnosis, while those with more male sexual partners, more male sexual experiences (including anal / receptive or / and insertion sexual intercourse, rimming and fisting) and a current syphilis infection were at risk. increased risk of HIV diagnosis.
MARTINEZ et al. Cinahl/ Trials	2018	Control Case	Main methods of preventing condom use and acts protected by PrEP and TasP.
CUMMINGS et al. Cinahl/AIDS and Behavior	2018	Randomized	In a sample of 563 MSM, 56.8% had receptive anal sex with men 12 months earlier, including 1,587 unprotected sex acts with men.
AUNON et al. Cinahl/Social Work in Public Health	2015	Quantitative	It demonstrated that MSM who practiced sex for money chose not to use non-client sexual partner condoms, in an effort to differentiate sex for work versus pleasure.
MORA; BRIGEIRO; MONTEIRO LILACS/Collectiv Health	2018	Qualitative	It points to HIV testing as a method of prevention in MSMs.
CALAIS; PERUCCHI LILACS/ Psycology in Review.	2017	Systematic Review	It advocates the combined prevention method as a means of HIV prevention in MSMs.

Discussion

The findings of this study are able to highlight the risk factors and preventive strategies for the prevention, control and coping with HIV / AIDS in men who have sex with other men.

With regard to risk factors, the location and understanding of risk factors for HIV is essential for providing the basis for the implementation of policies aimed at prevention. In the case of Men who have Sex with other Men (MSM), the contamination of this public exposes them to a global epidemic of serious impact and which continues to expand in most countries, which indicates the need for advances in knowledge about related factors.[18] From the researched scientific productions, they pointed out the main risk factors that contribute to HIV contamination in MSM: multiple sexual partners, unprotected sex, syphilis, use of alcohol and illicit drugs, and receptive anal sex, a result similar to that found in a meta-analysis of 12 studies in China.[19] As has been pointed out, the multiplicity of sexual partners is a factor associated with HIV infection. Because the greater the number of sexual partners, whether male or female, the greater the chance not only of transmission, but also of HIV contraction between MSM and their partners.[20-21]

The multiplicity of partners increases the risk not only of contracting HIV, but also of other STIs and is a significant predictor of behavior seeking health treatment, as people with only one sexual partner are more likely to seek health treatment earlier.[22-23] In a study conducted in China it was identified that having multiple male sexual partners is directly associated with HIV infection, in the same study more than 10% of the survey participants reported having at least five sexual partners in the last 6 months prior to the survey. that becomes very worrying.

People who have multiple sexual partners are more likely to engage in other risky sexual behaviors than people who have only one partner.[24] This is in line with a study in Addis Ababa, in which unprotected sex was greater among those who had multiple sexual partners compared to those who had a single partner.[25]

Unprotected sexual intercourse is a very common practice among MSM who, at times, are unaware of their partner's serological situation, which makes this attitude an important risk factor for HIV contraction. In general, unprotected sex in the presence of detectable viral load, especially when the serological situation is not known, are responsible for new HIV infections among MSM.[26-27]

Anal sex is ten times more at risk for HIV transmission when compared to vaginal sex without a condom. In many situations, unprotected sex can be a conscious and desired choice, which can be seen in sexual practices *barebacking*, in which MSM practice anal sex without using condoms intentionally, as it is considered more pleasurable.[28]

Many MSM still keep in mind that unprotected anal intercourse with a regular partner is safe and they have not recognized the risk of such relationships within regular relationships, although most HIV infections are transmitted by regular sexual partners.[29-30]

Despite the awareness of the importance of condoms, MSM do not feel vulnerable to HIV and claim some reasons to justify unprotected sex such as the possibility of condoms to break the decrease in pleasure. And they end up offering resistance to condom use because they believe their partner is not HIV positive, ashamed to buy condoms, not being able to use them, lack of money and false beliefs.[31]

Even with all the existing and widely disseminated information on condoms, and their distribution for free, the amount of MSM involved in unprotected sexual practices is very high.[32] Having had syphilis or an ulcerative STI increases the risk of HIV contamination.[20] In a study conducted between 2013 and 2015, about 70.7% of MSM with syphilis had HIV co-infection, as well as genital ulcer.[33-34]

The presence of other STIs facilitates the risk of HIV transmission due to the interruption of protective barriers and the recruitment of immune cells susceptible to the site of infection. Among STIs, syphilis stands out due to the increase in HIV viral load in the patient's blood plasma and the decrease in the count of TCD4 cells, which can contribute to the progression of infection to AIDS.[35]

According to the WHO, 2014 alcohol is a psychoactive substance with addictive properties and has been used for centuries and in different cultures. Alcohol use can be harmful and cause a large number of health problems, as well as social and economic burdens on societies.

A factor related to the sexual practices of MSM and associated with HIV infection and other STDs is the inconsistent condom use that can occur due to the use of alcohol and / or psychoactive substances before and during sex, which can increase exposure to HIV infection.[18]

Thus, the use of illicit drugs has been associated with an increased prevalence of unplanned pregnancies and STIs, in addition to HIV infection. Since the end of the 1980s, the relationship between illicit drugs has been a concern because of the increasing prevalence of HIV / AIDS and other STIs in this population.[36-37]

In a study carried out with drug users treated in treatment at a Psychosocial Care Center focused on assisting alcohol and drug users, (CAPSad) pointed out that despite drug use, it is associated with sex and that it makes sense for participants in such research, in practice, condom use was inconsistent, and they had a high prevalence of STIs.[38] In addition, the presence of preference for receptive anal sex was also identified in other scenarios and revealed that those who prefer receptive anal sex are more likely to be diagnosed with HIV, this is because unprotected anal sex carries a greater risk of transmission HIV.[39]

Finally, the main form of HIV transmission in Brazil is through sexual intercourse, with unprotected anal receptive sexual practice being the most risky situation for acquiring the virus.[40]

Due to the fragility of the epithelium of the anorectal mucosa, there is an increased risk of rupture of the epithelial barrier during sex, this fact, associated with the absence of a protective antibody barrier in the rectal mucosa, facilitates the entry of the virus into the host.

Regarding HIV preventive strategies involving men who have sex with other men (MSM), it was identified that in the research selected as the basis for the present study, the main preventive strategies pointed out are: PreP, TasP, HIV testing, consistent condom use and combined prevention.

Pre-exposure prophylaxis (PrEP), marketed as "truvada", is a combination of two drugs in a single tablet: deprofil tenofovir fumarate (TDF) and emtricitabine (FTC), and is used daily, via oral.[43]

Its use is particularly recommended for key populations vulnerable to infection, among which MSM stand out and among the current biomedical prevention strategies against HIV infection, PrEP, has stood out for the effectiveness presented in the clinical trials developed, with reduction in risk of infection by up to 92%.[44]

The use of PrEP can be a useful method to prevent HIV infection and in addition to directly protecting individuals who take it, it can also have an indirect effect on people who are not PrEP, since a reduced number of infections by HIV will eventually lead to decreased transmission. People who take PrEP may feel protected from HIV infection and, consequently, use less condoms. On the other hand, PrEP users can be widely advised, be more aware of their risk behaviors and the risks of unprotected sex, and therefore may be more likely to use condoms.[45]

In countries where HIV transmission occurs among MSM, PrEP should not be considered as the only intervention option, as other HIV prevention options are needed.[45] PrEP is recommended due to the positive result of benefits and damages based on high-quality evidence, acceptability in the review of values

and preferences, feasibility in study environments, and potential cost-benefit, however there are no data on the long-term effects. TDF / FTC term in health in individuals not infected with HIV or among those who become infected with HIV while on PrEP.

Unlike what happens in other countries where the drug is marketed in 2015, the Ministry of Health announced the development of the first national study with MSM aimed at distributing PrEP free of charge through the Unified Health System (SUS) in hospitals and in specialized treatment posts. and STI / AIDS prevention.[46]

Before prescribing the use of PrEP, health services that provide treatment should educate and advise potential users about the risks and benefits of PrEP and can also conduct an individualized risk-benefit assessment to assess possible eligibility. For the candidate to be able to use PrEP, some criteria must be met, which are: being HIV negative; having no suspicion of acute HIV infection; be part of the population at substantial risk of HIV infection; not having contraindications for PrEP drugs (for example, TDF / FTC); be willing to use PrEP as prescribed, including periodic HIV tests.[47]

TasP is a term used to describe a method of preventing HIV infection (regardless of the CD4 cell count) that uses antiretroviral therapy in HIV-infected individuals, because with the reduction of the viral load in the person infected by the virus, there is a decrease the likelihood of HIV transmission.[48]

Antiretroviral treatment cannot be seen as the only means of prevention. The prevention policy should be combined with other ways of reducing the transmission of the virus, such as treatment of other sexually transmitted infections that increase the likelihood of HIV transmission, advice on the forms of transmission and prevention methods available, policy of reduction of harm to people who inject drugs.[49]

TasP's intention is that in addition to having a better quality of life, they have less viruses circulating in their bodies (with low or even undetectable viral load), and this causes a great impact as it reduces the transmission of HIV in the community.[50]

Since 2005, rapid tests have been offered in Brazil, in compliance with Ordinance No. 34/2005, which discusses the mandatory use of rapid tests for the diagnosis of HIV infection in special situations such as occupational risk, pregnant women who have not been tested in the prenatal care, a population that is difficult to access and can also be used in cases where there is a need.51 However, the insertion of rapid tests in the protocols published by the Ministry of Health, for the diagnosis of STIs, is relatively recent and the professionals responsible have not yet they have sufficient security for interpretation and conduct after their performance.[51]

MSM are one of the populations with a concentrated HIV epidemic, which is disproportionate to other populations, which means that the importance of periodic HIV testing, as a prevention strategy in the programmatic response to the HIV / AIDS epidemic, is discussed on a global scale.[51]

The Testing and Counseling Centers (CTA), implanted in Brazil since 1989, offer anti-HIV testing free of charge and carry out STI diagnosis and prevention actions. The counseling actions carried out in these places have the purpose of passing on information to users about HIV / AIDS and guide them in relation to

preventive measures and coping with seropositivity and disease, however WHO estimates indicate that only 0.2% of adults in low- and middle-income countries undergo testing and counseling for HIV. diagnosis of HIV infection.[53]

Rapid tests decrease the transmission of STIs and also the number of aggravating factors and mortality, thus having a great impact on public health, as they do not need a laboratory structure like the other standard tests and cover a larger number of people, thus allowing the diagnosis and treatment of individuals who would not otherwise be diagnosed.[54]

Condoms are safe, low-cost methods with no side effects. The Ministry of Health recommends that its use should be encouraged even in cases where other prevention methods are in progress, such as Post-Exposure Prophylaxis (PEP) or PrEP and its offer must be made without restrictions, without limitations on withdrawal quantities. and without the need for identification documents, so that it is not difficult for people to access these inputs.[55]

The consistent use of condoms is an important preventive measure also for people living with HIV / AIDS, since among serodiscordant and seroconcordant couples it is intended to prevent reinfection of strains already resistant to antiretrovirals, to decrease viral load during sexual intercourse and to avoid transmission of other sexually transmitted infections.[56]

Condom use is an effective method for the prevention of STIs including HIV as long as it is used correctly and frequently, and its use properly is directly related to knowledge, attitudes and practice, that is, to know, feelings and behaviors in relation to STIs.[57]

Combined prevention should not only have a biomedical approach, but also include cultural, social and structural dimensions of the epidemic. It is not a mere combination of methods and technologies, but a combination of these methods with structural factors, with social aspects (favorable social and cultural environments, such as less stigma and discrimination) and behavioral (expanding the level of knowledge about the new methods, individual and collective choices).[58]

The effective adoption of multiple preventive approaches also depends on the access of individuals and communities to information about available methods, in addition to awareness of the potentially most effective methods in the light of their specific situations and the empowerment to make decisions about the prevention options they make. more meaning to their lives.[59]

Combined prevention has several challenges to be successful, in addition to taking the test to everyone, removing the clinical criteria for starting ART, you should also encourage all people who are diagnosed with HIV to enter as soon as possible, under treatment, always respecting the autonomy of these people in relation to this choice.[56]

Conclusion

The study identified the main risk factors for HIV infection in MSM: multiple sexual partners, unprotected sex, syphilis, use of alcohol and illicit drugs, and receptive anal sex and as the main preventive strategies, PreP, TasP, Testing for HIV, consistent condom use and combined prevention.

When evaluating the scientific productions related to the risk factors and preventive strategies of HIV / AIDS in MSM in the referred period, it was observed that it is of fundamental importance that the contamination by HIV / AIDS in the population addressed here has in the current context of our society and the continuity of the subject may, of course, provide subsidies for further discussion and direction of actions and conduct in the face of the theme, aiming at reducing the consequences arising from HIV / AIDS infection.

It is also highlighted the need to encourage actions aimed at expanding health education based on the awareness of key populations and other populations, prioritizing prevention and protection actions for the whole society.

It is emphasized that knowing the risk factors and preventive strategies for HIV/AIDS in MSM is not always sufficient to reduce the incidence of this phenomenon. Actions are also needed to facilitate and encourage access to health services, so that everyone can have access to guidance, methods of prevention, and treatment of such a problem.

Therefore, considering the relevance of the subject and the high rates of HIV/AIDS infection in MSM today, the findings cited in this study may serve as subsidies for other future studies with the objective of implementing safe sexual practices, implementing public policies and awareness of the entire population.

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