

## APPROACH TO A GROUP OF ADOLESCENTS FROM KEY POPULATIONS TO HUMAN IMMUNODEFICIENCY VIRUS (HIV) IN CUBA

Lídice Mederos Villalón, Olga L Revilla Vidal, Nadina Peñalver Díaz,  
Zulendry Kindelán Árias, Frankis Leonel Tirado Campo, and Stephanie D.  
Gingerich

### Abstract

**Introduction:** Individuals who engage in specific high-risk behaviors have a higher susceptibility to becoming infected with the Human Immunodeficiency Virus (HIV) than the general population and therefore are considered a key population for HIV prevention strategies in Cuba. Children under 18 years of age who engage in these specific risk practices may be part of this key population. **Objective:** Identify the needs for guidance, information, and knowledge related to the prevention of HIV and other sexually transmitted infections (STIs) for adolescents in selected municipalities of Havana who are part of key populations at higher risk for becoming infected with HIV and other STIs. **Method:** A qualitative study using the theoretical principles of phenomenology. Intentional non-probabilistic sampling identified a group of adolescents between 15 and 19 years old to participate in focus groups with the aim of achieving rapprochement. After the focus groups were completed, the participants requested that workshops be held. **Results:** Participants reported that they do not have timely information about sexual health and prevention of HIV as well as other STIs. Their general knowledge about infections was scarce and permeated with erroneous information. Although they felt the need to know their HIV status, they were unaware of how to seek out this information. Their families constituted one of the main sources of violence and discrimination. **Conclusions:** It is necessary to expand the evidence base for key adolescent populations, design comprehensive and multidisciplinary strategies that reduce their vulnerability to HIV and other STIs and guarantee that they receive timely support and treatment.

**Keywords:** adolescents, key populations, human immunodeficiency virus, HIV, sexually transmitted infections, STIs, health needs, knowledge, health disparities, health inequities

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## **Introduction**

For several years in Cuba, the trend from the Cuban Ministry of Health has been to have a more strategic approach to using resources for prevention of Human Immunodeficiency Virus (HIV) infection in key populations. Approximately half of all new HIV infections among adults worldwide occur between people from key populations and their immediate partners (Joint United Nations Programme on HIV and AIDS [UNAIDS], 2021).

To address HIV prevention in key populations, the Pan American Health Organization (PAHO) issued a framework for monitoring services related to HIV and other sexually transmitted infections (STIs) among key population groups in Latin America and the Caribbean in 2019 (PAHO, 2019). Within this document, key populations are defined as groups of individuals who, due to their specific high-risk behaviors, have increased susceptibility to becoming infected with HIV, regardless of the type of epidemic and the local context. Children under 18 years of age who engage in these specific risk practices may be part of key population groups. Additionally, they may be at greater risk due to their age and greater social vulnerability (PAHO, 2019).

It is worth noting that only a minority of adolescents engages in sexual experiences with people of the same sex, either casually or repeatedly. These homosexual experiences can range from feelings of physical attraction and/or sexual fantasies to specific sexual acts (i.e. anal penetration) (González et al., 2016; López Sánchez, 2017; Nebot et al., 2019). Some researchers believe that adolescents who engage in higher-risk practices, as well as those who belong to key populations—including adolescent boys who have sex with people of the same sex, transgender adolescents, and adolescents who prostitute themselves or engage in transactional sex—are at risk for earlier initiation of sexual activity, a higher number of sexual partners, and a higher prevalence of STIs (Corona & Funes, 2015).

Certain behaviors significantly increase the risk of HIV infection among adolescents who engage in same-sex sexual practices. Unprotected anal intercourse, inconsistent condom use, and a higher number of sexual partners compared to their peers who do not engage in same-sex sexual practices, represent major risk factors. Moreover, structural determinants such as stigma, discrimination, and violence further exacerbate their vulnerability. These conditions often lead adolescents to conceal their sexual orientation, thereby limiting their access to accurate information, preventive services, and comprehensive sexual health care. Additionally, some young men who have sex with men do not self-identify as homosexual or they view these encounters as experimental or occasional. As a result, they may underestimate their susceptibility to HIV and fail to adopt consistent prevention strategies, increasing their overall risk of infection (Levine et al., 2013; Luk et al., 2017; Panchankis et al., 2020).

For transgender people, various sources maintain that, from a very early age, the dysphoric feeling associated with being born in a gendered body that does not align with their internal views can manifest in different degrees of intensity and at certain times in life (Gabaldón Fraile, 2020; Hurtado Murillo, 2017; Londoño Restrepo & Mira Taborda, 2021). Fernandez-Garcia et al. (2018) state that in the last decade, a substantial increase in cases of adolescent transsexuality has been observed, with a higher number of female transgender people compared to male transgender people. Trans adolescents are a population that is one of the most vulnerable to HIV due to various reasons, including lack of access to adequate health services and high risk of violence (UNAIDS, 2002). According to Alfonso (2022), the majority experience high levels of anxiety, depression, and other mental health problems due to discrimination and social exclusion; this author concludes that violence, in various forms, is present in the life trajectory of most transgender people.

Transactional sex, where money is exchanged for sex, is the main source of economic support for some adolescents (Rosell & Baute, 2022). Transactional sex can be observed in both at-risk groups, whether men who have sex with men or transgender people; however, they are more prevalent in the latter group. Dropping out of school, running away from home, or even being kicked out of their homes can

contribute to limited access to economic resources at older ages, which can be a factor that perpetuates poverty in this group (Iglesias et al., 2016).

Westin et al. (2023) confirm that being an adolescent in these groups—including adolescent boys who have sex with people of the same sex, transgender adolescents, and adolescents who prostitute themselves or engage in transactional sex—means facing challenges even greater in terms of risk and vulnerability to HIV and other STIs (de la Fuente-Roldán et al., 2025; Masferrer & Everaert, 2025). Adolescents engaging in these sexual practices face higher risks compared to adults who engage in the same behaviors, due to factors such as developmental vulnerability, limited access to prevention services, and lower negotiation power in sexual relationships. There is strong evidence about transactional sex and its role in HIV transmission (Alexi et al., 2021; Berbesi et al., 2012; de Alba Cruz, et al., 2015; Espinel Vallejo, 2009). Among younger populations there is a link between transactional sex and a series of factors related to violence, and a greater probability of having multiple partners (UNAIDS & STRIVE, 2018).

### ***HIV in Cuba***

Adolescents who engage in transactional sex constitute a group particularly vulnerable to acquiring STIs, including HIV, due to multiple biological, social, and contextual factors. Studies conducted in Cuba indicate that the majority of these adolescents initiate transactional sexual practices during adolescence (Pérez Martínez et al., 2016), coinciding with a developmental stage characterized by greater impulsivity, lower risk perception, and limited sexual negotiation skills. International research suggests that clients of transactional sex prefer younger adolescents, based on the mistaken belief that they are less likely to be HIV-positive (Sumalla & Montiel, 2023). This situation is further exacerbated because adolescents involved in these practices have virtually no capacity to negotiate safe sexual conditions, such as condom use, increasing their exposure to STIs and reinforcing structural vulnerability and sexual exploitation dynamics (National Assembly of the People's Power, 2023; United Nations Children's Fund [UNICEF], 2023a; UNICEF, 2024).

In Cuba, the national response to STIs focuses on the key population groups most at risk of them. The National Strategic Plan for the Prevention and Control of HIV and Hepatitis 2024 - 2028 defines key populations as: female transgender people, men who have sex with men, and people with HIV and their partners (Lantero et al., 2019; Ministry of Public Health, 2019).

More information is needed to further understand the needs for emotional support, services, and learning (including STI prevention) of key populations, including adolescents. Current research lacks critical data such as how violence impacts the different stages of life, and how current strategies are transforming the realities of key populations within the context of STI prevention and care (Betancourt Llody, 2021; Ministry of Public Health, 2014).

Despite the progress obtained in legislative documents, barriers persist for adolescents' access to STI prevention and other sexual and reproductive health services. Violence and prematurely leaving school and home continue to impact prevention of STIs in these adolescents (Asamblea Nacional del Poder Popular [National Assembly of People's Power], 2019; Iglesias et al., 2016).

### ***Research Questions***

The findings of this literature review prompted the following questions:

- What are the motivations and the needs for guidance and information in key adolescent populations related to the prevention of HIV and other STIs?
- What knowledge, attitudes, and sexual practices do these populations have related to the prevention of HIV and other STIs?
- What are the main sources of discrimination and violence that these individuals perceive?
- What services would these adolescents perceive as most appropriate?

These research questions gave rise to the following general objective: to identify the needs for guidance, information, and knowledge related to the prevention of HIV and other STIs among adolescents in selected municipalities of Havana who are part of key populations related to HIV and other STIs?

## **METHOD**

### ***Study Design***

A qualitative phenomenological study was conducted to understand the experiences, perceptions, and needs of adolescents in selected municipalities of Havana who are in key populations regarding HIV and other STIs. This approach allowed an in-depth exploration of participants' subjectivity, beliefs, motivations, and sexual health practices (Espitia, 2000; Sanguino, 2020)

### ***Participants and Sampling***

Fifty-four adolescents aged 15 to 19 participated, including 45 men who have sex with men, 5 transgender adolescents, and 4 women with homosexual experiences. Participants were recruited using intentional non-probabilistic sampling via the snowball technique to reach populations that are difficult to access. Recruitment was conducted through multiple complementary channels: through friends, acquaintances, or sexual contacts of adolescents from key populations connected to the Red de Jóvenes por la Vida; via WhatsApp messages; and through direct contact by municipal coordinators with adolescents in schools, communities, and social events. Municipalities were selected based on high HIV and STI incidence and the concentration of young men who have sex with men and transgender individuals: Old Havana, Central Havana, Diez de Octubre, San Miguel del Padrón, and Plaza de la Revolución. These recruitment strategies ensured diversity of experiences and access to key populations, thereby enhancing the qualitative representativeness and depth of the study.

### ***Data Collection***

Six focus groups were conducted with 7-10 participants each, in safe community spaces (public libraries, children's home, teaching space within a polyclinic, and family-oriented houses). Sessions lasted between 45 and 60 minutes. All sessions were audio-recorded with informed consent and transcribed. Detailed notes were

also taken to complement the recordings. A semi-structured question guide focused on:

- Knowledge about HIV and STIs, including transmission routes
- Attitudes and sexual practices
- Experiences of discrimination and violence
- Perceptions of and access to health services
- Needs for information and guidance

The question guide was aimed at identifying information, orientation and health needs related to HIV and other STIs, as well as feelings and motivations, and explored knowledge, attitudes, and sexual practices related to the prevention of HIV and other STIs. Additionally, the focus groups examined participants' relationships with their families, schools, and communities; the support and protection networks they identified; and other issues that contributed to the proposed objective. For the purposes of research, the group considered the following key areas: **Knowledge, Available Services, Attitudes, Practices.**

**Knowledge.** Severity of the infection, transmission routes, possibility of reducing the risk of infection, serological status.

**Available Services.** Access, sexual rights, ways to protect yourself, self-knowledge.

**Attitudes.** Protection; self-care; stigma; discrimination and violence due to gender, sexual orientation or serological status; myths and misconceptions related to prevention; safe and secure sexual negotiation skills; perception of infection risk.

**Practices.** Condom use, types of sexual practices, higher-risk sexual practices, number and ages of partners and sexual partners, frequency of sexual activity, conditions in which sexual activity takes place.

Specific questions used during the focus group included:

- Do you know why we are here?
- Do you know what HIV is and the ways it is transmitted?
- Do you know what symptoms and signs indicate that you may be infected with an STI?
- How would you rate your sexual experiences? (good, fair, or poor)

- Would you like your sexual experiences to be different? If the answer is “yes,” how would you like your experiences to change?
- What are your most frequent sexual practices? Do you think these practices put you at risk of HIV infection or other STIs?
- Have you ever taken an HIV test? Why or why not?
- Do you use a condom? How often?
- Have you ever felt less than others for being the way you are? Or does someone tell you that?
- Have you felt any form of discrimination within your family for having homosexual relationships? What did it consist of? By whom?
- Have you felt discriminated against at school? For what reasons? By whom?
- Have you been a victim of any violence in your family, school, or community? For what reasons? By whom?
- Do you feel any health needs related to sexual orientation or gender identity?
- Have you ever thought that life would be easier if you were someone else? Do you think being the way you are makes you unhappy?
- Do you know where to find information related to sexuality or the prevention of STIs?
- Have you identified any health personnel to seek this type of information from (doctors, nurses, psychologists)? Have you attended any health services?
- What type of health service would you like to have?

### ***Data Analysis***

A thematic analysis was conducted using a structured process (Mieles et al., 2012): Open coding, Axial coding, Selective coding.

Analysis matrices were used to organize information by municipality, focus group, and thematic category. Additionally, investigator triangulation was applied, with at least two researchers independently analyzing each transcript and comparing

findings to ensure consistency and reduce bias. Atlas.ti 22 software was used to manage coding and organize thematic categories.

### ***Qualitative Rigor***

Lincoln and Guba's criteria (Cohen & Crabtree, 2006; Lincoln & Guba, 1985) were applied to ensure credibility, transferability, confirmability, and dependability.

***Credibility.*** Member checking and prolonged observation during focus groups.

***Confirmability.*** Detailed documentation of the analysis process and methodological decisions; peer review of findings.

***Saturation.*** Participants were included until theoretical saturation was reached, meaning no new relevant themes emerged.

***Transferability.*** Detailed description of context and participant characteristics to allow comparison or application in similar settings.

### ***Ethical Considerations***

All study procedures adhered to the principles of confidentiality, anonymity, and informed consent. Each adolescent received a written document outlining the purpose, procedures, potential risks, and benefits of participation, and was asked to provide their signature to indicate informed consent. During each focus group, the facilitator read the consent form aloud, explaining each section and addressing questions to ensure full understanding. For workshop sessions, parents or legal guardians, as well as the adolescents' teachers, were informed in advance, and signed consent forms were obtained to authorize participation. Psychological support was made available for participants who experienced emotional distress during sessions. These measures align with international ethical standards for research with minors and vulnerable populations, ensuring voluntary participation, comprehension of study procedures, and protection of participants' well-being (Emanuel et al., 2000; World Medical Association, 2013).

## **RESULTS**

The facilitator of the focus groups noted that of the 54 study participants, 3 did not actively engage at the beginning of the sessions. This situation changed during the session, and these individuals did engage by the end. The majority of participants expressed that they felt motivated and engaged with the topic, recognized the importance of this moment in their lives, and were grateful for the possibility of sharing their life experiences. The groups flowed in a pleasant atmosphere.

### ***Comments from Participants***

When exploring information and knowledge about STIs, HIV, and available services, these are representative comments from participants:

- I don't know much about that. I know they exist but I don't want to know anything about it, they scare me.
- There are many things to talk about, not just STIs, and at school when they talk to you it is almost always about STIs. They scare us about STIs, that's why we don't want to know about anything.
- We don't have a place to look for the information we want.
- There is no known service that I know of.
- The best thing would be to put these services in schools.
- I have no idea, if I went back in time I would have liked to have people like us, I would like a group like this to talk about my problems. I also would have liked the laws to protect homosexuality to have come much sooner.
- When in doubt, we check on Google, [or with] friends. Very little with parents.
- I don't feel that there are spaces to clarify doubts about these topics.
- The school space is the best; in the family we sometimes see rejection. Sexual education is still limited.
- You have to create spaces like this, because I find this group work more effective.

A constant theme of self-acceptance and being accepted by others was noted when discussing attitudes related to protection, self-care, and discrimination:

- It has been known for years that people see rejection as taboo...you have to open up and try to see that this is normal. You have to have an open mind, I don't like people to criticize.

- You don't have to put labels on yourself... regardless of sexual orientation... I AM WITHOUT A LABEL... I'm fluid... I like it that way.
- People are free. They must have the right to your presence. Homosexuality is historical and we continue with those archaic concepts.
- They remind me every day that I have a defect, that if I had not been her son she would have been happy.
- My mother and father physically abuse me.
- My dad, who is Abakua [a secret society of heterosexual males in Cuba], hits me hard.
- It was an offense to my dad. He told me, when you are with your partner, you cross the street and don't greet me.
- I want to believe that I am a normal person. I am not pretty, but I am not ugly either. it is my taste, I don't want anyone else to reject me, it hurts me a lot.
- I have never thought about how to take care of myself.
- I know of many families, including mine, that do not accept...they distance...they separate from all contact with their children or other families who have this sexual orientation.
- It hurts a lot when you feel needy...and they reject you...we should express sexuality, it is part of one...not to look good we should limit ourselves.

Participants discussed sexual practices, frequency, and conditions. Responses about transactional sex included:

- I have done it for pleasure or necessity, I see it as normal to have transactional sex.
- There are taboos with this practice, but many people do it.... Sometimes it leads to violence, aggression, not only because of what others may think, but because we expose ourselves to bad things by hiding from people. That happens a lot.
- In my first times with sex I had to learn to defend myself. Many times they hit me, hard hits... and it was the same group of people. Then to stay outside the house until the bruises were no longer visible. I became afraid of having relationships.

- Sometimes I use condoms and sometimes I don't, it depends on who it is with.
- The condoms don't appear... I need the money for other things.
- I'm on the street and if an opportunity appears I do it, I don't think about whether I'm going to get sick or not.
- Finding an older partner is not always bad. In my case it is the best thing that has happened to me. I am safe, I have a house.
- My family hasn't heard from me for months while I was sick, but my partner was aware of everything I was going through and supported me....
- I always buy condoms at any price, but that costs me...I understand those who can't.
- There are things that you don't even say to yourself. I have seen myself doing everything.
- The first time I woke up with several people I was very scared, but that's normal! HAHA!

### ***Themes***

Themes identified from the focus group comments were: Knowledge, Attitudes, and Sexual Practices Related to HIV and other STIs; Knowledge Gaps Related to the Prevention of HIV and other STIs; and Violence and Discrimination. These themes are listed below along with specific topics related to each theme for areas specified by the participants.

### ***Theme 1: Knowledge, Attitudes, and Sexual Practices Related to HIV and other STIs***

- The most generalized information they have is that HIV causes death. This information is interconnected with myths such as that HIV is transmitted by mosquito bites, and that a person with HIV can be identified by their physical appearance.
- Generally, they have unprotected sexual relations.
- They practice polyamory, group sex, and transactional sex to survive and be accepted in peer groups.
- Their sexual relations are almost always with partners who are two or three times their age.

- Other than their family doctor, they do not know of any other prevention service where they can go.
- They would only share information of an STI or HIV diagnosis with their sexual partners.
- Families do not always respond to the care needs of adolescents who have non-heterosexual sexual orientation or gender identity.
- They would like virtual spaces and networks to access information of interest.
- They would like to see representation of their life experiences shown in magazines or other media.
- They would like to see conversations in schools on these topics.
- They are interested in taking short courses for more education or a specific training program to become health promoters, youth who are trained to provide health information to their peers (Gingerich et al., 2025).
- Internet search engines and social networks are the main sources of information.
- They would like health services with more privacy, where they are not laughed at or criticized for how they are.
- They would like to not have to depend on parents to access services.
- They would like to be able to help other young people to avoid being exposed to the situations they have been through or putting them at risk of becoming infected with an STI or HIV.
- They would like to have spaces where they can go to seek information related to HIV and sexuality or to receive care for their ailments.

***Theme 2: Knowledge Gaps Related to the Prevention of HIV and other STIs***

- They do not identify communication spaces where their realities or needs are reflected.
- They do not have educational materials with content related to these infections.
- At school they do not always receive information about STIs.

- They do not identify their families or their family's doctors as sources of information in situations that generate doubts or concerns in relation to these infections.
- They have little information about HIV and STIs and their prevention.
- They have little knowledge about sexual health and prevention of STIs and HIV.
- They do not know the consequences of STIs for sexual health.
- They feel the need to know their HIV status and other STIs, but do not know where to go.
- They do not correctly identify the routes of HIV transmission.

### ***Theme 3: Violence and Discrimination***

- The family is identified as the main space in which they receive violence (physical or economic), motivated by their gender identity, sexual orientation, and/or serological status.
- In the family, rejection comes from mothers, fathers, grandparents, and uncles.
- They believe the majority is not interested in them.
- They consider that society does not give them real opportunities to grow.
- Discrimination starts at home and spreads everywhere.
- They believe that Cuban society has hidden their reality; it makes them sad because they know that they exist.
- They would like to find ways to facilitate coexistence and acceptance in families.
- They would like to be accepted into their families just as they are.
- Violence is constantly experienced, which can be gestures, looks of contempt, not being allowed to participate in the family, shouting, aggressive expressions, being left without food or being kicked out of the home to live on the street.
- They consider that they cannot count on anyone, sometimes not even those who are like them, when they have a problem, such as being kicked out of the house or facing violence.
- When they find a partner, they do everything the partner asks as a way to find moral or financial support.
- They do not identify a way or path to improve in the future.

At the request of the participants, 3 workshops were held aimed at addressing topics selected by them.

### ***Workshop 1: Sexual Health***

- Male and female sexual organs
- Self-care of the sexual organs
- Self-examination of the sexual organs
- Hygiene of the sexual organs

### ***Workshop 2. Prevention of STIs***

- The session covered adolescence comprehensively, including biological and psychological development, typical behavioral patterns, and social factors influencing vulnerability.
- More frequent STIs in young people, including the signs and symptoms. Regarding STIs, participants were informed about the characteristics of each infection, common symptoms, and clinical presentation, emphasizing early recognition and preventive measures.
- Higher-risk sexual practices
- Correct use of condoms, development of skills for correct condom placement
- How to advocate for use of condoms during sexual interactions

### ***Workshop 3. Prevention of Discrimination***

- Sexual and reproductive rights
- Main manifestations of stigma and discrimination
- Identity, self-esteem, and self-recognition
- Legal guidance services

## **Discussion**

A study published by UNICEF highlighted that in sub-Saharan Africa, adolescents from key populations aged 15 to 19 years constitute a considerable proportion of new HIV infections, with a significant gap in access to sexual and reproductive health services (UNICEF, 2024). Another UNAIDS report noted that sexual minority adolescents are at greater risk than their heterosexual peers and older peers in these populations. These adolescents are even more vulnerable than older cohorts to STIs, HIV and other sexual and reproductive health problems (PAHO, 2019).

According to Iglesias et al. (2016), transgender people in Cuba have a lower level of education than the rest of the Cuban population. Only 7.4% advance beyond the secondary education or intermediate level, fundamentally due to dropping out of school because of symbolic and/or actual violence perceived by them. The violence felt and perceived within families also constitutes a criterion for abandonment and isolation (Iglesias et al., 2016).

Iglesias et al. (2016) found that participants who identified as transgender reported experiences of violence and limited condom use in sexual relations with casual partners. A portion of these participants also reported having acquired a sexually transmitted infection (STI) during the study period. While HIV prevalence in this group appeared higher than in other participants, this cannot be attributed solely to limited knowledge about infections or their prevention, as structural and social factors, including reduced control over sexual encounters, likely contribute to these disparities. It is also noteworthy that in the national survey by Iglesias et al. (2016) found that a large proportion of the Cuban population (83.7%) expressed attitudes of rejection toward transgender people, regardless of context, age, place of residence, or skin color. These findings highlight the multiple vulnerabilities faced by transgender adolescents and young adults in Cuba and underscore the importance of addressing both social-structural and individual-level factors in STI/HIV prevention strategies (Iglesias et al., 2016).

Only 59.3% of the adolescents participating in the study reported having used a condom in their first sexual relationship, and 30% reported having 2 or more sexual partners in the last year. Sex in threesomes, groups and partner exchange are

practices that are rapidly becoming popular in these populations and increases the risk of transmission of HIV and other STIs (Davids et al., 2021)

The results of the current study coincide with international references supporting that adolescents from key populations face additional risks for contracting HIV, which include social and economic inequalities that can lead to marginalization and social exclusion. For the majority of adolescents, families, schools, and communities constitute spaces of protection, but for these key populations they are sources of discrimination and stigmatization (UNAIDS, 2022).

These encounters with adolescents, conducted during focus groups and workshops, show that violence and abuse are major barriers to preventing HIV and other STIs, as well as to building safe and fulfilling lives.

The majority of adolescents who participated in the study exhibit a low perception of HIV risk and limited knowledge about STIs. They also face fear of discrimination and frequently experience mental health challenges, which increase their vulnerability. In addition, they encounter structural and social barriers to accessing youth-friendly services and reliable sexual health information. Collectively, these factors limit their ability to receive timely information and to effectively implement HIV and STI prevention measures, highlighting the need for comprehensive interventions that address both individual and social-structural determinants (Hosek & Pettifor, 2019; Woog, & Kagesten, 2017).

Despite the multiple specific needs of adolescents belonging to key populations, these needs are frequently overlooked or underestimated in national prevention and care strategies. International literature and local studies have documented that factors such as low risk perception, limited access to youth-friendly services, structural discrimination, and social barriers increase their vulnerability to HIV and other STIs (UNAIDS, 2021; UNICEF, 2023b). Youth programs do not adequately address these adolescents, and initiatives targeting key populations focus primarily on adults. As a result, these adolescents remain unprotected against HIV and other STIs, and evidence shows that many engage in high-risk sexual practices. Their age-

related vulnerabilities, combined with structural barriers such as violence, stigma, and discrimination, further increase their risk of infection. Therefore, it is essential to strengthen the evidence base regarding their sexual and reproductive health needs and effective HIV and STI prevention strategies. An inclusive, comprehensive, and multidisciplinary approach is needed to reduce their vulnerability and ensure timely access to support, information, and treatment, providing interventions that are effective, equitable, and tailored to their biological, psychological, and social characteristics.

### ***Limitations of Study***

***Limited Generalizability:*** This study presents the experiences of adolescents from key populations who participated in the focus groups, which may not be representative of all adolescents in this particular situation.

***Possible Social Desirability Bias:*** Since sexuality is a sensitive topic, some participants might have given socially acceptable answers instead of expressing their true feelings. Likewise, with respect to issues of violence and discrimination in families and other environments close to the participants, many may have softened the descriptions of their experiences, out of sadness or not wanting to remember negative experiences.

### **Conclusion**

Adolescents belonging to key populations face **multifactorial vulnerability to HIV and other STIs**, resulting from individual, social, and structural factors. This vulnerability is further reinforced by **significant information gaps**, engagement in **high-risk sexual practices**, and the influence of adverse social determinants. Violence, discrimination, and family exclusion function as **structural barriers**, limiting effective access to prevention, testing, and sexual and reproductive health services.

Evidence indicates that these adolescents exhibit **low risk perception**, **limited knowledge of STIs**, and **difficulties implementing effective prevention measures**,

highlighting the need to design **differentiated interventions** tailored to their specific needs and incorporating strategies at the:

- **Individual level**, by strengthening comprehensive sexual education, negotiation skills, and risk perception;
- **Family level**, by promoting open communication, emotional support, and guidance in STI prevention;
- **Structural level**, by addressing access barriers, violence, and discrimination, and integrating a **human rights, gender equity, and intersectional approach**.

Comparisons with international studies reveal similar vulnerability patterns, although significant contextual differences exist in Cuba, such as the availability of services, cultural norms, and public policies. This allows the identification of **best practices and lessons learned** that can be adapted to the local context, strengthening the effectiveness of prevention and intervention strategies.

In summary, it is recommended to implement **comprehensive, inclusive, and multidisciplinary programs**, grounded in evidence, addressing individual, social, and structural determinants, with the aim of **reducing vulnerability and ensuring timely access to information, support, and treatment**, thereby contributing to a more effective response to HIV and other STIs and promoting safer and healthier lives for adolescent key populations in Cuba.

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**Lídice Mederos Villalón** holds a Bachelor of Science in Nursing, a Master's degree in Health Informatics, and a Diploma in Health Promotion. She is an Assistant Professor at the National Center for the Prevention of STIs-HIV/AIDS, and is a Specialist at Prosalud Cuba.

**Olga L. Revilla Vidal**, Doctor of Medicine, is a Specialist in Comprehensive General Medicine at Prosalud Cuba.

**Nadina Peñalver Díaz** holds a Bachelor's degree in Psychology and Diploma in Health Promotion. She is a Specialist at Prosalud Cuba.

**Zulendry Kindelán Árias**, Bachelor of Law, Diploma in Health Promotion, is a Specialist at Prosalud Cuba.

**Frankis Leonel Tirado Campo**, Doctor of Medicine. Diploma in Health Promotion.

**Stephanie D. Gingerich**, DNP, RN, CPN, is a Registered Nurse, Clinical Associate Professor and Specialty Coordinator for the Doctor of Nursing Practice Program at the University of Minnesota, and Executive Editor of the Interdisciplinary Journal of Partnership Studies.

Correspondence about this article should be addressed to Lídice Mederos Villalón at [lidicemederos@gmail.com](mailto:lidicemederos@gmail.com)