# Maternity and vertical transmission of HIV/ AIDs in HIV/AIDS pregnant adolescents: Integrative review

RESUMO | Objetivo: analisar as percepções de mães adolescentes com HIV/Aids sobre a gestação e a transmissão vertical. Método: Estudo de revisão integrativa de literatura. As bases de informação utilizadas foram: Biblioteca Virtual de Saúde (BVS), Web of Science, PubMed e Science Direct, reunindo artigos do recorte temporal de 2012 a 2020. O período de coleta de dados se deu entre outubro de 2021 a dezembro de 2021. Resultados: Elencaram-se dois artigos que relataram a condição biopsicossocial da gestante adolescente, associada ao medo, insegurança, incapacidade e culpabilização. Os resultados foram agrupados em categorias, a saber: a maternidade sob ótica da adolescente soropositiva e a transmissão vertical do HIV durante a gestação na adolescência. Conclusão: Espera-se que a temática possa ser explorada a fim de contribuir para a assistência voltada para o público estudado e minimizar os riscos da transmissão vertical.

Descritores: Gravidez na Adolescência; HIV; Transmissão Vertical.

**ABSTRACT** Objective: to analyze the perceptions of adolescent mothers with HIV/AIDS about pregnancy and vertical transmission. Method: Study of integrative literature review. The information bases used were: Virtual Health Library (VHL), Web of Science, PubMed and Science Direct, gathering articles from the time frame from 2012 to 2020. The data collection period took place between October 2021 and December 2021. Results: Two articles were reported on the biopsychosocial condition of pregnant adolescents, associated with fear, insecurity, disability and guilt. The results were grouped into categories, that is: maternity from the perspective of hiv-positive adolescents and vertical transmission of HIV during pregnancy in adolescence. Conclusion: It is expected that the theme can be explored in order to contribute to the assistance aimed at the studied public and minimize the risks of vertical transmission.

**Keywords:** Pregnancy in Adolescence; HIV; Vertical Transmission.

RESUMEN | Objetivo: analizar las percepciones de las madres adolescentes con VIH/SIDA sobre el embarazo y la transmisión vertical. Método: Estudio de la revisión integradora de la literatura. Las bases de información utilizadas fueron: Biblioteca Virtual en Salud (BVS), Web of Science, PubMed y Science Direct, recopilando artículos del marco de tiempo de 2012 a 2020. El período de recolección de datos tuvo lugar entre octubre de 2021 y diciembre de 2021. Resultados: Se reportaron dos artículos sobre la condición biopsicosocial de adolescentes embarazadas, asociada con miedo, inseguridad, discapacidad y culpa. Los resultados se agruparon en categorías, es decir: maternidad desde la perspectiva de las adolescentes seropositivas y transmisión vertical del VIH durante el embarazo en la adolescencia. Conclusión: Se espera que el tema pueda ser explorado con el fin de contribuir a la asistencia dirigida al público estudiado y minimizar los riesgos de transmisión vertical.

Palabras claves: Embarazo en Adolescencia; VIH; Transmisión vertical

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Recebido em: 04/03/2022 Aprovado em: 15/05/2022

#### INTRODUCTION

he process of adolescence is a period marked by intense physiological, emotional and social transformations, evidenced by the tireless search for identity, the feeling of belonging and maturation. (1) This period is defined as a transition between childhood and adulthood, delimited by the period between 10 and 19 years. (2)

Faced with the set of changes and immersion in an unknown context, it is considered that adolescents can experience situations of vulnerability, leading to the occurrence of risk behaviors such as the use of licit and illicit drugs, unprotected sex, exposure to Sexually Transmitted Infections (STIs) and early pregnancy. (3)

It is known that the Human Immunodeficiency Virus (HIV), which causes the Human Immunodeficiency Syndrome (AIDS), is responsible for the immunosuppression of the individual's immune system, providing susceptibility to opportunistic infections. Its transmission occurs through sexual, blood or vertical route, between the binomial during pregnancy or during breastfeeding. (4)

Global data reveal that currently around 37.7 million people are living with HIV/AIDS, of which approximately 53% are girls or women. In addition, it is estimated that in sub--Saharan Africa for every seven new HIV infections, six are adolescents between the ages of 15 and 19. (5-6) The epidemiology of the disease in Brazil shows that there was an increase in the incidence of contagion in youth, between 15 and 19 years old. (7) Therefore, of the total of 20,553 thousand pregnant women with detectable HIV, about 10.1% are between 15 and 19 years old. (8)

Pregnancy is a physiological condition, which involves a set of systemic, physical and emotional repercussions, which requires a series of adaptations and reorganizations of daily habits. Regarding motherhood in the life of adolescents living with HIV, it is essential that there is psychic support, added to the knowledge of its particularities and the risks for the mother and child binomial. (9-10)

Faced with the theme, knowing how adolescents living with HIV perceive their pregnancy becomes essen-



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tial for the elucidation that specific issues of this age group, as well as for the development of care practices, aimed at populations at risk, inserted in the maternal-infant context. In this sense, the present study aims to analyze the perceptions of adolescent mothers with HIV/AIDS about pregnancy and vertical transmission.

#### **METHOD**

This is an integrative review, which consists of a research method that broadly analyzes the studies, with the objective of synthesizing the exposed ideas, contributing to the discussion and results of the research, as well as to filling the gaps found with the formulation of new works. (11)

prepare this review, following steps will be followed: identification of the theme and elaboration of the research question; selection of inclusion and exclusion criteria; search and categorization of studies; evaluation of articles included in the integrative review; interpretation of results; synthesis of knowledge and presentation of the review. (11)

The research question was elaborated from the PICo strategy, as follows: Population (P): pregnant adolescents with HIV/Aids; Phenomenon of interest (I): understanding; Context (Co): pregnancy and vertical transmission. Therefore, the guiding question of the research will be based on: "What is the understanding of pregnant adolescents, with HIV/AIDS, about pregnancy and vertical transmission?". It is worth noting that such a strategy provides the identification of descriptors in order to develop the search strategy in the available databases. (12)

Periodicals were used in the time frame from 2012 to 2020, justified by the implementation of the Stork Network, through Ordinance No. 1459, of June 24th, 2011. This ordinance advocates the systematization of care for the binomial, guaranteeing women the right to reproductive planning and humanized care during the pregnancy period, from prenatal care to the postpartum period. In addition, it ensures the right to safe birth and healthy, quality child growth and development. (13)

The definition of descriptors was given from the research question together with an initial search in PubMed and the Virtual Health Library (VH:), in order to identify controlled and non-controlled descriptors.

To this end, controlled descriptors were defined based on the Health Sciences Descriptors (DeCs) and Medical Subject Headings (MeSH): Pregnancy/Gravidez/Embarazo; Adolescence/Adolescência/Adolescencia; HIV/VIH. Como descritor não controlado, adotou-se os termos: Transmissão vertical/Vertical transmission/ Transmisión vertical.

Data collection was performed by pairs, from October 2021 to December 2021. The Portal of Periodicals of the Coordination for the Improvement of Higher Education Personnel (CAPES) was used, through access via the Federated Academic Community (CAFe).

Four sources of information were used to search for articles, namely: VHL, Web of Science, National Library of Medicine (PubMed) and Science Direct. As a search strategy, it was used: (Pregnancy OR Embarazo OR Gravidez) AND (Adolescence OR Adolescência OR Adolescencia) AND (HIV OR VIH) AND (Transmissão vertical OR Vertical transmission OR Transmisión vertical).

The following inclusion criteria were used: articles available in Portuguese, English and Spanish and published between 2012 and 2020. Articles that did not meet the guiding question were defined as exclusion criteria, in addition to editorials, letters to the editor, case studies, reviews and book chapters.

After a complete search by peers and independents, the articles were selected from the initial reading of titles and abstracts, with subsequent search and reading in full. It should also be noted that the bibliographic

Flowchart 1. PRISMA flowchart of identification and selection of articles, according to information bases. Maringá, Paraná, Brazil. 2022. Identification Studies identified in the databases: Virtual Health Library (VHL) (n=1510), Web of Science (n=8), PubMed (n=245) and Science Direct (n=150).Total identified studies Total studies excluded due to duplication (n=500) (n=1913)screening Totel of studies excluded for Studies analyzed by titles and not meeting the inclusion abstracts (n=1413) criteria (n=1399) Studies analyzed for full text Articles excluded 10 for not **Eligibility** reading (n=14) meeting the target audience 2 for not addressing vertical transmission Studies included after reading Studies included after reading the full text (n=2)the references (n=0) Inclusion Selected articles (n=2)

 $Source: Adapted \ from \ Preferred \ Reporting \ Items \ for \ Systematic \ Reviews \ and \ Meta-Analysis.$ 

references of all articles selected for full reading were performed. A selection flow was created to elucidate the search for articles, based on the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA), in order to ensure the methodological rigor of the study. (14)

As an analysis of the articles, we used our own instrument that extracted information related to authors, journals, year of publication, Impact Factor, objective, main results and

conclusion. This information from the publications was presented through a summary table.

In addition, the articles selected for the final sample were evaluated according to the level of evidence: I. Evidence from syntheses of cohort or case-control studies; II. Evidence derived from a single cohort or case-control study; III. Evidence obtained from meta synthesis or synthesis of descriptive studies; IV. Evidence from descriptive or qualitative studies; and V. Evidence from expert opinions which

allowed the analysis of different types of methodological designs. (15)

#### **RESULTS**

Table 1 shows the synthesis of the listed articles that make up the present study, including year of publication, country of origin, author, Impact Factor (IF) and Level of Evidence (LE).

Table 2 represents the characteristics of the articles selected according to objective, method and main results.

#### DISCUSSION

In view of what was found in the survey of studies on the central theme, a limited production was noted. Even so, it was possible to identify two articles that discussed the vertical transmission of HIV/AIDS in HIV-positive pregnant adolescents.

In order to better understand the results, they were divided into two categories: motherhood from the perspective of HIV-positive adolescents and the risks of vertical transmission of HIV during adolescence. Such findings will be presented and discussed below:

# The motherhood of the HIV positive adolescent: everyday implications

The psychological and physiological changes in this phase of life are, in themselves, significant and influenced by the adoption of new patterns of behavior and the initiation into a new life experience - sexual. Pregnancy, at this stage, is a risky aspect of the adolescent's sexual behavior, and can become a complex problem that impacts both the emotional issue of the young woman and social problems. (18)

This stems from the fact that motherhood does not only presuppose the moment of discovery of pregnancy, but rather refers to a set of developments influenced by life stories, for the future perspectives regarding the child

Table 1- Synthesis of articles that make up the study plus year of publication, country of origin, author, Impact Factor (IF) and Level of Evidence (LE). Maringá, Paraná, Brazil. 2022.

ID	YEAR	COUN- TRY	AUTHOR	DATABASE	IF	LE	
1	2020	BRAZIL	SILVA et al.(16)	Web of Science	0,71	IV	
2	2014	BRAZIL	EID et al.(17)	VHL	0,43	IV	
Source: The authors, 2022.							

Table 2 - Synthesis of articles that make up the study, objective, methodology and main results. Maringá, Paraná, Brazil. 2022

methodology and main results. Maringa, ratana, brazin. 2022							
ID	OBJECTIVE	METHOD	MAIN RESULTS				
A1	Understand the experience of pregnancy and motherhood by adolescents/ young people who were born infected with HIV	Adolescents and young people were interviewed from June 2017 to March 2018. Thematic analysis was performed, using a vulnerability framework to reflect on unplanned pregnancy and its implications for care.	Four categories emerged: Discovery of the pregnancy in progress: ambivalent feelings in the face of seropositivity; Disclosure of the pregnancy news to the partner, family members and health professionals; Experience of childbirth and prophylaxis of vertical transmission of HIV; and Experience of motherhood: implications for life stories and future projects				
A2	To analyze, through autobiographical narrative interviews, how HIV positive young people, infected by vertical transmission, build their life projects and, above all, motherhood.	Three autobiographical narrative interviews were conducted with HIV positive young people who contracted the virus via vertical transmission. The young women, aged between 16 and 20, attend a health service specializing in STD/AIDS (NCS) in the city of Porto Alegre/RS, who voluntarily participated	Maternity comprises six key elements: motherhood, planned and unplanned pregnancy, childbirth and the puerperium, breastfeeding, HIV versus healthy children, and guilt and responsibility. Particular factors, such as prejudice, aspirations and fears, cross the daily life of those living with HIV/AIDS. Participants perceive that society does not consider them capable of starting a family and fighting for their life projects.				

Source: The authors, 2022.

and the changes to be experienced by those involved. (16)

Seropositivity can exacerbate teenage pregnancy issues. (19) In the articles presented in the synoptic table, it was observed that in the face of this condition, at the time of the disclosure of the pregnancy, feelings emerge that permeate both the woman herself, as

well as her partner, family members and health professionals. (16)

When looking at the condition of these adolescents, who were often born with HIV or were infected at the beginning of their sexual life, it is necessary to reflect on the perception of their sexuality, added to the episode of pregnancy. (20) The vulnerability that

encompasses the situation experienced in an unplanned pregnancy, during youth, can lead to possible consequences for this adolescent, since this context is associated with the lack of access to information, the lack of sex education and structural socioeconomic issues. (19,20)

Another finding refers to the fact that motherhood, in adolescence, can be experienced through two different circumstances, in which the young woman plans her pregnancy or not. It is important to point out that young people in situations of greater vulnerability, in a precarious socioeconomic and educational situation, with a low level of education and subjected to disorganization in the family environment, are generally more exposed to unwanted pregnancies. (18)

In some cases, teenage pregnancy and childbirth have implications for a woman's general and reproductive health. Teenage pregnancy carries some risks, including during birth, which can especially affect the health of the mother or child. (18)

Faced with the phases of motherhood, the condition of being HIV positive can be an aggravating factor for the woman, since after the gestation period, one still goes through childbirth, puerperium, breastfeeding, consequently implying feelings of responsibility and guilt. (17)

It has been noted that the experience of motherhood concomitant with HIV care may be psychologically and emotionally overloading women, even more so when they are adolescents. This reality brings significant particularities in relation to the great concern with the disease and its repercussions for the baby. This happens because the management of the binomial in the face of the mother's seropositivity differs from the others, resulting in implications in the biopsychosocial spheres, mainly related to childbirth and breastfeeding. (21)

Teenage mothers are at higher risk of developing emotional disorders such as anxiety, stress and depression during pregnancy, but also postpartum depression. In addition, isolation or abandonment by family members, friends and even the child's father can create mental problems for the mother and this can include feelings of fear, uncertainty, loneliness or even clinical symptoms. (18)

Therefore, it is important to identify HIV-infected pregnant women early and carry out an active search for medical evaluation, with the purpose of implementing support and prophylactic measures, consequently, minimizing negative feelings, thus guaranteeing the quality of life for the mother-child binomial. (22)

When pregnancy occurs without adequate planning, it becomes more complex to recognize motherhood, as having a baby in the context of HIV seropositivity has been emotionally difficult for some future mothers and their families. (23)

Carrying out prenatal interventions in pregnant adolescents, preparing and offering prenatal and postpartum care, as well as family support, are also important protective factors to maintain or optimize the emotional health of future mothers. (18)

Thus, although seropositivity represents a social silencing in sex education, due to the fear of being configured as a stimulus to sexual practice, it is essential that the care for young people living with HIV overlaps with others of the same age group, thus allowing them to also contemplate the seropositive condition in order to mitigate exposure to stigma, social disapproval and discrimination regarding the exercise of sexuality and the interest in reproduction. (20,24)

# Vertical transmission of HIV during teenage pregnancy

The daily life of pregnant adoles-

cents living with HIV/AIDS is permeated by aspirations, prejudice and fears, due to the fact that they face the judgments of society, which does not consider them elective to form a family. (17)

Pregnancy for young women with HIV, in general, causes a feeling of guilt, fear and concern for the baby's health, due to exposure to the virus. Thus, given the vulnerability in adherence to prophylaxis and the possibility of exposing the baby to vertical transmission, these future mothers need to be encouraged to carry out the treatment properly. (25) Guidance, in accordance with the needs of this specific public, allows the adolescent to create new expectations regarding the possibility of having a seronegative child. (26)

In this way, the pregnant women's concern with HIV, added to the feelings that involve their pregnancy-puerperal process and the appropriate guidelines, contribute positively to these women's properly performing prenatal care until after birth. (27) It is also noteworthy that generating a serodiscordant child from the mother makes these young women feel full, for having fulfilled their mission, which is a reflection of adherence to prophylaxis against exposure to vertical transmission of HIV. (19)

There are some situations in which young people affected by HIV infection face the stigma of a disease that, unfortunately even today, is related to carelessness, promiscuity and irresponsibility. Thus, achieving a life similar to a teenager free from this condition has been a great challenge in the face of the beliefs that society attributes to HIV. (24)

This perception was described in a study conducted in Sub-Saharan Africa, which showed how young women and caregivers and service providers have contrasting perspectives and priorities in relation to sexual and reproductive health care. (28)

Young women reported having little control over the negotiation of safer sex or contraception and their priority was to prevent unwanted pregnancies and interruptions, due to strategic issues of the services, in their HIV care and, in contrast, caregivers and nurses viewed sexual activity from a purely clinical perspective, fearing HIV transmission and advocating abstinence from sexual intercourse or the use of condoms whenever possible. (28)

The alert for these differences points to the need to improve the service. It is further suggested that young women themselves be involved in future service improvement initiatives to encourage the development of culturally and socially acceptable care pathways. (27)

In view of this, social vulnerabilities regarding the exercise of sexuality and reproduction in the context of HIV during adolescence, permeates simplistic understandings regarding pregnancy at this stage of life, since society tries to restrict explanations and accuse these young people of irresponsibility and immaturity. (20)

In these circumstances, health professionals need to take initiatives to contribute to the management of these situations, with health interventions that are adequate to consider the sexual and reproductive demands of this public. Since the absence of sex education and the lack of reception results in vulnerability to an unplanned pregnancy or a pregnancy that was little reflected before its verification. (18,20)

Although after the discovery of pregnancy during adolescence, in the context of HIV seropositivity, many young women start prophylaxis of vertical transmission of HIV (16), in some cases, some young women may still experience mother-child transmission situations. In view of this fact, this group becomes extremely vulnerable, as the mothers of these babies need intensive support and need their specific demands to be met, to guarantee the baby a health condition capable of surviving and thriving. (29)

Another issue to be addressed is that some young women feel neglected by society because it does not consider them fit to start a family and fight



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for their life projects, as their peers do.

For young women with HIV, the main risk is conceptualized in the social sense, being able to lose a partner,

risk of losing material support and risk of not being like the others anymore. Thus, pregnancy often occurs due to the difficulty of justifying the use of contraceptive methods by young women, in relation to their partners, without raising suspicions about their condition. (28)

Faced with the risk of vertical transmission in adolescents with HIV, young women, their caregivers and service providers should be encouraged to reflect on the issue of pregnancy in a cohesive way, because the different perspectives on this reality create a silence that can act as an obstacle to access to contraception or to the open discussion of other potential health risks. (4)

#### CONCLUSION

The findings of the present review report the ambivalence of feelings of HIV-positive adolescents regarding the discovery of pregnancy, especially when reflecting on the risks of vertical transmission to the baby and the condition of vulnerability that involves the mother-child binomial.

Based on the results of the study, it is suggested to encourage public policies aimed at the adolescent public, especially with regard to sex education, since early pregnancy is associated with a lack of knowledge and risk behaviors experienced in this age group. In addition, social and emotional support, through programs for pregnant adolescents, is necessary to increase their resilience and emotional coping skills.

In addition, given the bibliographic gap on the subject, it is expected that further research will be carried out with the aim of guiding the assistance to HIV-positive adolescents and minimizing possible risk of teenage pregnancy and the transmission of the disease. 🛬

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