

Risks of human immunodeficiency acquired in childhood: Integrative Review

Riscos da imunodeficiência humana adquirida na infância: Revisão Integrativa

Riesgos de la inmunodeficiencia humana adquirida en la infancia: Revisión integradora

RESUMO

Objetivo: Analisar e caracterizar as produções técnicas científicas acerca dos riscos da imunodeficiência adquirida na infância. **Método:** Trata-se de Revisão Integrativa da Literatura por meio das plataformas SciELO (Scientific Electronic Library On line), BDNF e LILACS, agregando estudos científicos entre os anos de 2013 a 2022, por meio dos descritores: Imunodeficiência adquirida; infância; saúde da criança. **Resultados:** Com base no estudo, o ano com um maior número de publicações foi o de 2013, quanto a temática os estudos abordam a prevenção da transmissão vertical, a terapia medicamentosa e os fatores ambientais e familiares. Os achados deste estudo apontam para evidências de que os riscos da imunodeficiência adquirida na infância são inúmeros e que os cuidados ainda representam um grande desafio para envolvidos. **Conclusão:** Os resultados contribuem para a produção de novas pesquisas e conhecimentos sobre a temática, ampliando assim a valorização do cuidado à criança soropositiva.

DESCRITORES: Imunodeficiência adquirida; Infância; Saúde da criança.

ABSTRACT

Objective: To analyze and characterize the technical scientific production about the risks of childhood acquired immunodeficiency. **Method:** This is an Integrative Literature Review using the SciELO (Scientific Electronic Library On line), BDNF and LILACS platforms, aggregating scientific studies from 2013 to 2022, using the descriptors: acquired immunodeficiency; childhood; child health. **Results:** Based on the study, the year with a greater number of publications was 2013, as for the theme the studies address the prevention of vertical transmission, drug therapy and environmental and family factors. The findings of this study point to evidence that the risks of childhood acquired immunodeficiency are numerous and that care still represents a major challenge for those involved. **Conclusion:** The results contribute to the production of new research and knowledge on the subject, thus increasing the value of care for HIV-positive children.

DESCRIPTORS: Acquired immunodeficiency; childhood; child health.

RESUMEN

Objetivo: Analizar y caracterizar las producciones técnico-científicas sobre los riesgos de la inmunodeficiencia adquirida infantil. **Método:** Se trata de una Revisión Integrativa de la Literatura utilizando las plataformas SciELO (Scientific Electronic Library On line), BDNF y LILACS, agregando estudios científicos de 2013 a 2022, utilizando los descriptores: Inmunodeficiencia adquirida; infancia; salud infantil. **Resultados:** Según el estudio, el año con mayor número de publicaciones fue 2013, ya que en la temática los estudios abordan la prevención de la transmisión vertical, la farmacoterapia y los factores ambientales y familiares. Los resultados de este estudio demuestran que los riesgos de la inmunodeficiencia adquirida en la infancia son numerosos y que los cuidados aún representan un gran desafío para los afectados. **Conclusión:** Los resultados contribuyen a la producción de nuevas investigaciones y conocimientos sobre el tema, ampliando así la apreciación de la atención prestada a los niños seropositivos.

DESCRIPTORES: Inmunodeficiencia adquirida; infancia; la salud del niño

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INTRODUCTION

Acquired Human Immunodeficiency Syndrome (AIDS) was first identified in 1981 in the United States. It was recognized by the World Health Organization (WHO, 1993) as a pandemic and until today it is one of the main infectious pathologies of chronic course, being considered as a serious public health problem¹.

Infection with the HIV virus, which causes AIDS, leads to a progressive impairment of the immunity of affected individuals, which can cause significant pathophysiological changes. In addition, it constitutes a social episode that highlights the dilemmas about sexuality, gender and human rights².

Worldwide, AIDS is a cause for great concern since, since its emergence, there has been a responsibility for assistance and specific care aimed at the affected person, especially with regard to children, since in the pediatric popula-

tion the infection seems to be more aggressive and has a minimum incubation period between contamination and the onset of symptoms, with a shorter survival after the onset of symptoms³.

According to UNAIDS, in 2020 there were 37.7 million people living with HIV, of which 1.7 million were children between 0 and 14 years old⁴. One of the forms of HIV transmission in childhood is mainly through vertical transmission, which is that from mother to child. The clinical evolution of AIDS in children presents significant differences for adults, therefore, understanding the care process is fundamental⁵.

The diagnosis of AIDS in children involves numerous issues and care must be careful due to the interference of the disease with regard to the child's growth and development and due to the specificity of the serological condition. In addition, these children are more vulnerable to various pathologies due to the state of immunosuppression they

are in⁵.

Taking into account the risks of acquired human immunodeficiency in children and the dilemmas surrounding this pathology, which is still an enigma for scholars, it is important that research on this topic is encouraged. Due to this problem, the interest in developing this research arose, through an integrative literature review, with the main objective of analyzing and characterizing the scientific technical productions about the risks of acquired immunodeficiency in childhood.. Research of this nature becomes relevant as it contributes to the dissemination of information favorable to the social visibility of the subject of the study.

METHODS

In order to reach the objectives of the study, an integrative literature review was chosen. This type of research is understood as a specific method whose

objective is to summarize the past of the literature, bringing a broader understanding of a specific issue⁶.

For the bibliographic survey of this study, an online search was carried out in the SciELO (Scientific Electronic Library Online), BDENF and LILACS databases. In the survey of articles, the following descriptors were used contextualized to the topic under study: Acquired immunodeficiency; childhood; child health. The search was carried out in June 2022.

According to the inclusion criteria, the articles should be available in the indicated databases and strictly focused on the object of study, between the years 2013 to 2022, in Portuguese and English. The following criteria were adopted for article selection: all article categories (original, literature review, reflection, update, experience report, etc.); articles with abstracts and full texts available for review. From the material obtained, 55 articles, the complete work was read in detail, selecting only those that responded to the objective proposed by this study, in order to organize and tabulate the data.

After reading the articles completely, it was possible to extract the following information: journal, authors, objectives, main results found and conclusion, which gave subsidy to answer the problem of the study. The articles were selected according to the inclusion and exclusion criteria described in the methodology, then they were organized numerically following the chronological order of the publications. Following the inclusion criteria,¹⁰ studies were selected for analysis, which are referenced in this text. A bibliometric analysis was performed to characterize the selected studies. Subsequently, the concepts addressed in each article and of interest to the researchers were extracted. The works were compared and grouped by similarity of content, in the form of empirical categories, being built two. Subsequently, the description and discussion of the data found was carried

out, and then the final considerations of the study were obtained.

The integrative literature review proposes the establishment of well-defined criteria for data collection, analysis and presentation of results, from the beginning of the study, based on a previously elaborated and validated research protocol. For that, the six steps indicated for the constitution of the integrative literature review⁷ were adopted: 1) selection of the research question; 2) definition of study inclusion criteria and sample selection; 3) representation of the selected studies in table format, considering all the characteristics in common; 4) critical analysis of the findings, identifying differences and conflicts; 5) interpretation of results and 6) clearly report the evidence found:

STEP 1: Identification of the theme and selection of the research question: The theme was identified and the question that guided the research for the integrative review was carried out, thus the delimited theme was: Risks of human immunodeficiency acquired in childhood: Integrative Review Providing answers to the following guiding question: What are the risks of acquired immunodeficiency in childhood?

STEP 2: Establishment of criteria for inclusion and exclusion of studies/sampling or literature search: After carrying out the first phase, a search was made in the databases in order to select the studies that were part of the review. For this, the internet is the main tool in this phase, taking into account that the databases have electronic access. To obtain internal validity of the review, it is necessary to separate the studies for a critical selection. The following descriptors (DeCS) were established: Acquired immunodeficiency; childhood; child health. The established search strategies are based on their combinations in Portuguese languages, and the Boolean operators OR/OU. The established sources of information will be: SciELO, BDENF and LILACS. The time frame will be the last 11 years from

the year 2013. The inclusion criteria for the selection of articles are: publications in Portuguese and English, and full articles that portray the previously defined theme As exclusion criteria, publications that did not meet the criteria established in the methodology were eliminated.

STEP 3: Definition of information to be extracted from studies: Thus, the information to be extracted from the selected studies was defined. To analyze and then synthesize the selected articles based on the inclusion criteria, a table was created to collect the information, aiming to help answer the guiding question of this integrative review. In order to analyze and interpret the data in an organized and summarized way, the table comprised the following items: year of publication, authors, objectives, main results found and conclusion.

STEP 4: Evaluation of the studies included in the integrative review: A critical analysis of the articles found was then carried out, observing the similarity between the results that would help to answer the guiding question of the study. In this way, this analysis was carried out in detail, aiming to find answers to the elaborated objectives.

STEP 5: Interpretation of results: At this stage, the discussion of the main results was carried out. After studying the articles through textual reading, a survey was carried out in order to find answers to the questions raised in the publications of articles with a temporal cut of the last eleven years.

STEP 6: Presentation of the knowledge review/synthesis: To reach the conclusion of this integrative review, this step presented the synthesis of the evidence found In this study, risk factors for human immunodeficiency acquired in childhood were found.

RESULTS

Through the search for studies, 10 publications were selected, distributed as follows: 5 in SciELO, 3 in LILACS

and 2 in BDENF. From these published productions, the articles that were complete and those whose theme directed to the object of the study were verified.

It could be seen that 80% (8 articles) were published in international journals and 20% (2) published in national journals.

It was observed that, in the last 9 years, the year with the highest number of publications was 2013. There are no publications in the years 2015 to 2019. The data collected presented the distribution, as shown in Figure 1.

Through a thorough reading of the

Picture 1: Distribution of studies according to year of publication, 2022.



Source: Survey data, 2022

PICTURE 01: Distribution of scientific productions according to the following variables: year of publication, title, authorship, objective, result and conclusion (n=10), 2022.

Year	Journal/ Title	Authorship	Objective	Result	Conclusion
2013	SciELO/ Hearing loss in children with HIV/AIDS8	Buriti AKL, Oliveira SHS, Muniz L	Investigate the occurrence of hearing loss in children with HIV/AIDS and verify its association with viral load, opportunistic diseases and the instituted antiretroviral treatment.	It was observed that lamivudine (3TC) was the most used antiretroviral in 17 (94.4%) patients, followed by Kaletra (KAL), administered in 14 (77.8%) patients, d4T in 11 (61.1%) and zidovudine (AZT) in seven (38.9%). Otitis was the most frequent opportunistic disease with 11 (61.1%) records. In the audiometric exam, 39 (84.8%) ears had hearing loss and seven (15.2%) normal ears. In imitanciometry, five (10.9%) normal ears were found, characterized by type A tympanometry curves. The remaining 41 (89.1%) were altered, with a predominance of type B curves in 67.4% of the cases.	There were hearing alterations in children with HIV/AIDS analyzed in this study. Discreet hearing losses were the most occurring. We verified statistically significant associations with the use of antiretroviral therapy and otitis. Therefore, we point out the importance of auditory monitoring and intervention as soon as possible, thus favoring adequate development in language and decreasing possible difficulties in learning and social inclusion.
2013	SciELO/Aspectos da linguagem em crianças infectadas pelo HIV9	Granzotti RBG, Negri SFBM, Fukuda MTH, Takayanagui OM	To assess lexical proficiency and the incidence of phonological disorders in the language of children infected with HIV.	The results obtained were analyzed according to the clinical criteria for the classification of the disease, proposed by the CDC and on the immunological profile and viral load through the Mann-Whitney test for statistical analysis. In the vocabulary assessment, 100% of the children presented an inadequate response for their age in at least two distinct conceptual fields. In the phonological assessment, 67.7% of the assessed children were considered to be affected by some phonological disorder. When comparing the adequate and inadequate results of the phonological assessment for clinical and immunovirological parameters of AIDS, such as clinical classification (p = 0.16), CD4 count (p = 0.37) and viral load (p = 0.82), no statistically significant relationship was detected between language disorders and disease severity.	The research showed that the group studied has a high risk of language disorders and that constant speech therapy monitoring is essential to identify changes early.
2013	SciELO/Demands for home care of children born exposed to hiv from the perspective of environmental theory10	Lima ICV, Pedrosa NL, Aguiar LFP, Galvão MTG	The objective was to identify the home care demands of children born exposed to HIV, from the perspective of environmental theory.	The results were contextualized according to the theory and organized into categories: "vulnerabilities associated with the physical structure of the house"; "impure indoor and outdoor air"; "water used for consumption"; "sewage and sanitation network"; "lighting and ventilation of the house".	It is concluded that the home environment offers unfavorable environmental conditions for the child. It is urgent to carry out interventions focused on the home environment, to promote the health of children born exposed to HIV.

2013	SciELO/ Vulnerability to illness of children with hiv/ aids in transition from childhood to adolescence11	Bubaduê RM, Paula CC, Carnevale F, Marin SCO, Brum CN, Padoin SMM	Identify situations of vulnerability to illness of patients with HIV/AIDS during the transition from childhood to adolescence.	At the individual level, the following were observed: knowing about the diagnosis and not being able to speak; negative reaction to the diagnosis; take on responsibilities for self-care; Difficulty taking medication. On the social level: orphanhood and/or illness of a family member; tell other people about the diagnosis; needing help remembering to take the medicine; dating and sexual initiation.	The importance of a multidisciplinary team capable of meeting the specific health demands of this population is highlighted, in order to promote autonomy in self-care and social insertion.
2014	LILACS/ The voice of children who live with HIV on implications of the disease in their daily life12	Kuyava J, Pedro ENR.	Knowing from the voice of the child living with HIV/AIDS the implications in their daily life.	Two categories were highlighted: Everyday fears of children with AIDS, and Experiences: lived knowledge. In relation to everyday life, the children report that they do not have a different life than the others; they do not stop doing their daily activities while living with HIV/AIDS and having to take medication. Express positive expectations for the future.	Children with HIV/AIDS live a complex situation permeated with serious conflicts. However, their childhood is similar to that of other children without the disease. Health professionals, and especially nursing, need to develop strategies to strengthen a bond that allows children and their families to express their feelings, which contributes to the process of living with this disease.
2020	BDENF/ Epidemiological and spatial analysis of hiv/aids in children and pregnant women13	Feitosa JMF, Conceição HN, Câmara JT, Chaves TS, Pereira BM, Moura LRP, Barreto CS, et al	To analyze the epidemiological profile and spatial distribution of notified cases of HIV/AIDS in children and pregnant women.	A total of 37 cases of seropositive pregnant women were reported, these being young aged between 16 and 20 years (32.5%), brown (70.3%), with less than eight years of study (70.3%) and housewives (59.5%). Only three cases of children with AIDS were registered.	It is concluded that the increase in the HIV incidence rate in pregnant women, as well as the registered cases of deaths in children due to AIDS, demonstrates the failure in the assistance provided to these individuals.
2020	SciELO/ Audiological assessment of children with HIV/AIDS: a meta-analysis14	Bentivi JO et al.	To analyze the results of the audiological evaluation of children with HIV and AIDS.	278 articles were identified; 26 were included, in which HIV/AIDS was shown to be a risk factor for hearing loss (OR = 5.364; p = 0.00). The studies used different audiological exams, with varying methodologies. There was no difference regarding the type of hearing loss (p = 0.119).	Longitudinal studies using the same type of examination at all stages are suggested, to allow better monitoring of the effects of HIV on the child's hearing, and studies that provide more methodological details. The knowledge of the influence of HIV on the child's auditory system may lead to the promotion of measures that minimize the prevalence of hearing loss, allow an early diagnosis and timely rehabilitation, so as not to compromise child development.
2020	LILACS/ Psychological and spiritual dimensions of parents of children living with HIV and AIDS15	Silva et al,	Investigate the quality of life of people living with HIV and AIDS, according to psychological and spiritual dimensions.	83,3% were female , 38,8% were between 19 and 32 years old and 55.5% were married. 50% completed high school and 44.4% are catholic. From the speeches, the psychological dimension categories related to the need for help emerged: spiritual dimension of care and health of human beings.	The emotional and spiritual dimensions must be addressed in the care for people living with HIV and AIDS. (AU)
2021	LILACS/ Line of care for children and adolescents living with HIV: participatory research with professionals and managers16	Kinalski DDF, Kleinubing RE, Bick MA, Langendorf TF, Padoin SMM, Paula CC	Build a line of care for health care for children and adolescents with HIV. M.	The fact that health care for this population is carried out mostly in specialized services has encouraged the discussion of conceptual, structural, and social aspects of the theme. It was agreed how user-centered care should be carried out and shared between the services, considering the qualifying attributes of care. The attributions of each service, the articulations and the operation were defined for the integration between the points of the network The validation of the central ideas culminated in the construction of a line of care for children and adolescents living with HIV.	The implementation of this product adapted to the daily care of the municipalities requires strategic actions for the integration of the points of care and for the qualification of the health care of this population.

2021	BDENF/ Lines of health care for children exposed to HIV17	Rufino SO, Silva SG, Casadevall MQFC, Guerreiro MGS, Silva ARA, Gonçalves MHRB, et al	Identify in the literature the main care for children exposed to HIV.	Final sample consisted of thirteen articles, consisting of nine (69.2%) studies with a qualitative approach and four (30.8%) with a quantitative approach. The main precautions were focused on four guiding groups: Care with the prevention of vertical transmission; Care related to drug therapy; Care related to environmental and family factors; and Food care.	The study contributes to the understanding of priority lines of care for children exposed to HIV and expands ideas for further research in this perspective.
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Source: Survey data, 2022.

ten articles found, it was possible to organize the results by similarity of content, constituting two categories of analysis referring to the risks of acquired immunodeficiency in childhood: general aspects of HIV in childhood; main risks of childhood acquired immunodeficiency⁸⁻¹⁷.

In the analysis of the methodology, both qualitative and quantitative studies can be observed. In most studies, children and adolescents were involved.

To reach the conclusion of this integrative review, this step presented the synthesis of the evidence found. This study showed that the risks of human immunodeficiency acquired in childhood depend on numerous factors that are not always directly related to the carrier.

Thus, Table 1 described below brings the identification of research with regard to objectives, author, year of publication, results achieved and conclusion of studies in order to show how research has addressed aspects related to the theme.

DISCUSSION

The characterization of scientific research published on open platforms on human immunodeficiency acquired in childhood is described that it is still a little explored theme, that the numbers of infections in children are increasingly worrying and that the risks involving this pathology are avoidable with information on preventive measures⁸⁻¹⁷.

The studies present general aspects with regard to care for the prevention of vertical transmission, drug therapy,

environmental and family factors, and care for the quality of life of those affected⁸⁻¹⁷.

In view of this, two themes were constructed that will be discussed below:

● General aspects of Acquired Human Immunodeficiency Syndrome

As AIDS is one of the pathologies of greatest concern worldwide, the literature reports that the pathology should be the subject of constant studies since it affects all classes of people, regardless of their socioeconomic status, age, and gender⁸⁻¹⁷.

With regard to HIV transmission, it can occur in different ways: unprotected sexual intercourse; contact with infected blood; vertical transmission that occurs from mother to child and through occupational accidents^{9,13,16,17,11}.

It can be observed in studies that mother-to-child transmission is a cause for great concern in women infected with HIV and, therefore, has become one of the WHO strategies to achieve the Millennium Development Goals of the United Nation¹⁸.

In some studies applied in the health area, researchers have tried to outline the characteristics that establish the individual level of vulnerability that includes aspects related to knowing the diagnosis and not being able to speak; negative reaction to the diagnosis; responsibilities of taking care of oneself without being prepared and the difficulties regarding adherence to treatment^{11,16}.

Studies also report that HIV infection leads to the progressive impair-

ment of the immunity of affected individuals, giving rise to numerous other pathologies. They also point out that the discovery of antiretroviral therapy (ART) has extended the survival of patients affected by the pathology and, consequently, increased the spectrum of acute and chronic diseases^{12,13,15}.

● Risks of Acquired Human Immunodeficiency in Childhood

It can be seen through the studies some risk factors regarding human immunodeficiency acquired in childhood, regarding the age group, the mothers infected with HIV were mostly young, without much education, from the lower-middle class^{10,15,16}.

With regard to the environment, several risks associated with the physical structure of the house and its influence on the health of the exposed child were identified^{10,12,17}. With regard to the environment, several risks associated with the physical structure of the house and its influence on the health of the exposed child were identified. Relating to other studies that showed that such measures are responsible for the reduction of up to 95% of VT in rich countries, reaching rates below 2%¹⁸.

Another key factor to be taken into account regarding the risks of acquired immunodeficiency in childhood is prenatal care, since, for the most part, HIV diagnosis occurs during this period and care during the gestational period, delivery and puerperium must be understood by pregnant women as a transmission prevention strategy. diagnosed during prenatal care¹⁹.

Regarding therapeutic regimens,

studies have shown that they must be adequate to the biopsychosocial profile of family members and their routine. Reinforcing the importance of the health professional in guiding these family members, suggesting the motivational interview as a tool for adherence to treatment^{10,11,15,17}.

With regard to associated pathologies, studies have shown that children diagnosed with acquired human immunodeficiency usually present with otitis with hearing loss and language disorders. It is worth mentioning that the impact of chronic disease in childhood depends on their level of development, as well as the moment when they begin to accumulate experiences with the di-

sease^{8,9,14}.

CONCLUSIONS

The study made it possible to understand the extensive causal chain involved in HIV/AIDS infection in children. Scientific production has shown that infection in children can occur through unprotected sexual intercourse, contact with infected blood and through vertical transmission. In addition, the fact that children are always in search of new discoveries makes them more susceptible to infections.

In the studies, several situations of vulnerability to the illness of children with acquired human immunodeficiency

were listed. It is known that these children may have dysfunctions in growth and development, otitis with hearing loss and language disorders, in addition to biopsychosocial impacts.

Studies of this nature highlight the need to review the care and policies aimed at this public. The results contribute to the production of new research and knowledge, thus expanding actions to prevent the risks of acquired immunodeficiency in childhood.

When carrying out this study, the lack of data and approaches on the referred subject became evident and therefore an integrative review study on this subject becomes relevant.

REFERÊNCIAS

- 1-Castro, BG; Pereira, G; Souza, H. AIDS: o que fazer?. Cadernos de Saúde Pública, [S.L.], v. 2, n. 1, p. 66-83, mar. 1986. FapUNIFESP (SciELO). <http://dx.doi.org/10.1590/s0102-311x1986000100006>.
- 2-Brasil, MS. Secretaria de Vigilância em Saúde. Programa Nacional de DST e Aids. Manual de rotinas para assistência de adolescentes vivendo com HIV/Aids / Ministério da Saúde, Secretaria de Vigilância em Saúde, Programa Nacional de DST e Aids. – Brasília: Ministério da Saúde, 2006. 176 p. : il. (Série A. Normas e Manuais Técnicos) (Série Manuais; n. 69) ISBN 85-334-1290-8.
- 3-UNAIDS. Situação da Epidemia de Aids 2020. [acessado em 10 jun 2022] Disponível em:<https://unaids.org.br/estatisticas/>.
- 4-Ortigão, MB. Aids em crianças: considerações sobre a transmissão vertical. Cadernos de Saúde Pública, [S.L.], v. 11, n. 1, p. 142-148, mar. 1995. FapUNIFESP (SciELO). <http://dx.doi.org/10.1590/s0102-311x1995000100021>.
- 5-Brasil. Protocolo clínico e diretrizes terapêuticas para manejo da infecção pelo HIV em crianças e adolescentes. Brasília (DF); 2014.
- 6-Ercole, F. F.; Melo, L. D.; Alcoforado, C. L. G. C. (2014). Revisão integrativa versus revisão sistemática. Rev Min Enferm, 18(1), 9-12.
- 7-Botelho, L. L. R.; Cunha, C. C. A.; Macedo, M. O método da revisão integrativa nos estudos organizacionais. Gestão e Sociedade. Belo Horizonte, v.5, n. 11, p. 121-136 · maio-ago. 2011 · ISSN 1980-5756.
- 8-Buriti AKL, Oliveira SHS, Muniz L. Hearing loss in children with HIV/AIDS. CoDAS 2013;25(6):513-20.
- 9-Granzotti RBG, Negrini SFBM, Fukuda MTH, Takayanagui OM. Linguagem em crianças com HIV. Rev. CEFAC. 2013 Nov-Dez; 15(6):1621-1626.
- 10-Lima ICV, Pedrosa NL, Aguiar LFP, Galvão MTG. Demandas de cuidado domiciliar da criança nascida exposta ao HIV na ótica da teoria ambientalista. Rev Gaúcha Enferm. 2013;34(3):64-71.
- 11-Bubaduê RM, Paula CC, Carnevale F, Marín SCO, Brum CN, Padoin SMM. Vulnerabilidade ao adoecimento de crianças com HIV/AIDS. Esc Anna Nery (impr.)2013 out - dez ; 17 (4): 705 – 712.
- 12-Kuyava J, Pedro ENR. The voice of children who live with HIV on implications of the disease in their daily life. Invest Educ Enferm. 2014;32(2): 317-325.
- 13-Feitosa JMF, Conceição HN, Câmara JT, Chaves TS, Pereira BM, Moura LRP, Barreto CS, et al. Análise epidemiológica e espacial de HIV/AIDS em crianças e gestantes. Rev enferm UFPE on line. 2020;14:e243437 DOI: <https://doi.org/10.5205/1981-8963.2020.243437>.
- 14-Bentivi JO, Azevedo CM, Lopes MK, Rocha SC, Silva PC, Costa VM, et al. Audiological assessment of children with HIV/AIDS: a meta-analysis. J Pediatr (Rio J). 2020;96:537---45.
- 15-Silva Júnior, SV., et al. Dimensões psicológica e espiritual de pais de crianças vivendo com HIV e AIDS. Rev. Nursing (São Paulo);23(262): 3672-3677, abr.2020.
- 16-Kinalski DDF, Kleinubing RE, Bick MA, Langendorf TF, Padoin SMM, Paula CC. Linha de cuidado para crianças e adolescentes. Escola Anna Nery 25(2)2021.
- 17-Rufino SO, Silva SG, Casadevall MQFC, Guerreiro MGS, Silva ARA, Gonçalves MHRB, et al. Cuidados em saúde às crianças exposta ao HIV. Rev enferm UFPE on line. 2021;15:e245688 DOI: <https://doi.org/10.5205/1981-8963.2021.245688>.
- 18-Friedrich L, Menegotto M, Magdaleno AM, Silva CLO. Transmissão vertical do HIV: uma revisão sobre o tema. Boletim Científico de Pediatria [Internet]. 2016 [cited 2020 Apr 10];05(3):81-6.
- 19-Dong Y, Guo W, Gui X, Liu Y, Yan Y, Feng K et al. Preventing mother to child transmission of HIV: lessons learned from China. BMC Infect Dis. 2020 [cited 2020 Dec 05]; 20: 792. doi: 10.1186/s12879-020-05516-3.