



Research Article

Adolescence and Risk of Sexually Transmitted Infections

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Abstract

Summary: Introduction adolescents represent a vulnerable group and are exposed to sexually transmitted infections including HIV / AIDS. It is a stage in which they are subjected to constant changes in physical, psychological and social development and risk factors such as ignorance, early sex, drug addiction, social inequality, gender and myths contribute to this exhibition. Objective: to deepen the characteristics of adolescents that put them at risk of acquiring an STI-HIV / AIDS.

Methods: A bibliographic review was made where the databases included in the LILACS, EBSCO and HINARI services were consulted, and very good coverage was achieved, both in Cuba, in Latin America and the Caribbean, and in the rest of the world.

Conclusions: This article of review on the risks to which adolescents are subjected to acquire an STI-HIV / AIDS is put in the hands of all personnel involved in working with children and adolescents. For the family doctor in particular for being a staff closely linked to the community, allowing them to be in a better position to detect these behaviors thus contributing to exercise and take preventive actions that will allow us to achieve the objectives of our Ministry of Public Health in relation to with this indicator.

Keywords: Adolescence; Risk; STI-HIV / AIDS

Introduction

Adolescence is a stage in which social interests appear and feelings never before experienced blossom, which together with physiological changes make evident a significant transformation in this subject that little by little ceases to be a child [1].

It is an era of continuous biopsychosocial changes, where the aim is to strengthen the personality and the roles that will develop in society. It is considered a period of human development in which an

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Citation: Alfaro AC (2019) Adolescence and Risk of Sexually Transmitted Infections. J AIDS Clin Res Sex Transm Dis 6: 024.

Received: April 11, 2019; **Accepted:** May 09, 2019; **Published:** May 16, 2019

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important decision-making process of the subject begins with respect to itself; it is also the beginning of the transition towards adulthood. The adolescent often faces, without possessing the necessary psychological resources to the problem of starting to outline the ways to follow to fully incorporate into society, so that his projection of life and his position within it change [2-5].

This is also a formative stage, crucial in the life cycle; identity, autonomy and the project of life are being conformed, reason why an integral approach of the sexuality is necessary, taking into account that the influence exerted of the different spaces where the adolescents develop in their daily life is determinant, if considers that at this stage of life, relationships with their peers are very significant [6].

With regard to the relationship of couple begins to relegate friendship relations to the background. Relationships at this stage tend to be unstable, since they have an experimental nature and contribute to the development of self-assessment or personal identity and, in particular, of the adolescent's sexual and gender identity [7].

One of the fundamental aspects in these ages is sex, indissolubly linked to the human being as a biological entity; it is a natural instinctive process, modified by social patterns. This stage should be one of full enjoyment and for this purpose, adequate orientation is necessary [8].

Adolescents do not have - in many cases - an adequate sex education, so they are a risk group par excellence for contracting sexually transmitted diseases and can also reach early motherhood or fatherhood for which they are neither objective nor Subjectively prepared [7].

In the choice of the couple the adolescents have difficulties to make match their ideal -from the physical point of view with the ideal to which they aspire according to their psychological and moral qualities, due to the great importance that they give to the corporal image. In adolescence, the stereotypes corresponding to the male and female sex roles are polarized in a particularly abrupt manner, and the need to correspond with them becomes more acute than ever [5,6].

In males, to a greater extent than in females, sexual maturity anticipates the development of the necessary personological resources to establish a relationship in which stability, psychological intimacy and mutual understanding are achieved [7].

The females, also attending to the stereotypes linked to their gender role, are more free to give themselves from the affective in the couple's relationship and, at the same time, taking into account what is expected in their sexual role, they must hide their feelings, since "wait" and "take their place" are qualities that are linked to values such as feminine dignity and reputation. This separation between what is erotic-sensual and tender depends, to a large extent, on macho prejudices, according to which the traditional style of masculinity and that of virility are legitimized by the approach of man to woman from positions of strength [6,7].

Therefore, the health of adolescents could be at risk due to inappropriate sexual and social behavior. The combination of both is frequent and very dangerous for sexual and reproductive health.

The main consequence of sexual risk behavior is framed in the reproductive damage with presence in the increase of Sexually Transmitted Infections [3].

Statistics worldwide estimate that in 2015 1.2 million adolescents died, that is, more than 3000 a day, mostly due to preventable or treatable causes [9].

New HIV infections among children have decreased by 58% since 2001 however it is reported that in 2013, 240,000 children were infected by the virus. AIDS is today the leading cause of death among adolescents (10 to 19 years old) in Africa and the second most common among adolescents worldwide. One million pregnant women get infected every year with syphilis. In 2012, Syphilis affected 360,000 pregnancies [10].

Among the characteristics of the adolescent population is the worldwide trend that 4 out of every 1,000 mothers were under 15 years of age in 2015. The age of onset of sexual intercourse has been made earlier, around 15 years of age. Mothers under 20 years of age are characterized because more than 96% have 7 degrees or more and have some conjugal bond [11-14].

The prevalence of contraceptive use has been seen to increase discreetly, but with discontinuous use [15].

This demands greater actions aimed at protecting adolescents in terms of sexuality, since it is a universal right of all people in relation to the full, healthy and free enjoyment of all discrimination and social injustice.

Methods

To carry out this review and offer readers an update on the subject in question, the databases included in the LILACS, EBSCO and HINARI services were consulted and very good coverage was achieved, both in Cuba, in Latin America and the Caribbean, and in the rest of the world. They also visited Web sites on the Internet, which required consultation due to their prestige and leadership on the subject.

To base this research work, a theoretical review has been carried out, gathering different aspects: Concept of adolescence, its characteristics as well as the factors that expose them to an STI-HIV / AIDS.

For the elaboration of the search strategies, the DeCS controlled language was consulted and the corresponding Boolean operators were included. The documents corresponding to the 2005 - 2018 period were selected.

Developing

Adolescents are especially vulnerable to HIV infection [16] since they are in a period of transition in which they are no longer children but have not reached adulthood, their social, emotional and psychological development is incomplete, and These tend to experiment with dangerous forms of behavior, often without realizing the danger. On the other hand, most young people have only a limited knowledge of HIV / AIDS, largely because society does not provide them with information. Social policies often highlight intolerance and discrimination

against youth, such as when they limit access to health information and care. Public health responses to the needs of these adolescents are often contradictory and lead to confusion. Likewise, social norms and expectations, together with the opinion of adolescents, have a powerful influence on their behavior, generally in a way that contributes to increasing health risks.

Adolescence and sexuality

Sexuality produces in many young people anxiety and embarrassment, partly because it is common for society itself to react in this way to this issue. Even young people who know how to protect themselves against HIV / AIDS often lack the skills to do so, anxiety and apprehension often prevent young people from using condoms because that requires the knowledge and cooperation of the couple. Adolescents who deny their personal risk of contracting HIV / AIDS can ignore prevention messages, dismiss their importance or think that they are not responsible for protection.

Adolescents are vulnerable to acquire STIs and HIV / AIDS due to risk factors such as lack of early sex information, drug addiction, social and gender inequality and myths.

Bravo Galarza [17] in his article states that the age of onset of sexual life of adolescents around the world population are exposed results, in which every time there is a tendency to have sex at younger ages, in his study found in his study found that 60.7% of adolescents claimed to have had sexual relations and that 37.2% of adolescents surveyed began sexual activity between the ages of 13 and 15, 24% between 16-18 years, 4% between 10-12 years, and 39.3% deny having sex. Cortés Alfaro (2 000) in his study "Sexual behavior and sexually transmitted diseases in adolescents of the Secondary School of Havana City, 1995-1996 found that the average age of initiation of sexual relations had occurred at 13.19 years for the female sex and 12.08 for the male.

Other studies indicate that the age of sexual debut age ranges from approximately 15-16 years in South America, while in some Caribbean countries, they initiate sexual life at an age as early as 10-12 years (Cuba, 2006), which may be associated with the fact that puberty is occurring at younger ages in both men and women, the pressure of the social group or family problems especially if they are children of parents who lived through a teenage pregnancy. [16] Research carried out by the National Bureau of Statistics and Information of Cuba in 2009, resulted in the beginning of sexual relations towards the middle of adolescence, being 16 years the most frequent age for both sexes, which may be the result of sexual education programs that promote the delay of the first sexual relations in this period.

The communication of HIV / AIDS in adolescence has specific characteristics, mostly adolescents are considerably sensitive, regarding the opinion of their peers, the perception of what peers think has a greater influence on sexual behavior or any other type of risky behavior, compared to the opinions of parents and other adults. In such a way that it has been observed in studies that 29.5% of young people prefer to talk with their friends, about HIV / AIDS, while 18.5% turn to their teachers, and 15.7% prefer not to talk about this topic; It should be noted that reference is made that only 4.4% talk with their parents. 164 In the study by Bravo and Galarza, it is stated that as a source of information the participation of the school is minimal with 26%, as well as that of the family with 28% and medical means with

6%, so that the majority of adolescents they receive biased information about their sexuality or the use of contraceptives.¹⁷⁵ A study carried out in Cuba (ONEI, 2009), showed that 94.5% of adolescents and young people have some information about HIV, obtained through the media and the promotional materials.

Perception of sexuality and HIV / AIDS in adolescence

As a start, an attractive aspect to discover in the perception of adolescents, is that there is no same argument about what is conceived as sexuality, however, the generality of young people agree plainly that the word sexuality is linked to sexual relationships and on the contrary, the emergence of some expression that will reason sexuality from a more extensive and complete framework is rare.

Also, sexual practices in adolescents, and the particularities of these and the experience of sexuality are only acceptable to be illustrated by them, when referring to other young people. The foregoing, evidence that sexual relations in our culture, and especially with respect to young people, even more so if they are women, are a taboo subject, vigorously akin to criticism, intimidation, reproach and stealth. On the other hand, when reference is made to talk about love, affection and affective feelings that they feel towards another person, those feelings are valued regarding the couple's relationship.

Thus, it is feasible to conceive a barrier over sexuality, which is related to the intimate life, which emerges disguised, and in some way, forged in the experiences of other adolescents; which has repercussions in a less threatening situation when talking about what they do or do not do, and which implies avoiding personal commitment to the subject.

Regarding the perception of risk of contracting the HIV virus, two perspectives that seem to be linked are observed. One of them sustains that this can happen to every person at any time, while the thought that it is unlikely to happen to them remains. In this sense, both arguments polarize.

From the above, segregates that the contracting of the virus is revealed in a fortuitous matter, which occurs without people predict a risk scenario and perform behaviors designed to prevent the transmission of the virus. The transmission of HIV manifests itself as an act so insubordinate, that the conjecture emanates that it does not matter what is done to get around it, this can happen at any moment, remaining this situation in the hands of fate or chance. From this perspective, young people do not have enough knowledge of the fact that people can take an active role in the prevention of this condition [18].

Adolescence and HIV / AIDS infection

According to UNICEF, of the 40 million people living with HIV / AIDS, more than a quarter are between 15 and 24 years old; half of the new HIV infections are currently occurring in young people 19 and every three minutes, one adolescent contracts HIV²⁰. About 30 adolescents between 15 and 19 years of age contracted HIV every hour in 2017, according to a new UNICEF report. "It's about both a health crisis and the ability to act," said HenriettaFore, Executive Director of UNICEF. "In most countries, women and girls lack access to information, services, or even the ability to say no to unsafe sex. HIV spreads among the most vulnerable and marginalized, leaving teenagers at the very center of the crisis [21]."

The WHO, "expresses that more than two million young people between 10 and 19 years old are infected with HIV. Adolescents are especially exposed to HIV infection and dying from causes related to the virus [22].

In the publication *Women: At the heart of the HIV response for children* (*Women: At the center of the HIV response among children*), instructive statistics are offered on the persistent global AIDS epidemic and its impact on the most vulnerable [23] Last year, 130,000 children and adolescents under the age of 19 died of AIDS, and 430,000 – almost 50 per hour – contracted the infection.

The report presented at the International AIDS Conference [21] says that adolescents are still the people most affected by the epidemic and that the lack of attention to this group is holding back the progress that the world has made in the last two decades in the struggle against the AIDS epidemic. The report states that:

- Adolescents between 10 and 19 years old represent almost two thirds of the 3 million young people aged 0 to 19 living with HIV.
- Although mortality in all other age groups, including adults, has decreased since 2010, deaths among older adolescents (15 to 19 years) have not been reduced.
- In 2017, about 1.2 million young people aged 15 to 19 were living with HIV, of whom 3 out of 5 were girls. Among the factors that explain the spread of the epidemic among adolescents include early sexual relations, including with older men, forced sex, impotence to negotiate the possibility of having sex, poverty and lack of access to services. confidential counseling and screening tests.

The possibility of contracting a sexually transmitted infection (STI) is higher in adolescents than in adults, favored by the early onset of sexual intercourse, the high number of different sexual partners or the lack of use of preventive methods such as condoms. Ignorance of STIs can also be considered a risk factor for them.

From the biological point of view, adolescents are more susceptible to infection and, although the clinical pictures of STIs are similar to those of adults, they have a higher risk of morbidity and long-term sequelae. Complications of STIs, when not detected in time and adequately treated, can have important repercussions on the health of the individual, ranging from neoplastic transformation induced by the human papillomavirus (HPV) to infertility due to tract involvement. Superior genital infection in gonococcal infections or Chlamydia.

Adolescents and young people with HIV around the world have expressed their concerns and difficulties they face in a series of surveys conducted by WHO in 2011 and 2012. Among other criteria, they state that their consent should be taken into account. Not that of their parents, that screening should be available at a younger age, that information more adapted to young people is needed on antiretroviral treatment and side effects among others. Their responses reveal that in many countries and settings, young people lack sufficient access to HIV testing, counseling services and treatment.

WHO has highlighted the urgent need to better adapt HIV services for adolescents, since HIV mortality rates in that group are not decreasing to the same extent as in the rest of the population. Although the total number of deaths related to HIV was reduced by 30% between 2005 and 2012, the deaths caused by the virus among

adolescents increased by 50% during the same period and indicates that among the main causes of mortalities HIV is found next to the traumas caused by traffic and suicide [22].

When asked, how have most children contracted HIV infection? In the article HIV and specific populations, it is suggested that the majority of people who became infected with HIV at that stage of life in the United States were through mother-to-child transmission and are now adolescents or young adults. However, it is important the number of young people with HIV who have contracted the virus through sexual intercourse, who have a recent infection or do not even know they are HIV positive [23].

The factors that increase the risk of HIV infection in adolescence [7] are insufficient basic information about the virus and how to prevent that infection, low rates of condom use, high rates of sexually transmitted infections (STIs), consumption of alcohol and drugs as it increases the likelihood of having risky behaviors, such as sex without a condom [23].

UNICEF highlights among the factors that explain the spread of the epidemic among adolescents, early sexual relations, including with older men, forced sexual relations, helplessness when negotiating about the possibility of having sex, poverty and the lack of access to confidential counseling services and screening tests.

The National Survey on Youth Risk Behavior at the Centers for Disease Control and Prevention (CDC) and other CDC data have identified factors that may increase adolescents' risk of contracting HIV. and young adults without the use of condoms such as:

Unprotected sexual activity can cause new infections. Man with man sex. Young men who have sex with men, especially African-Americans and Latinos, have high rates of new HIV infections. This could be because members of this group are less likely to know that they or others are infected with the virus, compared to other HIV positive young people. Another reason may be that these young people are less likely to receive effective and appropriate education and preventive interventions.

- Precocious sex. At age 16, almost 34% of men and 30% of women had sex.
- Sex with older or multiple couples. This could increase the risk of infection in adolescents.
- Consumption of alcohol or drugs before sex. This can affect decisions about whether to have sex or not and about the use of protection during sex.
- Not knowing if you have HIV. In the United States, the majority of undiagnosed HIV infections are seen in young people aged 13 to 24 years. [24] Young people at increased risk of infection (men who have sex with men and young people from minority groups) are not only more likely to get the infection, but are also more likely to not get tested for HIV. This puts your own health and the health of the people with whom you have sex at risk [25].

Studies conducted in sub-Saharan Africa highlight that half of adolescent girls do not know that an apparently healthy person may have contracted HIV. In Haiti, sexually active young people between the ages of 15 and 49 think that they are not at risk of contracting the infection. In Mozambique 74% of young women and 62% of young

people aged 15 to 19 are unable to cite a single example to protect themselves from HIV [26].

Studies conducted by Bravo Galarza and cols [17] report that the method most used by adolescents in the first sexual relationship was condoms with 42%, however it is important to describe that 36% did not use any method of protection in their first relationship sexual. Likewise, among the contraceptive preference methods, they indicated condoms with 68%, oral contraceptives with 12% and 13% do not prefer any contraceptive method, which puts their sexual health at risk.

Study carried out in Cuba (ONEI, 2009), they contribute that 32.4% of adolescents have perfect knowledge about HIV, persists 17% with myths and false beliefs and 83.5% used condom in the last sexual relation. The most used contraceptive methods in these ages are the condom, the IUD and the pill. It also reports that the beginning of sexual relations occurs towards the middle of adolescence, with 16 years being the most frequent for both sexes, 94.5% of adolescents and young people have some information regarding HIV, mostly provided by the mass media and educational materials and 56% of adolescents and young people received information on condom use and 22.3% received a free sample of condoms.

The guidelines on HIV in adolescents

Durante el período extraordinario de sesiones de la Asamblea General de las Naciones Unidas sobre el VIH / SIDA celebrado en junio de 2001, los gobiernos adoptaron una Declaración de Compromisos en la que definieron objetivos y metas concisas con plazos específicos, con respecto al acceso a la información, educación y servicios necesarios para desarrollar las habilidades necesarias para reducir la vulnerabilidad de este grupo al VIH.

In November (2013) [22] the WHO published the document entitled HIV and adolescents: Guidance for HIV testing and counseling and care for adolescents living with HIV, in which for the first time guidelines are offered that address the specific needs of adolescents with HIV. It recommends that governments review their consent policies for accessing services in order to make it easier for adolescents to access HIV testing without the consent of their parents. The publication also offers guidance on how health services can improve HIV infection. Quality of care and social support provided to adolescents with HIV.

Among the 10 main threats to health in 2019 is HIV and the WHO has proposed that in order to face these and other threats, in 2019 a new five-year strategic plan will begin: the 13th General Program of Work. According to this organization and that will be the ten priority health challenges for 2019 among which is HIV. Considers that the progress made was enormous in terms of increasing the number of people who undergo the tests, providing them with antiretrovirals (22 million are in treatment) and having access to preventive measures, such as pre-exposure prophylaxis (PrEP, which is when people at risk of HIV take antiretrovirals to prevent infection) [15].

Achieving that girls and women have sufficient economic security so that they are not forced to resort to sex work is a necessity. We must ensure that they have adequate information about how HIV is transmitted and how they should be protected. And, of course, we need to make sure they have access to all the services or medications they need to stay healthy.

“To help curb the spread of the epidemic, UNICEF, in close collaboration with UNAIDS and other partners, launched a series of initiatives, [21] including:

- “All together to end AIDS among adolescents”, which aims to reach adolescents in 25 priority countries where the largest number of adolescents with HIV in the world live.
- “Start free, stay AIDS free”, a framework aimed at reducing free, the number of new HIV infections among adolescent women and young people to less than 100,000 by the year 2020.
- The 2020 Roadmap for HIV Prevention, an action plan to accelerate HIV prevention by focusing on structural obstacles, such as punitive laws and lack of adequate services, and highlighting the role of communities.

Conclusion

It is placed in the hands of all personnel linked to work with adolescents in this review article on violence in these population groups that include their manifestations, forms of presentation and their prevention. For the family doctor in particular for being a staff closely linked to the community, allowing them to be in a better position to detect these behaviors thus contributing to exercise and take preventive actions that will allow us to achieve the objectives of our Ministry of Public Health in relation to with this indicator.

References

1. Esther HML, Helena MMGN, Yarisleidi CH, Yamisleydis CS, Maria MHO (2014) Evaluation of the level of knowledge of young adolescents about sexuality. *Rev Medical Sciences* 18: 33-44.
2. Cruz Sánchez F, Rodríguez Alonso B, Alonso Uría RU (2014) *Childcare in adolescence*. Havana: Ministry of Public Health. Pg no: 15-16.
3. Guerrero Borrego N, Pérez Enríquez M (2016) Integral education of sexuality in childhood, adolescence and youth. Conceptual approach In Guerrero Borrego N. Reflections and views on sexuality in childhood, adolescence and youth. Pg no: 21.
4. World Population Prospects. ONEI Life Expectancy at Birth 2011 - 2013. (2015).
5. Anaudina RRG, Claudia C-BA, Laura DG (2016) We are equal? Characterization of racial identity in a group of adolescents in Havana. *Journal of the Juan Marinello Cuban Cultural Research Institute*.
6. Mirelys SL, Anabel SL, Esther CCL (2017) Level of knowledge about HIV / AIDS in high school students. *Rev. Cubana Enfermer* 31: 4.
7. Domínguez García Laura. (2014) Human psychological development as a process of continuity and rupture: the “social situation of development”. Work presented at the II International Colloquium: life, thought and work of the main Russian representatives. Santa Monica Campus of the Federal University of Uberlândia.
8. Elsa María Rodríguez Romero, Lisset Patricia RoS sell Búzón, Juan Carlos Salfrán Gámez, Margarita Diéguez Caballero, José Renato Almaguer Bosch (2009) *exuality and Adolescence*. *Rev electron*. Vol no (34).
9. General Assembly of the United Nations on HIV / AIDS. Summary of the Declaration of commitment in the fight against HIV / AIDS (2001) Joint United Nations Program on HIV / AIDS. Pg no: 25-27.
10. World Health Organization. *Sexually transmitted infections*. (2018)
11. United Nations Population Fund (2018) Ministry of Health of Costa Rica. Strategy of universal access to male and female condoms.
12. Alicia Communion Artieda. Sexually transmitted infections in the adolescent, what the Primary Care pediatrician should know. 201-207.
13. Castro Espin M, Rivero Pino R (2015) Government responsibility and comprehensive education of sexuality in Cuba.
14. Ministry of public health (2017) *Statistical yearbook of health*.
15. Wilfredo de Jesús Almeida Gacives, Maritza Borges Acosta, María Eugenia Bolufé Vilaza (2016) Educational actions for a responsible sexuality in adolescents from the university extension. *EDUMECENTRO* 8: 174-180.
16. Cavazos MTR, Martínez PCC (2003) HIV / AIDS and adolescence. *School of Public Health and Nutrition*. Vol no: 4.
17. Galarza B, Paulette I (2016) Age of beginning of sexual life of adolescents of the third year of high school of a secular school, a religious school and a military school of the city of Quito and the relationship that exists in their preference of contraception, sexual practices and sexual orientation. *Pontifica Universidad Católica de Ecuador*.
18. WHO (2019) *HIV and young people*.
19. WHO (2019) *What are the top 10 threats to health in 2019*.
20. UNICEF (2018) *Every three minutes, a teenager contracts HIV*.
21. WHO (2019) *HIV AIDS. Data and numbers*.
22. WHO. *Deal with HIV in adolescence 2013*.
23. InfoSida. *HIV and specific populations. HIV and children and adolescents*.
24. Centers for Disease Control and Prevention (2012) *Monitoring selected national HIV prevention and care objectives by using HIV surveillance data-United States and 6 U.S. dependent areas*. Vol no: 17.
25. National Institutes of Health (2013) *US Department of Health and Human Services. How does HIV affect children and adolescents*.
26. AIDS (2003) *A global problem / a global solution. AIDS Platform in Africa*.



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