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# Sexuality of adolescent girls born with HIV in Senegal: an anthropological analysis

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## Abstract

**Objectives:** In Senegal, the dominant social norm upholds virginity before marriage and edifies abstinence for adolescents as a cardinal moral value. Currently, sex outside of marriage remains socially condemned. The onset of sex for adolescent girls born with HIV in Senegal brings up several challenges. In Dakar, initiatives, especially through digital applications, are being developed to support these young people. These programs are much rarer in rural settings. A study conducted in 2021 explored how adolescent girls born with HIV who live outside of Dakar experience sexuality, what socio-health constraints they face, and what support they receive from the healthcare system.

**Method:** An anthropological study titled ‘Treatment Failure among Children and Adolescents Living with HIV in Senegal, Outside Dakar’ (ETEA-VIH, ANRS 12421) was conducted in 2021 in 14 regional hospitals and health centers. Semi-structured interviews were conducted with 87 HIV-positive children and adolescents, 95 parents/guardians, and 47 health care workers. Adolescent girls’ onset of sexuality was specifically analyzed for 40 adolescent girls age 12–19 years old.

**Results:** Generally, parents feign oblivion about their children’s sexual lives. Mothers dread a pregnancy out of marriage because they are responsible for overseeing sex education and would be ‘blamed’ for the transgression. The occurrence of an unintended pregnancy can lead to exclusion from the family and a risk of transmitting HIV to the child due to the lack of medical and social support. HIV remains a stigmatizing disease that families keep secret. The risk of disclosure is a major concern. Despite sexual and reproductive health (SRH) programs, most healthcare workers are reluctant to discuss sexuality or to offer contraception to adolescent girls. Information spaces have been set up in some regional hospitals by associations trained in SRH. They are rarer in health centers. Accessibility to digital applications and discussion forums is limited due to the lack of smartphones and Internet access.

**Conclusion:** In rural settings, HIV-positive adolescent girls are confronted with the silence that surrounds sexuality and HIV. An individualized approach and confidential access to contraception should be prioritized to support them with assistance from PLHIV associations.

**Keywords:** adolescents, decentralized context, HIV, Senegal, sexuality

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## Introduction

Globally, an estimated 1.7 million adolescents (10–19 years) are living with the human immunodeficiency virus (HIV), the majority of whom are

in sub-Saharan African countries.<sup>1</sup> Compared with sub-Saharan Africa, pediatric HIV infection has virtually disappeared in countries in the North. In Africa, shortcomings in programs to

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prevent mother-to-child transmission during pregnancy still lead to a high number of children born with HIV.<sup>2</sup> With the expansion of antiretroviral (ARV) treatment programs and early medical care for children born with HIV, the number of adolescents living with HIV (ALHIV) is gradually increasing. The physiological and psychological upheavals related to puberty make adolescence a challenging period for all individuals. For these adolescents and their families, issues surrounding the onset of sex become pertinent. HIV-positive adolescents going through their first romantic and sexual experiences knowing they have a chronic, stigmatized, and sexually transmitted infection face additional specific constraints, particularly the fear of infecting a partner and being rejected if they disclose their serological status.<sup>3</sup>

Since the 2000s, as for adults, the care of children and adolescents living with HIV (CALHIV) has been the subject of recommendations drawn up by international organizations such as the World Health Organization (WHO) and experts from public health. They aim to guide health professionals' practices. These recommendations evolve in response to scientific research. In recent years, there has been a significant focus on support for CALHIV regarding disclosing the disease, therapeutic education, consultations to support the transition from pediatric to adult services, and sexual and reproductive health (SRH) programs.<sup>4</sup> In West and Central Africa, these recommendations are generally applied in specialized departments in urban hospitals, which have trained and competent staff.<sup>5</sup>

In Senegal, about 36% of the 6700 CALHIV are 13–19 years old.<sup>6</sup> More than half live in rural areas, far from the capital. In Dakar, the implementation of support programs has improved care for these adolescents. Conditions for applying them in rural areas raise numerous challenges, particularly for girls, in a context characterized by stigmatization of HIV and sociocultural taboos.

This article describes and analyzes the socio-health constraints facing adolescent girls born with HIV who live outside of Dakar and the support that they receive from care systems.

### **Methodology**

The topic of this article was drawn from a broader anthropological study that described and analyzed the sociocultural and organizational dimensions of

medical and social care for CALHIV in rural settings, conducted in Senegal in 2020–2021 (ETEA-VIH, ANRS 12421). Investigations were conducted in 14 regional hospitals (RHs) and health centers (HCs) in 11 regions in Senegal. The sites were selected based on informed choice to ensure broad geographic distribution and a diversity of health structure size, the number of people living with HIV (PLHIV) followed up, and sociocultural contexts.

The methodology is based on semi-structured interviews and observations. The interviews were conducted with 87 CALHIV, 94 parents/guardians, and 47 health care workers. Participants were selected based on informed choice: the criteria were diversity of age, sex, and situation of treatment success or failure as well as the parents' and children's availability and agreement to participate. These interviews, lasting 30–120 min, were conducted face to face in a confidential location, with no third parties present. A different thematic guide was used for each category of interviewees and was pretested at the start of the investigation. It explored the history of the disease, the treatment itineraries, the experience of the disease for the child and their family, the onset of sex, intra-family relations, solidarity networks, the healthcare workers' experience and practices, as well as the organization of care. In some cases, the interviews were repeated to get additional information. They were conducted in care structures and sometimes in people's homes with their consent. The interviews were recorded and then retranscribed.

The information collected from the various categories of people was cross-referenced and triangulated to assess the diversity of experiences and points of view. The interviews were conducted to the point of data saturation and supplemented by examining the medical files for clinical elements (weight, height, pathologies, treatment regimen, and viral load measurement).

The observations were conducted using a guide that addressed how the health facilities functioned and interactions between health professionals, the CALHIV, and their parents during consultations. Observations written up in the form of field notes made it possible to place the statements in context and to analyze the different stages of care.

The data were systematically analyzed using two approaches:

- An inductive content analysis, inspired by grounded theory, was performed by manually coding the data as the surveys progressed, allowing new themes to emerge in addition to those previously identified.<sup>7</sup> Therefore, the interview guides were refined and supplemented by a constant back-and-forth between data collection and analysis. Analyses were performed using Word and Excel tools. The researchers carried out a systematic reading of the corpus followed by a synthesis that was used to identify an initial level of themes, which were then broken down into sub-themes, until a thematic tree was created.<sup>8</sup>
- The life narratives, reconstructed by combining the information collected from the various sources, were analyzed. This biographic approach is built on individuals' subjective interpretation of their own lives and their relationships within their family and social environment.<sup>9</sup> Combining these two approaches enabled a dynamic analysis of the situations that took into account the variety of interactions and how situations evolve over time.

Among the various topics explored – history and experience of the disease, the child's position in the family, and perceptions and organization of care – adolescents' onset of sexuality was specifically analyzed.

The interviews and observations were conducted by five Senegalese research assistants (four women and one man), with master's degrees in community health or socio-anthropology and who received prior training in HIV infection and research ethics. They were supervised by three senior anthropologists (two women and one man) – two anthropologist physicians (MD, PhD) and one medical anthropologist (PhD) – all three of whom each have over 15 years' experience in HIV research in Africa. The senior anthropologists performed the analyses in consultation with the research assistants.

Regarding ethics considerations, the protocol SEN19/84 (*Analyse socio-anthropologique de l'échec thérapeutique chez les enfants et adolescents vivant avec le VIH en contexte décentralisé au Sénégal* [Socio-anthropological analysis of treatment failure in children and adolescents living

with HIV in a decentralized context in Senegal]) was approved by the National Ethics Committee for Research in Health in Senegal on 28 January 2020 under no. 0000020/MSAS/DPRS/CNERS. All participants received information about the study and were able to ask questions. The parents or guardians gave their verbal consent and adolescents gave verbal assent. Refusals to participate in the study were the exception. At the end of the interview, the research assistants summarized the responses with the interviewees. No previous relationship existed between the investigators and the participants.

At the time of transcription, each interviewee was given a pseudonym to ensure anonymization. All of the reported situations and quotations in the article correspond to these pseudonyms.

The researchers shared the results with health professionals, patient associations, and health authorities in Senegal as the research progressed.

## Results

Of the 87 CALHIV in the broader study, 40 of the adolescents were 12–19 years old, among whom 21 were girls and 19 were boys, all of whom self-identified as such. The average and median age of these adolescents, for both boys and girls, was 16 years. Fifteen of the adolescents receive care in RHs that follow up an average of 41 children (min. = 23, max. = 56) and 25 in HCs that follow up an average of 18 children (min. = 7, max. = 43). The RHs are located in a decentralized urban context; the HCs are usually located in rural areas that are sometimes quite remote. An analysis of the narratives revealed a set of challenges that determine the ability of adolescent girls and their families to manage the onset of sex. The example of Amy illustrates one of these complex situations.

Amy is 18 years old; she lives in a town far from the capital. Her mother died of HIV when she was 3 years old; she was raised by Fatou, her maternal aunt, who herself has three children, in the extended family of her husband, Amy's uncle. Her guardian, who was very attached to Amy's mother, shares a strong emotional bond with the adolescent. Amy has been on ARV treatment since a young age, without knowing about her status. At age 17 years, she had rebellious periods when she refused to take her treatment, and she wanted to know

about her disease. Her aunt feared the shock of disclosure and news getting out about a disease she had always carefully concealed within the family circle. Only she and her husband knew about it. After discussing it with the social worker at the health center where Amy is followed up, Fatou told her about Amy's status. Her ARV treatment adherence improved after these conversations. In the following year, the young woman became more flirtatious and went out with her friends often. Fatou was worried that she could become sexually active. She confided in the social worker, who suggested meeting with Amy's fiancé to talk to him when the time came and marriage was an issue. A year later, Fatou discovered that Amy was pregnant. This pregnancy set off a family scandal that forced Amy to leave the house and take refuge with a cousin in a distant village. Fatou, her guardian, was criticized for her lack of supervision and the shame that fell on the family. Far from the health center where she was usually seen for follow-up, Amy concealed her status and stopped taking her treatment. She delivered in a dispensary near her new home. Three months after the birth, she returned to her aunt's home. At the age of 18 months, her child tested HIV positive.

Amy's story is one of many narratives of adolescent girls born with HIV noted in this study. Not all of them have the serious consequences experienced in Amy's case, but in most cases, adolescent girls and their families have faced stressful situations, and even crises and conflicts. These situations reveal the various types of constraints confronting adolescent girls.

#### *Adolescent sexuality in the face of social norms*

In Senegal, the dominant social norm upholds virginity before marriage and edifies abstinence for adolescents as a cardinal moral value. Sexuality before marriage is widely condemned. Parents' attitudes toward adolescents vary according to gender. For girls, sex before marriage is not tolerated. Girls' virginity, promoted as a moral ideal, requires the preservation of hymenal virginity before marriage, anatomical proof of this virginity. Also, adolescent girls hide their 'boyfriends'; sometimes they confide in their mothers but rarely in their fathers. This is the case of Aïdara, who has been in a romantic relationship for over a year, unbeknown to her father who is otherwise

very close to his daughter and whom he believes he knows well:

We talk a lot. We are very close. I don't think she has a boyfriend; when I'm there, I've never seen anyone. I am very jealous [laughing]. I want her to focus on her studies, pass her baccalaureate, and that she completes her studies to become independent.

The occurrence of a pregnancy outside of marriage brings shame on the girl and her family; the heads of families blame mothers or female guardians who are deemed guilty of not knowing how to 'restrain their daughters'. These pregnancies are often the cause of violent family tensions, the fear of which explains attempts at abortion. In rural settings, early marriage of girls is often considered the best way to prevent unplanned pregnancy. The only dictates for boys are to practice religious morality and discretion.

In addition, sexuality is rarely discussed in families and remains a taboo topic. In this context, adolescents have very little access to information on sexuality and methods to prevent pregnancy. SRH programs are implemented, but accessibility to programs using new technologies is difficult for adolescents who live far from urban centers.

This is the case for Abdoulaye, age 17, who is followed up in an RH where an association organizes discussion groups. A WhatsApp group was created to promote exchanges between ALHIV on various topics, including sexuality, but Abdoulaye was unable to join this social network or participate in the discussions:

I don't participate [in the WhatsApp group] because I don't have a phone to connect to it. My phone hasn't worked well for a long time and when it does work, I don't have [phone] credit to connect.

#### *HIV, the family secret*

Derogatory social representations about HIV fuel another category of constraints influencing the onset of sex. In families, taking care of CALHIV is often characterized by various forms of silence around the disease. Parents' or guardians' primary concern is to maintain absolute secrecy about the child's illness because it could reveal their biological parents' status.



Thus, Fatoumata lives in terror that her illness and that of her two children, Oumar, age 14, and Cheikh, age 20, will be discovered. After her husband's death, she returned with her children to live with her family, where she carefully hides their status:

No one in the family knows about it. I lied to my family about coming [to the health center], telling them that I'm going into the city for their birth certificate and identity card. But I didn't tell them the real reason. I wouldn't want to be chased out of here; it's a big family.

When the child is an orphan of parents who may have died of HIV, the guardians' silence about these events is the norm. For the remarried mother of a seropositive child, the risk of disclosure of the child's status is perceived as a threat that could lead to repudiation, especially if the union is within a polygamous household. The nature of the disease is disclosed to the child as late as possible, lest they reveal this information indiscriminately in the social circle or neighborhood.

Parents want to protect themselves – and protect the child – from the risks of stigmatization and discrimination. Various strategies are applied to maintain confidentiality among members of the same household or in the family. Medicines are hidden; various schemes are employed to administer treatment to the child; and pretexts are found to justify frequent visits to the HC. Zeynab, a young woman of 33 years, who lives with her in-laws with her husband and Hawa, her youngest 10-year-old daughter, all three HIV-positive, attests to her isolation and challenges:

I have never shared my daughter's status with my in-laws because you never know. They're just as likely to accept or reject us. If my mother were here, I could share both my child's and my status with her; I would have someone who could talk about it with me and console me. But I have no one to confide in. This disease is not like others. [. . .] I usually bring Hawa into my bedroom to give her her medicines. Since she has other medicines for her pain, people don't suspect anything. I have to find a pretext to go to an appointment; if not, they'll ask me why she has to go to the hospital all the time.

The social worker also highlighted,

Zeynab lives in a large family; she categorically refuses home visits. She is afraid that her family will

know her status. She doesn't come when we invite her to community activities. She always says that she might run into people she knows. She self-stigmatizes. Sometimes she's afraid to talk to us. It's complicated with her.

For adolescents born with HIV, reaching marriageable age and the possibility of their first sexual relations reactivate their parents' or guardians' fears. They are torn between the desire that their child can have a normal life while respecting social conventions through marriage, and the fear that this event will lead to publicly revealing the existence of the disease in the family. The tragic story of Khady illustrates the consequences of public disclosure:

Khady was infected at age 10, following a rape. Her father moved away with her to put an end to the rumors about the rape and seropositivity, which compromised the family's reputation and his daughter's future. At age 17, she married a 20-year-old young man, without informing him of her status. On the wedding day, a guest recognized her and informed the husband and his family about Khady's illness. The wedding was at 5 pm; at 8 pm, the divorce was announced, and the entire neighborhood knew it was because of HIV. After that, Khady left her family and the region to settle in Dakar, where there was a lower risk of meeting anyone who knew her.

Issues surrounding the onset of sex with the disease and whether or not to disclose their HIV status are stressful concerns for adolescents. They also wonder, with their illness, if they will be able to fulfill their socially assigned roles – marriage and procreation for girls, supporting family and aging parents for the boys. Health professionals struggle to respond appropriately.

#### *Health workers' tentative response*

Governmental requirements stipulate that health professionals, throughout the country, must participate in the implementation of various SRH programs that are, in theory, open to adolescents. Our study shows that in rural areas, numerous professionals disapprove of strategies that facilitate access to contraception for adolescents. For personal moral reasons or out of fear of accusations of promoting sex outside of marriage, many resist the idea of providing contraception for adolescents. Criminalization of the termination of pregnancy leads some caregivers to report

suspicious of voluntary abortion to the police to avoid being prosecuted for complicity.

The current national political context in Senegal reinforces health workers' fears. For several years, there has been a rise in conservative and moralizing discourses, conveyed by religious leaders and spread by the media, which are echoed within society. The attacks target television shows accused of promoting adultery, artists who are tolerant of homosexuality, and even associations that defend human rights. These identity-based discourses condemn the influence of countries in the North, alleged to be imposing their own values in Africa.

Faced with this development, health authorities sometimes take on ambiguous positions themselves, fearing accusations of promoting behaviors inconsistent with the dominant morals. In the fight against AIDS, they are criticized for programs in support of 'key populations' vulnerable to HIV, particularly men who have sex with men. Thus, although prevention programs recommend using condoms to prevent the spread of HIV infection (and unintended pregnancy at the same time), messages geared toward youth from the National AIDS Control Council (CNLS), still to date, propagate ABC-type messages (Abstinence, Be Faithful, Use a Condom) that emphasize abstinence rather than condom use.

In health facilities, issues involving the sexuality of ALHIV are usually handled by social workers and peer educators in conjunction with PLHIV associations. These actors have a central role in supporting CALHIV. They are the ones who best know the history of the child's illness and who advise them and try to strengthen their adherence to medical follow-up. In order to further motivate CALHIV to take their ARV treatment, which in itself is restrictive, they frequently remind them 'that with ARVs, you can live a normal life, get married, and have children [ . . . ]; you won't have to say that you are sick'. Although they provide terse information on issues of sexuality, they rarely elaborate on this topic. For them, sexuality is only considered in the context of marriage: they promote abstinence before marriage – which they recommend as late as possible – and suggest that parents and adolescents return 'when the time is right'. This stance of putting off the response reflects health workers' challenges in proposing

solutions that strike a balance between their moral values and the needs of younger generations. When the possibility of marriage becomes clearer, some peer educators suggest various strategies for informing their future spouse: testing both partners for HIV, then disclosing the status with the warning of legal proceedings if one of them decided to disclose the diagnosis. This is the method used by one peer educator in an urban HC:

If this becomes more serious, I advise her to come in with her fiancé to do testing together and act as if she had never taken the test. We had a girl who met a man; she said that she wanted to get married, but she didn't want to share her status with the man yet, 'because I don't know how he is going to react'. They came and took the test; it was negative for the man. I told him, 'As you know, this girl was married, and her husband died; so she did a screening test and it's positive. But your test is negative; you can get married without her infecting you, and you can have children if she takes her medicines correctly and has an undetectable viral load'. They were married, they had children, and the couple is still together; I haven't heard of any problems.

Some PLHIV associations offer a pragmatic solution given the fear of revealing the HIV-positive status but the need, especially for girls, to find a spouse. They play the role of matchmaker and facilitate identifying a spouse among the association's HIV-positive members, thus promoting a kind of serological endogamy that ensures maintaining secrecy around the disease. As one association leader explained,

There are many cases. There is a 17-year-old girl who got married within the association. The man is much older than her, but he had no wife. And she wanted to get married but didn't know how to go about it without revealing her status. They met at the association, and they got married.

These solutions only partially meet adolescents' demands and needs; moreover, they are limited to urban locations where associations have been able to become established and develop support activities. In remote rural areas, associations are rare. The low number of PLHIV in follow-up in rural health facilities causes PLHIV to avoid meeting up with each other for fear of disclosing their HIV status.

Therefore, outside of large urban centers, Senegalese adolescents have very limited, if any, access to information on sex and contraception. Adolescent girls born with HIV must confront the imposed silence about the disease and the denial of their sexuality, sometimes resulting in unintended pregnancies and an increased risk of family exclusion, disrupted medical follow-up, and transmission of the HIV infection to the child.

## Discussion

### *Strengths and limitations of the study*

This study is the first to highlight the impact of social constraints and SRH provision on the onset of sexuality of adolescent girls born with HIV in Senegal. This theme was drawn from field research through the grounded theory perspective. In particular, this perspective revealed health professionals' reluctance to provide contraception to adolescent girls in rural areas. The multi-site and multi-region nature of this study enabled broad coverage of the country's cultural and social contexts. Reconstructing the life narratives from several sources of triangulated information offers a rich and detailed point of view on the social experiences of adolescents, their loved ones, and health workers. Nevertheless, this study has various limitations. Despite their diversity, the experiences recounted in this article may not reflect all experiences across the country. In addition, our study deals with decentralized, rural or semi-urban locations and does not take into account current trends in the capital and a few large urban centers where initiatives to support adolescents in their sexuality are underway. Finally, we have highlighted the most difficult situations, which may have masked less contentious family configurations.

### *The weight of HIV on adolescent sexuality*

Our findings highlight the double bind of social norms around sexuality and HIV-related stigma that weighs on adolescent girls and their families. Marriage and procreation offer parents living with HIV hope that their children can lead normal lives. Thus, young people's sexuality is considered in the strict framework of a matrimonial union. As we have seen, a pregnancy outside of marriage for girls is seen as shameful for the family. For adolescent girls, it sometimes leads to temporary exclusion from the family. Therefore,

seropositive adolescent girls must manage the emotional experience of HIV status and the additional fear of a pregnancy. Indeed, access to contraceptive methods and even condoms is not easy, especially in rural areas.

Discussions between parents and children about adolescent sexuality are always quite limited within Senegalese families. Our observations are consistent with those of Jaffré<sup>10</sup> from their study conducted in four countries in West Africa (Burkina Faso, Ghana, Mali, and Senegal): 'In all places [ . . . ], talking about sexuality is constrained by a kind of modesty that inhibits conversations between mothers and daughters or, more generally, between women of different age groups'; these authors also point out 'the various forms of silence or at least avoidance and allusive language games' around sexuality. In Côte d'Ivoire, Aka Dago *et al.*<sup>11</sup> point out the weight of the taboo on sexuality and the impossibility of talking about it in society other than through jokes, playful remarks, or profanity; they also highlight the challenges adolescents face in having access to information and accurate sex education.

The context of HIV compounds these challenges. They have been highlighted by numerous studies in Africa and the rest of the world. In Canada, Fernet *et al.*<sup>3</sup> observe that issues of sexuality are rarely discussed in families where the parents are living with HIV. Adolescents must deal with the dual silence imposed by inheriting a family disease and the dynamics of secrecy surrounding it. Issues of sexuality are ignored even more in families where the parents carry the weight of their own guilt for having contracted HIV through sex. Adolescents often learn late about their HIV status because parents fear the disclosure of their own status.<sup>12,13</sup> Dealing with the onset of sexuality with a sexually transmitted, stigmatized disease adds an additional level of complexity to what is already a challenging stage for all adolescents.<sup>14</sup> In general, the fear of transmitting the virus to their partner along with their reluctance to disclose their HIV status not only for fear of rejection and stigmatization, but also because they do not know how to, are sources of anxiety.<sup>15-18</sup> Adolescents, therefore, use a variety of strategies, such as early disclosure to avoid the pain of future rejection, waiting for the 'right' partner, 'testing the waters' to ascertain likely reactions, or even using condoms to avoid disclosure.<sup>19,20</sup> According to Kidman and Violari,<sup>21</sup>



while revealing the serological status strengthened support from the family circle for some adolescents, others have suffered reactions of rejection and stigmatization. These authors recommend a cautious approach to disclosure, as recommended by WHO. Few adolescents spontaneously reveal their serological status to their partners. On the contrary, condoms are not used consistently during sex, especially when the fear of infecting the partner, present at the start of sexual relations, fades over time because the viral load is undetectable or because past experience showed them that their partners may not become infected.<sup>3</sup> Studies in various contexts show that nearly half of ALHIV have unprotected sex using no condom<sup>22</sup> even though their viral load is detectable.<sup>23,24</sup> In fact, it is known that poor adherence to medicines (even outside of HIV) is a common risk behavior among adolescents.<sup>14</sup> This results in a risk of infecting sexual partners as well as the child in case of pregnancy.

#### *Controversial institutional responses*

Adolescent sexual health in Senegal is a major social and public health issue: the 2017 Demographic and Health Survey found that 19% of women have had their first birth before age 18 years, and 8% of 17-year-old girls had started their reproductive life.<sup>25</sup>

The use of contraception is socially reserved for married couples. Tragedies depicting clandestine abortions or infanticide appear regularly in media headlines in a context where voluntary termination of pregnancies is criminalized. Abortion and infanticide are the second most common reason for long-term incarceration of women in Senegal.<sup>26</sup>

For several years, various 'reproductive health' programs for adolescents have been developed throughout the country. With support from the Ministry of Health and the Ministry of Family and various nongovernmental organizations (NGOs), they disseminate information through TV series (e.g. *C'est la vie*) and smartphone applications (Hello Ado, Bibl CLV), with the goal of combatting early pregnancy – the main cause of school drop-out for girls – early marriage, female genital cutting, and sexually transmitted infections. 'Ado clubs' have been set up in the capital and secondary cities.

These programs are regularly virulently criticized by social actors, most often religious leaders, who consider their content to be inconsistent with traditions and moral values. Moreover, our study shows that access to these programs is very often limited for adolescents in rural settings, whose standard of living does not enable them to own smartphones.

In some countries, access to information and contraception for adolescents does not appear problematic. Studies, which have revealed similarities about social stigma and the challenges of disclosing the disease to partners, also indicate easier access to contraception for adolescent girls.<sup>15</sup> That these issues are not mentioned in most studies suggests that access to contraception is not perceived as a primary problem for adolescents.<sup>20</sup> In Africa, adolescent SRH programs, although considered a public health issue, are facing difficulties. National SRH programs have been implemented for years to combat early marriage and unplanned pregnancy, but the results are mixed.<sup>27</sup> An analysis in 33 countries in sub-Saharan Africa showed uneven progress with West and Central Africa and rural contexts lagging far behind. The study also highlights the overall low contraceptive coverage and gender inequalities that reinforce adolescent girls' vulnerability.<sup>28</sup>

In the area of AIDS control, ABC-type messages continue to emphasize abstinence rather than condom use. For years, these strategies have been controversial, garnering blame for increasing the risk of HIV exposure, especially among young women.<sup>29</sup> As in Senegal, these messages are promoted by existing conservative religious movements that wield powerful social influence.

#### *Health professionals who adhere to social norms*

In Senegal, it is noted that many health professionals and social actors are reluctant to implement national SRH programs for adolescents. Our study reveals that the lack of motivation among health workers, including individuals from associations, to address issues of sexuality and offer contraception to adolescent girls is closely related to their adherence to social and religious norms.

These situations are common to numerous African countries. In Ethiopia, Sidamo *et al.*<sup>30</sup> observe the influence of sociocultural and religious norms on health workers' attitudes toward unmarried adolescents, which compromises SRH services delivery, already undermined by the health system's shortcomings in terms of essential medical supplies and training.

According to Morris and Rushwan,<sup>31</sup> health professionals' reluctance to provide responsive, discreet, and non-judgmental support services is a major barrier to the dissemination of information and services.

More broadly, differing opinions between health actors and public health managers often result in obstructing the dissemination of scientific information in the field. Thus, the U = U (Undetectable = Untransmittable) campaign based on the concept of the non-transmissibility of HIV by sexual means when the viral load is undetectable, launched in 2016 to fight stigmatization,<sup>32</sup> and widely implemented across the African continent, has been met with reluctance in the field by health professionals who fear that young people will stop using condoms.<sup>13</sup>

The lack of buy-in to SRH programs advocating access to contraception and safe abortion may also be interpreted through long-standing controversies on global family planning policies and the distrust of countries in the North, suspected of wanting to reduce fertility and the size of families, thereby reducing the population of African countries.<sup>33</sup> Therefore, socio-political and ideological issues interfere in public health issues and hamper the development of health programs.

#### *What can be done?*

SRH programs intended for adolescents often lack approval. The heads of these programs are forced to work in contexts where the community can oppose delivery of comprehensive sexual and reproductive education for young people. Health professionals themselves sometimes believe that adolescent sexuality should be limited. How do we overcome these sociocultural barriers to giving young people full access to information on sexual health and contraceptives? Clearly, no ready-made solutions exist. Nevertheless, experiments carried out in various countries where programs

have faced similar constraints suggest various strategies.

Involving 'peer educators' from the same age group as the young people targeted by the programs makes it possible to circumvent taboos related to talking about sexuality and to bring up these issues outside of any moralizing discourse. Development actors have tested integrating SRH programs first into teacher training curriculum and then into student curriculum, including in Koranic schools, by adapting the content to the religious context. Other projects have implemented an approach aimed at ALHIV, their parents, and healthcare teams through individual and collective interventions to stimulate dialogue and reflection around issues of puberty and sexuality; organizing confidential discussion spaces for young people; testing the use of digital tools and new technologies to disseminate youth-friendly messages; and developing advocacy to spark debates at the national level.<sup>34,35</sup>

None of these initiatives alone provides a miracle solution. In their diversity, these experiences sought to adapt to the context in which they evolved and to find pragmatic responses to the obstacles encountered. Their common principles are the promotion of participatory, individualized, and collective approaches, taking into account sociocultural contexts and adapting to local constraints.

#### **Conclusion**

The onset of sexuality for adolescent girls born with HIV in Senegal occurs in an unfavorable social context, especially in rural areas, characterized by various socio-health and cultural constraints. Both national and international consensus agrees on the need to implement support systems adapted to these adolescents. Application of these measures must take into account the various constraints – not to cut back on interventions but rather to remove barriers – so that adolescent girls can be less vulnerable.

The issue of the onset of sexuality is a critical component of support for adolescents born with HIV and their transition into adulthood. Support programs must enable them to imagine themselves in their future life, able to manage their illness and ARV treatment adherence and to achieve their personal aspirations, whether familial or

professional. Caught between the conflicting HIV-related constraints that are virtually ubiquitous (even if the experience of secrecy and stigmatization differs depending on contexts) and local social norms, health professionals and association members who are responsible for this support must themselves be equipped, trained, and provided with sufficient material resources (especially contraceptives) so that they are able to extend beyond their own moral standards and respond appropriately to adolescents' needs.

## Declarations

### *Ethics approval and consent to participate*

The protocol (SEN19/84: L'échec thérapeutique chez les enfants et les adolescents vivant avec le VIH en context décentralisé au Sénégal, approches anthropologiques [Treatment failure among children and adolescents living with HIV in a decentralized context in Senegal, anthropological approaches] (ETEA-VIH ANRS 12421)) was approved by the National Ethics Committee for Research in Health in Senegal on 28 January 2020 under no. 00000020/MSAS/DPRS/CNERS. The parents or guardians gave their verbal consent and adolescents gave verbal assent.

### *Consent for publication*

Not applicable.

### *Author contributions*

**Gabrièle Laborde-Balen:** Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Supervision; Validation; Writing – original draft; Writing – review & editing.

**Maimouna Diop:** Data curation; Formal analysis; Investigation; Writing – original draft; Writing – review & editing.

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### *Availability of data and materials*

Data are available on reasonable request. Please contact the corresponding author if you are interested in accessing data from this study.

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