

Use of post-exposure prophylaxis for HIV in young people: an integrative review

Uso de profilaxia pós-exposição para o HIV na população jovem: revisão integrativa

How to cite this article:

Mota ER, Farias OO, Maia JKO, Queiroz ML, Mota NP, Galvão MTG. Use of post-exposure prophylaxis for HIV in young people: an integrative review. Rev Rene. 2022;23:e78152. DOI: <https://doi.org/10.15253/2175-6783.20222378152>

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Conflict of interest: the authors have declared that there is no conflict of interest.

EDITOR IN CHIEF: Ana Fatima Carvalho Fernandes
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ABSTRACT

Objective: to identify the use of post-exposure prophylaxis for HIV in young people in the context of sexual risk behavior. **Methods:** this is an integrative review, with search in LILACS, MEDLINE, CINAHL, SCOPUS, SciELO and COCHRANE, using the main descriptors: HIV, HIV Infections, Health Education, Technology and Post-Exposure Prophylaxis related through the Boolean operators AND and OR. **Results:** the final sample included 16 studies, mostly implemented with men who have sex with men. The articles were classified and analyzed from the categories: knowledge assessment; barriers/challenges to adherence to post-exposure prophylaxis; population using post-exposure prophylaxis; and educational technologies. **Conclusion:** non-adherence was related to the ignorance of basic information such as the indication of post-exposure prophylaxis, place of delivery, dosage, and side effects. **Contributions to practice:** synthesis of knowledge about the use of post-exposure prophylaxis by young people. In addition to increasing research on young people in the context of risky sexual behavior, especially in the nursing field, it subsidizes the development of health education strategies.

Descriptors: Health Education; HIV; HIV Infections; Post-Exposure Prophylaxis; Technology.

RESUMO

Objetivo: identificar o uso da profilaxia pós-exposição para HIV na população jovem em contexto de comportamento sexual de risco. **Métodos:** trata-se de uma revisão integrativa, com busca nas bases LILACS, MEDLINE, CINAHL, SCOPUS, SciELO e COCHRANE, utilizando os descritores principais: HIV, HIV Infections, Health Education, Technology e Post-Exposure Prophylaxis relacionados por meio dos operadores booleanos AND e OR. **Resultados:** contemplaram a amostra final 16 estudos, implementados majoritariamente com homens que fazem sexo com homens. Os artigos foram classificados e analisados a partir das categorias: avaliação de conhecimento; barreiras/desafios para adesão à profilaxia pós-exposição; população usuária da profilaxia pós-exposição; e tecnologias educativas. **Conclusão:** a não adesão esteve relacionada ao desconhecimento de informações básicas como indicação da profilaxia pós-exposição, local de fornecimento, posologia e efeitos colaterais. **Contribuições para a prática:** síntese do conhecimento sobre o uso da profilaxia pós-exposição por jovens. Além de incrementar pesquisas que versem sobre jovens em contexto de comportamento sexual de risco, principalmente, no âmbito da enfermagem, subsidia a elaboração de estratégias de educação em saúde. **Descritores:** Educação em Saúde. HIV; Infecções por HIV. Profilaxia Pós-Exposição. Tecnologia.

Introduction

The Human Immunodeficiency Virus (HIV) detection rate has been increasing in young people, and in recent years has remained at approximately 14%⁽¹⁾. Adolescents and young people represent a growing portion of people living with the virus worldwide. In 2020 alone, 400,000 young people between 10 and 24 years old were infected, of which 150,000 were adolescents between 10 and 19 years old. It also indicates that only 25% of adolescent girls, and 17% of adolescent boys aged 15 to 19 in East and Southern Africa - the region most affected by the virus - have been tested for HIV in the past 12 months and received their latest test results. Testing rates in West and Central Africa and South Asia are even lower. If current trends continue, there will still be about 183,000 new annual HIV infections among adolescents in 2030⁽²⁾.

Aiming at the prevention and control of HIV infection, the Ministry of Health recommends the adoption of combined prevention. This includes Post-Exposure Prophylaxis (PEP), a biomedical intervention that prevents the virus from being sufficiently viable and replicating in the exposed organism, thus preventing the infection of people who had some risk exposure⁽³⁾.

This short-term therapy was developed in the 1990s. Its use reduces seroconversion rates when started in a timely manner and if time of use adherence is maintained. The implementation of post-exposure prophylaxis in different continents is not so old, however, its dissemination and access seem to be covered by various barriers, from the absence of specific policies to the lack of inputs⁽³⁾.

In this context, combined prevention actions are necessary in this population, focusing on the behavioral approach, implementing educational actions, campaigns against HIV adapted to cultural and/or social contexts and promoting open and direct dialogue between health agencies, school, and society. The association of these actions will strengthen the fight against HIV⁽⁴⁾.

Given the low number of studies addressing the use of PEP by young people, the increase in the number of cases of HIV/Human Immunodeficiency Syndrome in this age group, and the gap in knowledge of this population about the forms of prevention, it is important to produce studies on the subject, since, according to what is presented in the combined prevention mandala (graphical and didactic representation of combined prevention), this type of prophylaxis is one of the main forms of prevention⁽⁵⁾.

Thus, we aimed to identify the use of post-exposure prophylaxis for HIV in young people in the context of sexual risk behavior.

Methods

This is an integrative literature review conducted between December 2020 and February 2021. The study followed the following steps: formulation of the research question; definition of inclusion and exclusion criteria; categorization of studies; selection of studies to be included in the integrative review; discussion and interpretation of results compared with the literature findings; synthesis of knowledge evidenced in the analyzed articles and presentation of the integrative review⁽⁶⁾.

To formulate the question, the acronym PICO was used, as it allows the recovery of human experiences and social phenomena. In this strategy the P corresponds to Population (young people), the I refers to the phenomenon of interest (use of post-exposure prophylaxis for HIV) and Co, refers to the context (risky sexual behavior).

To contribute to the identification of the target audience, the World Health Organization (WHO) concept is used, which circumscribes adolescence to the second decade of life (from 10 to 19 years) and considers that youth extends from 15 to 24 years. These concepts have ramifications, identifying young adolescents (15 to 19 years old), and young adults (20 to 24 years old)⁽⁷⁾.

The guiding question formulated for this re-

view was: What is the technical-scientific production on the use of post-exposure prophylaxis for HIV in young people in the context of sexual risk behavior?

The bibliographical survey was conducted by virtual access to the following health area databases: Latin American Literature on Health Sciences (LILACS); Medical Literature Analyses and Retrieval System online (MEDLINE), Cumulative Index to Nursing and Allied Health Literature (CINAHL), SCOPUS, Scientific Electronic Library Online (SciELO) and COCHRANE, accessed through the Portal of the Coordination for the Improvement of Higher Education Personnel (CAPES).

The database searches were carried out by two researchers independently and there was no disagreement. The descriptors present in the Health Sciences Descriptors (DeCS) and their equivalents in the English language in the Medical Subject Headings (MeSH) and CINAHL Titles (Human Immunodeficiency Virus, HIV Education, Patient Education) were selected. This survey was conducted by combining the following descriptors: HIV, HIV Infections, Health Education, Technology, and Post-Exposure Prophylaxis. The terms were related using the Boolean operators AND and OR. To restrict the study population to young people, the descriptor young people was used; however, in a pilot search, the strategy did not achieve results, and therefore, this descriptor was removed.

Intentional sampling was implemented, based on the following inclusion criteria: studies that addressed the use and/or knowledge about post-exposure prophylaxis in young populations; available in full online; regardless of the period or language of publication. The following exclusion criteria were established: articles that did not answer the guiding question; repeated studies found in different platforms; case studies; experience reports and editorials.

Articles that met all eligibility criteria were read title and abstract, and those that met the study criteria were read in full to identify suitability to the guiding question of the integrative review. After selection, the articles were analyzed in their characteris-

tics, obtaining the following information: identification, objectives, methodological characteristics, main results, conclusions, and levels of evidence⁽⁸⁾.

The data were extracted using a specific instrument, containing information about the main author, journal, year of publication, level of evidence, study design, study site, sample, and main results.

As for the level of evidence, the studies followed the following classification: Level 1 - systematic reviews or meta-analysis of relevant clinical trials; Level 2 - evidence from at least one well-designed randomized controlled trial; Level 3 - well-designed clinical trials without randomization; Level 4 - well-designed cohort and case-control studies; Level 5 - systematic review of descriptive and qualitative studies; Level 6 - evidence derived from a single descriptive or qualitative study; Level 7 - evidence derived from the opinion of authorities or expert committees including interpretations of information not based on research⁽⁸⁾.

The results were summarized in figures. Then, the articles were categorized, and the results were critically analyzed based on the scientific literature. Figure 1 describes the flowchart of selection and inclusion of the articles found in the databases.

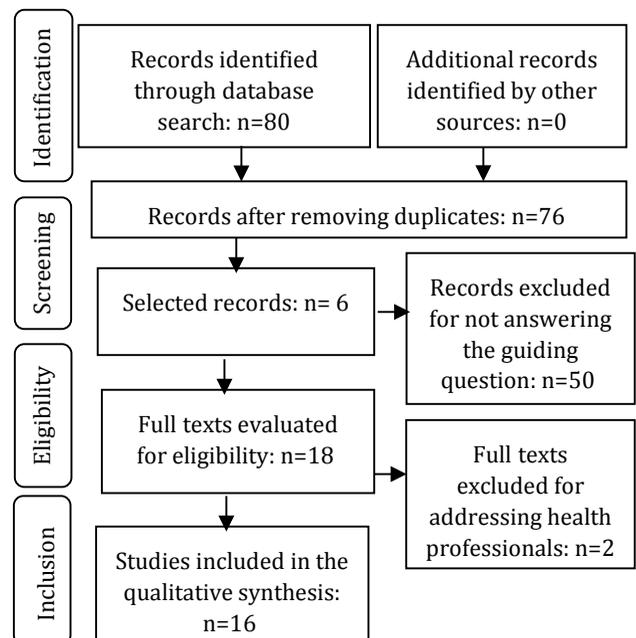


Figure 1 – Flowchart of identification, selection, and inclusion of studies. Fortaleza, CE, Brazil, 2022

Results

The characterization of the 16 articles revealed that the publications occurred between 1998 and 2020, with the distribution: 2020⁽⁹⁻¹²⁾, 2019⁽¹³⁾, 2018⁽¹⁴⁻¹⁵⁾, 2017⁽¹⁶⁻¹⁷⁾, 2016⁽¹⁸⁾, 2015⁽¹⁹⁾, 2014⁽²⁰⁾, 2013⁽²¹⁻²²⁾, 2008⁽²³⁾, and 1998⁽²⁴⁾, which indicates a certain regularity regarding the publication of the theme, with an increase during the year 2020. Regarding the place of publication, we can cite the United States of America^(12,15,19,21,24) representing the largest number, followed by China^(9,11) and England^(16,22) with two publications each, and South Africa⁽¹⁸⁾, Australia⁽²⁰⁾, Brazil⁽¹³⁾, Canada⁽¹⁴⁾, Spain⁽²²⁾, France⁽¹⁷⁾, and Nigeria/Ghana and South Africa⁽¹⁰⁾ (each with one publication).

As for the populations addressed in the articles: the group most referred to are Men who have Sex with Men (MSM) with a total of six published articles^(9-11,16,18,20), followed by people using post-exposure prophylaxis, with three^(14,17,24). Drug users⁽²⁴⁾, the Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) population⁽²²⁾, women in general, and women deprived of liberty⁽¹⁹⁾ were also represented, each with one publication. It is noteworthy that one article used as population MSM/Cisgender and transgender non-white women⁽¹⁵⁾.

It is noteworthy that it was not possible to calculate the mean age of the participants in the studies, since they were measured in different ways and were

not included in all articles. The age ranges most often mentioned were: <30 years old⁽¹¹⁾; 18-30 years old⁽¹⁰⁾; 26-40 years old⁽¹³⁾; 20-24 years old⁽¹⁵⁾; 31-40 years old⁽¹⁶⁾; ≥30 years old⁽²²⁾. The mean ages found were as follows: 34.7 years old⁽¹⁹⁾; 45⁽¹²⁾; 37.5⁽¹⁴⁾; 40.9⁽¹⁷⁾; 32.8⁽¹⁸⁾; 33.8⁽²⁴⁾. Age was not mentioned in four articles^(9,20-21,23). Thus, it is important that situational diagnoses be performed to reach specific populations in their needs.

Regarding the level of evidence of the studies: two studies have level 1 because they are systematic reviews with meta-analysis^(9,21); two studies are level 4^(14,20); followed by nine articles classified as level 5^(10-11,15-16,18-19,22-24). A significant number of studies with a cross-sectional approach stand out; and three studies identified as level 6^(12-13,17). Systematic review studies were included due to the high level of evidence and the low number of studies on the subject. And, regarding the quality of the studies, after applying the instruments of the Joanna Briggs Institute (JBI), the 16 selected articles were included in this review.

The articles were divided into three categories: Evaluation of knowledge about post-exposure prophylaxis^(9,11,15-16,18,22); Barriers/challenges and adherence to post-exposure prophylaxis^(10,21); and Populations using post-exposure prophylaxis^(12-14,17,19,20,23-24). Figure 2 shows the categories and characterization of the studies as to country/year of publication, design/sample and main outcomes.

Code	Country/Year	Design/Sample	Main outcomes
Category 1. Knowledge evaluation			
A2	China/2020 ⁽¹¹⁾	Cross sectional n=713	Identify strategies such as: clinical guidance on non-occupational use (what doesn't occur through workplace accidents) of PEP; communication campaigns targeting MSM social networks needed to address barriers to PEP awareness and acceptance.
A5	China/2020 ⁽⁹⁾	Systematic review with meta-analysis n=74	Risky sexual behaviors and STI history are associated with higher PEP uptake. Insufficient knowledge, underestimated risk of HIV exposure, lack of accessibility, and social stigma may impede PEP uptake. Knowledge and uptake of PEP among MSM worldwide are low. Additional efforts are needed to address barriers to PEP access.
A7	USA/2018 ⁽¹⁵⁾	Cross sectional n=529	Increasing the level of awareness about PEP, especially among young black MSM, can maximize the impact of HIV chemoprophylaxis. Highlights include: a) Targeted programming and messaging. b) Education and knowledge can be increased by supporting community-based organizations that work with key populations. c) Media campaigns that raise awareness and act to reduce stigma can generate the creation of enabling environments where exposed individuals can access and adhere to PEP. d) Awareness of PEP can be increased through outreach to large public institutions that reach key subpopulations.

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Code	Country/ Year	Design/Sample	Main outcomes
A10	England / 2017 ⁽¹⁶⁾	Cross sectional n=179	The high awareness and use in this sample suggest that PEP is a valuable risk reduction strategy that should be capitalized on following potential HIV exposures among MSM. Initiatives to increase patient comfort in disclosing their sexual orientation to the general practitioner may further increase awareness and acceptance of PEP and other HIV prevention treatments and promote overall improvements in MSM health.
A11	South Africa/ 2016 ⁽¹⁸⁾	Cross sectional n=408	Ongoing web-based surveys could be conducted to produce serial cross-sectional surveillance data that assess knowledge, attitudes, and beliefs about PEP. PEP use among MSM that should have access to PEP, but whose level of information about this prevention strategy and uptake of PEP itself are lagging other segments.
A13	Spain/ 2013 ⁽²²⁾	Cross sectional n=2,545	22% of the participants knew about PEP. Only 2% had ever used it; 70% of these after high-risk sex. Awareness was higher among MSM (34%) than among women (16%) and men who had sex exclusively with women (15%). It was evidenced that lack of PEP awareness is associated with birth in Latin America, while awareness increased with the number of prior HIV tests among women and men who had sex exclusively with women. Among men who had sex exclusively with women, knowledge was associated with having a college degree, the degree of interaction with gay culture, number of partners, and use of the internet as the main way to meet partners.
Category 2. Barriers/challenges to PEP adherence			
A3	Rwanda, Nigeria, Ghana, and South Africa/ 2020 ⁽¹⁰⁾	Cross sectional n= 97	Most respondents reported having heard of PEP, and the average level of correct knowledge of PEP was low. Five characteristics were associated with higher odds of using PEP: age, having a professional background, having heard of PEP, knowing where to get PEP, and having been kicked out of the house.
A12	USA/ 2013 ⁽²¹⁾	Systematic review with meta-analysis n=17	Higher overall adherence to PEP was demonstrated than previously reported for HIV exposure after sexual assault. Although pre-exposure prophylaxis is a significantly more long-term intervention than PEP, the high adherence to PEP observed after unforced sexual exposure to HIV outside of a clinical trial setting is encouraging for future adherence to pre-exposure prophylaxis and indicates that high levels of adherence to antiretroviral therapy for prevention can be achieved.
Category 3. Populations using PEP			
A1	USA/ 2015 ⁽¹⁹⁾	Cross sectional n=114	The data pointed to the importance of preventive educational strategies and measuring knowledge about PEP, about risk behaviors, about ways to obtain PEP, and about general information. Although simple, the educational program represented a valuable opportunity for HIV prevention education for populations at high risk of HIV acquisition.
A4	USA/ 2020 ⁽¹²⁾	Methodological Study n=51	Preliminary evidence of an increase in knowledge and awareness of PEP after viewing a brief PEP educational video coincided with sustained willingness to access PEP over time. However, those who were unwilling to access PEP were more likely to report HIV stigma. Furthermore, willingness to access PEP did not translate into actual requests for PEP. Contextualized perception of low HIV risk emerged qualitatively as a possible explanation for the lack of PEP uptake.
A6	Brazil, 2019 ⁽¹³⁾	Retrospective n=501	The number of women receiving PEP, in registries over a 2-year period, was approximately 25% of that reported for men. High rates of loss to follow-up after initiation of PEP reduced the positive impact of this method. Whether new preventive methods will live up to their potential to contain the epidemic depends on the implementation of policies aimed at improving the organization of health facilities and addressing structural inequalities.
A8	Canada/ 2018 ⁽¹⁴⁾	Retrospective n=501	Thirty patients received PEP in the modality known as PIP. Four patients used PIP during this study. There was no HIV seroconversion in 21.8 cumulative patient-years of PIP. Twenty-nine were MSM, while one heterosexual woman in a HIV-different relationship was included. The mean age was 38 years. Of the 30 who started on PIP, four patients were initially on pre-exposure prophylaxis but transitioned to PIP due to very rare risky sexual activity, while another four patients transitioned to daily pre-exposure prophylaxis based on follow-up assessment of sexual practices and HIV risk.

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Code	Country/ Year	Design/ Sample	Main outcomes
A9	France/ 2017 ⁽¹⁷⁾	Qualitative n=23	Many participants reported negative PEP experiences: difficult access to the PEP clinic, uneasiness and embarrassment in the hospital setting, unpleasant interaction and moral disapproval from medical staff, intolerance of treatment, and prevention messages that were inconsistent with real life. PEP management failures among the target population are highlighted that may have compromised any subsequent attempts to seek PEP.
A14	England / 2008 ⁽²³⁾	Cross sectional n=30	Fifteen men in the sample described a sexual exposure incident where they knew their partner had HIV. Of these, only five knew their partner's HIV status prior to sexual contact. The remaining 10 sought PEP because their sexual partner disclosed his positive status after potential sexual exposure. The results indicated that encouragement from friends, sexual partners, and health care providers played a key role in men's knowledge about the existence of PEP.
A15	USA/ 1998 ⁽²⁴⁾	Cross sectional n=327	Eight (3%) men had already used PEP and 85 (26%) planned to use it. Compared to the 242 (74%) men who indicated no plans to use PEP, those planning to use PEP were younger, less educated, more likely to have used illicit substances in the past six months and were more likely to have a history of injection drug use. Men who intended to use PEP were also more likely to have engaged in unprotected anal and oral sex as receptive partners and were more likely to have multiple anal sex partners with whom they were receptive. MSM generally support the immediate use of PEP.
A16	Australia/ 2014 ⁽²⁰⁾	Quantitative and qualitative cohort n=328	Of the 88 patients (27%) participated in the qualitative approach. The interviews explored the event that prompted the request for PEP. Participants understood safe sex, the physical and psychological experience of treatment, and the impact that the availability of PEP may have on their future sexual practices. A recurring theme was the determination to maintain existing high levels of safe sex or increase safe sex practices in men who perceived PEP as a warning.

PEP: Post-Exposure Prophylaxis; HIV: Acquired Immunodeficiency Virus; STI: Sexually Transmitted Infections; MSM: Men who have Sex with Men; PIP: Prophylaxis in Pocket

Figure 2 – Categories and characterization of the studies regarding country/year of publication, design/sample and main outcomes. Fortaleza, CE, Brazil, 2022

Discussion

From the findings of this review, the various facets involved in the educational process about post-exposure prophylaxis become evident. The evaluation of knowledge, a practice found in some of the articles included, is an essential step to understand the needs of the target population, working as a diagnostic analysis of what is available. Thus, it is noteworthy that through this review there is the development and/or improvement measures of national, state, or municipal programs about the adequacy of the offer of post-exposure prophylaxis to the needs of the young population⁽²⁵⁾. The apprehension of this data is important as a starting point for understanding the weaknesses and potentialities to be worked on in health education.

It was identified in China that among 708 gay, bisexual and MSM, those with lower educational level and higher risk behavior have reduced knowledge about post-exposure prophylaxis, and 70% said they would use it if they needed it (only 6% would have already used it). It is important to highlight that in this country the use of non-occupational post-exposure prophylaxis is allowed since 2005, but it has not been well introduced, and there are no national guidelines for its indication⁽¹⁰⁾.

The data found pointed to an overall suboptimal understanding (51.6%) about post-exposure prophylaxis in regions considered developed, such as the United States, Australia, and Europe, which contrasts with better data from middle-income regions such as Brazil, South Africa, and Thailand. The low level of knowledge was related to higher exposure to HIV, and

subsequently higher use of post-exposure prophylaxis⁽²¹⁾. In contrast, a group of 179 British MSM recruited by smartphone app obtained 88% of statements about post-exposure prophylaxis, which may demonstrate sociodemographic variability⁽¹⁶⁾.

Corroborating this fact, analysis in a Spanish article revealed that only 22% of 2,455 participants had ever heard of post-exposure prophylaxis, a fact more common among MSM than among women or men who had sex with women ($p < 0.000$). Latin Americans and those who had unprotected sex with casual partners in the past 12 months were less likely to know about post-exposure prophylaxis. In contrast, the more annual testing, the more likely they were to know about post-exposure prophylaxis⁽²⁶⁾. These findings indicate that programmatic issues such as the provision of safe information, policy formulation, development of protocols and guidelines, as well as their implementation, are governmental responsibilities, and their increase or decrease is directly linked to the efforts that countries, states, and municipalities make. On the other hand, the individual dimension carries characteristics such as functional health literacy for knowledge acquisition.

It is important that the specificities of key populations are accessed to target health education actions, as demonstrated in a US study of 529 trans women, non-white MSM and non-white women, where 313 (59.2%) had already heard about post-exposure prophylaxis. Most answered correctly regarding the indication of post-exposure prophylaxis (78.6%) and maximum time to start (70.6%). As for the treatment time, the item with the lowest rate, 40.4% answered correctly⁽¹⁵⁾. Although little reported in the included studies, professionals should also be evaluated and sensitized as to the need to acquire knowledge about post-exposure prophylaxis, even if they do not work in specialized services.

It was found that in a group with 221 nurses, 51.1% had heard about post-exposure prophylaxis against HIV. The main sources of information about post-exposure prophylaxis were faculty (26.5%) and

colleagues (22.1%), while 31 (27.4%) could not remember the source of information, and only 3 (1.4%) professionals had attended a formal training on post-exposure prophylaxis for HIV. The majority (77.8%) could not identify indications for post-exposure prophylaxis, and more than half (60.6%) were unaware of appropriate first aid measures following a needle stick injury. The majority (89.6%) of respondents could not identify a single antiretroviral drug used as HIV prophylaxis after exposure, and overall, more than two-thirds (80.1%) had insufficient knowledge of post-exposure prophylaxis for HIV⁽²⁷⁾. The lack of knowledge of post-exposure prophylaxis by professionals can disqualify the care to the user or to the one who intends to know/initiate prophylaxis, being necessary sensitization of professionals for their own training with the services.

The characterization of adherence to post-exposure prophylaxis after unprotected sex through 17 articles pointed out that adherence ranged from 49 to 72%, with an overall adherence of 78%. There was no difference in therapeutic regimen or subpopulations of the lesbian, gay, bisexual, transgender, queer, intersex and asexual (LGBTQIA+) community. Reviews show that psychological factors associated with sexual violence, such as fear, rape stigma, fear of being blamed for rape, and trauma-related anxiety, can negatively impact levels of adherence to post-exposure prophylaxis⁽⁹⁾.

The main barriers found were part of two distinct groups: that of personal issues, such as fear, stigma, insufficient knowledge of post-exposure prophylaxis and non-perception of the need for the service; and the group of external factors, such as the existence or not of specialized services, free or low-cost distribution of drugs, treatment received by the team⁽²⁸⁾. It shows the importance of how professionals pay attention to issues concerning the reception of potential users of post-exposure prophylaxis, to guide them about the objectives of prophylaxis, indication, time of use, and side effects.

One of the articles dealt with post-exposure

prophylaxis in drug users, of whom more than half reported unprotected sex (53%) and high-risk sexual partnership (62%). Depressive symptomatology was described by 69% of respondents. While 34% reported knowledge about post-exposure prophylaxis, and 9% knew the indications, dosage, and time of use⁽¹²⁾.

The analysis of risk factors related to the use of post-exposure prophylaxis by women indicated that the main risk factors were unprotected sex with an occasional partner of unknown HIV status, being a prostitute or having a partner living with HIV. Having sex work as an occupation and using drugs/alcohol were more prevalent among women attending the specialized care service. The use of post-exposure prophylaxis was more frequent among younger women and those in situations of greater social vulnerability⁽¹³⁾. A British study that sought to understand the experiences of men who sought post-exposure prophylaxis found that most of them sought the service, being encouraged by the disclosure of their partner's serology, raising moral questions about the importance of sharing this information and the importance of condom use, whether in casual relationships or with fixed partners, HIV-concordant or discordant⁽²³⁾.

MSM are a key population when it comes to HIV prevention and care actions, including through post-exposure prophylaxis. In a qualitative study of French origin, service users who made use of post-exposure prophylaxis were interviewed revealing some experiences, such as stress, fear, judgment of sexual practices by health professionals, discrepant information during consultation and occurrence of side effects⁽¹⁷⁾.

The study of specific populations using or trying to use post-exposure prophylaxis is essential for the identification of vulnerabilities, as the included studies pointed out. There are several issues that are part of the life of a sex worker, for example, such as the commercial sexual practice, her exposure to clients with risk of aggression, the very gender performance of women as social beings. Added to this is the availability of services, the type of specialized care, and the fear of prejudice. When it is understood that the

risks related to HIV acquisition are not only related to self-responsibility and condom use, but it is also possible to develop more appropriate strategies for each audience⁽²⁸⁾.

An interactive program was developed with the objective of increasing the knowledge of inmates of a female prison system about post-exposure prophylaxis as a prevention strategy. Of the participants, almost 90% reported engaging in high-risk sexual behaviors in the previous year, and 20% reported high-risk drug-related behaviors in the past. There was a statistically significant association between second- and third-week groups in knowledge of risk behaviors, post-exposure prophylaxis guidelines, and location⁽¹⁹⁾.

Study limitations

This review presented as a limitation the scarcity of studies, nationwide, regarding the measurement of users' knowledge of post-exposure prophylaxis. In addition, most of the studies compare post-exposure prophylaxis use and pre-exposure prophylaxis use and focus on post-exposure prophylaxis use in cases of occupational accidents.

Contributions to practice

The findings of this review contributed to the synthesis of knowledge about the use of post-exposure prophylaxis by young people, being possible to identify aspects related to barriers/challenges, knowledge, and adherence. These findings allow increasing research on the young population in the context of risky sexual behavior, especially in the nursing field, supporting the development of strategies for the health education process.

Conclusion

We conclude that the evidence from the articles included in the sample points to inaccuracies about users' knowledge about post-exposure prophylaxis.

The lack of adherence was related to the ignorance of basic information such as the indication of post-exposure prophylaxis, place of delivery, dosage, and side effects. Moreover, the perception of other factors that can affect adherence to post-exposure prophylaxis were cited, such as access to health services, free availability of the drug, fear of stigma and prejudice, showing spaces where nurses exercise their professional autonomy according to the health needs of the individual.

Authors' contribution

Conception, analysis, data interpretation and article writing: Mota ER.

Data analysis and relevant critical review of the intellectual content: Farias OO, Maia JKO, Queiroz ML, Mota NP, Galvão MTG.

Final approval of the version to be published: Mota ER, Farias OO, Maia JKO, Queiroz ML, Mota NP, Galvão MTG.

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