



Federal Fluminense University

AURORA DE AFONSO COSTA  
NURSING SCHOOL



## Indigenous health in times of AIDS: an integrative review

Rafaela Gerbasi Nóbrega<sup>1</sup>, Jordana de Almeida Nogueira<sup>2</sup>,  
Sandra Aparecida de Almeida<sup>2</sup>, Alinne Beserra de Lucena Marcolino<sup>3</sup>,  
Juliana Nunes Abath Cananéa<sup>1</sup>, Valéria Peixoto Bezerra<sup>2</sup>

*1 João Pessoa University Center*

*2 Federal University of Paraíba*

*3 Faculty of Medical Sciences of Paraíba*

### ABSTRACT

**Aim:** To summarize the scientific production published in national and international literature related to HIV/AIDS in the indigenous population. **Method:** Integrative review, held in November 2014 in the virtual libraries LILACS, SCOPUS, PubMed and BVS, using these keywords as a search strategy; HIV, HIV infections, Acquired Immunodeficiency Syndrome, Indigenous Population and Health of Indigenous, regardless of the period of publication of these works. **Results:** The articles that met the inclusion criteria gave rise to two main themes: "AIDS in the indigenous population: contexts of vulnerability and risk" and "The battle against AIDS and the challenges of indigenous health." **Discussion:** There was a need to implement measures to control and prevent AIDS in indigenous tribes, as well as educational activities inherent to the traditional habits of this population. **Conclusion:** This evidence will contribute to the effective targeting of AIDS prevention actions aimed at the indigenous population.

**Descriptors:** Acquired Immunodeficiency Syndrome; Health of the Indigenous Populations; Prevention.

## INTRODUCTION

As from 1990, native health gained social and political visibility in Brazil's public spheres. The health service organizational model for indigenous areas was integrated into the National Health System and was established into the conception of Special Indigenous Health Districts (DSEI), characterized by the adoption of a complementary and differentiated model, in which the ethno-cultural and geographic specificities are respected<sup>(1)</sup>.

In Brazil, it is estimated that the indigenous population amounts to 896,900 individuals, and that they are divided into 305 ethnic groups and 274 languages. Most of the indigenous population is concentrated in the northern region, with approximately 45% of the population, followed by the Northeast with 24%, the Midwest with 20%, the South with 8% and the Southeast region with approximately 3%<sup>(2-3)</sup>.

It is noteworthy, however, that the indigenous epidemiological profile is little known because of a lack of surveys and censuses, as well as the unreliability of information about morbidity and mortality systems. The difficulty, in relation to the data survey, is explained mainly by the extensive geographical area of the country, the difficult access to villages, cultural inaccessibility and the spatial mobility of some groups<sup>(4)</sup>.

It is worth noting that the demographic and epidemiological transitions are not presented for the indigenous people with the same characteristics as in the general population. Therefore, the process of decentralization of health actions for the DSEI's scope has been established as an effective possibility for expanding access to the prevention, diagnosis and care of various diseases<sup>(5)</sup>.

The proximity of the indigenous areas to urban centers, the entry of non-indigenous people

to the villages, the frequency and status of men and/or women who leave their villages, malnutrition, unfavorable economic conditions, the abusive consumption of alcohol and unhealthy sanitation favor the appearance of infectious and parasitic diseases. The emergence of AIDS in this population gave visibility to the socio-cultural contexts that may increase the chance of HIV infection; rituals and/or events involving the handling of sharp objects shared without adequate disinfection (scarification and tattooing), sexual practices of polygamy and polyandry, interactions between different ethnic groups and the practice of cross-lactation<sup>(6-8)</sup>.

The first case of AIDS reported in the Brazilian indigenous population was recorded in 1987 in the state of Mato Grosso. In 2013, the incidence in the indigenous population accounted for 0.4% of all notifications of the disease in Brazil. However, high rates of other STDs in the indigenous population suggest that the available statistics probably underestimate the reality<sup>(4,9,10)</sup>.

Although this population is targeted by strategic propositions set by the Action Plan for interventions in HIV/AIDS and STD in indigenous communities, in partnership with the Special Secretariat of Indigenous Health (SESA) of the Ministry of Health, it is observed that most of them live in isolated areas of Brazil, with difficult access to health actions and services, inaccessibility and/or poor adherence to condom use, as well as having inadequate knowledge, in terms of HIV transmission routes. One has to consider a delicate reflection on customs, myths, languages, beliefs, values and social conventions, which can, in many situations, favor the individual or group conditions of vulnerability to HIV infection<sup>(3, 5)</sup>.

Therefore, considering the relevance of discussing AIDS in a culturally different population and the challenges of approaching this theme in this scenario, the objective of this study is to

summarize the scientific literature related to HIV/AIDS in indigenous populations.

Such an investigation is justified, for the knowledge and interpretation of the literature on the subject, in order to raise reflections in terms of the available information and contribute to the development of future research.

## METHODS

This is an integrative literature review conducted in virtual libraries; Latin American and Caribbean Social and Health Sciences (LILACS), SCOPUS, National Library of Medicine (PubMed) and Virtual Health Library (VHL). We considered the following guiding question to conduct this study: What is the scientific evidence from the literature, in terms of AIDS in the indigenous population?

The search of the information bases occurred in November 2014 and the references that met the inclusion criteria were evaluated, without considering the publication period of the works. The inclusion criteria, to guide the search and selection of items, were articles that addressed the AIDS' theme in the indigenous population, indexed to virtual libraries and published in English, Portuguese or Spanish. Publications referring to conference abstracts, proceedings, editorials, theses and dissertations, as well as articles that did not provide access to the printed or online publication, were excluded.

The descriptors chosen to select the data collection were HIV, HIV infections, "Acquired Immunodeficiency Syndrome", "Indigenous population" and "Health of Indigenous". The search strategy was carried out in three stages, as described below: (Picture 1)

The construction of the corpus was performed independently by two authors in order to ensure the legitimacy of the content of the

analysis. The initial universe was 121 publications, and those publications that did not meet the criteria were excluded. We excluded seventy six (76) publications whose full text was not available for free, twelve (12) articles that did not concern the subject matter, four (04) duplicate studies, two (02) letters to the editor, two (02) theses, one (01) dissertation, two (02) monographs, two (02) books, two (02) manuals and one (01) summary resulting in an empirical basis of 17 articles for analysis.

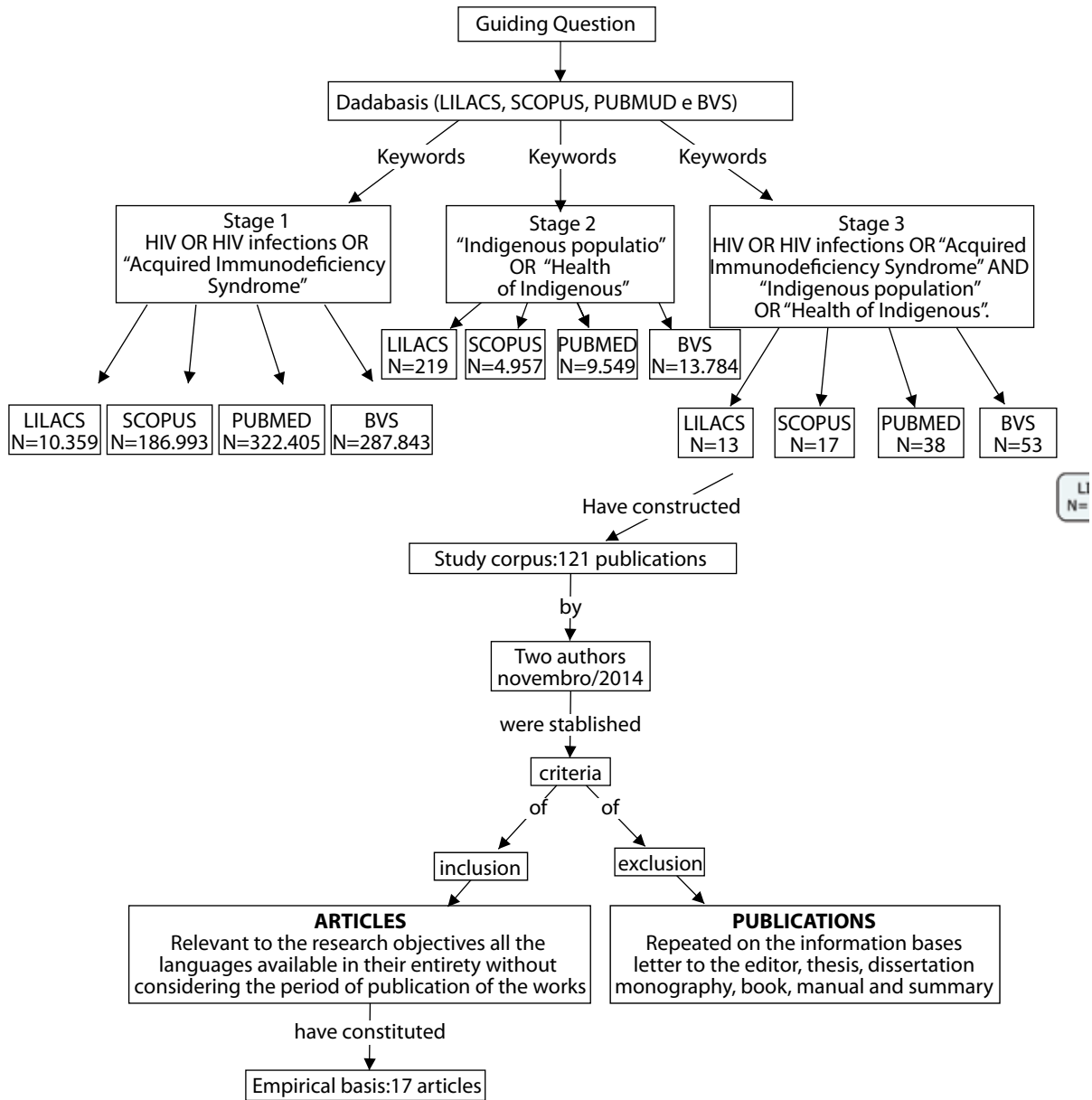
From the perspective of organizing the data evaluated in the articles, we built a data collection instrument contemplating the following; title, authors, journal, publication year, article type, study site and the theme addressed. Then two themes were defined through the full reading of the articles of this review, through the similarity of content, and through summarizing and comparing them to each other: "Aids in the indigenous population: contexts of vulnerability and risk" and "Confronting AIDS and the challenges of indigenous health."

## RESULTS

Regarding the year of publication of the articles that comprise the study, presented in Table 1, there was a higher production in 2008, with a quantity of five published articles. Between the years of 2007 and 2013, there were three publications each year. Between 2003 and 2005, no study relating to the theme was identified.

Among the places where investigations were conducted, we can highlight Peru, the United States, Canada and South Africa, each with two surveys. Indonesia, Brazil, Mexico, Australia, the Netherlands and Italy have participated with one study each. Two studies were conducted in the form of an integrative review, one in Latin America and one study comprised of Asian and African countries.

Picture 1 – Fluxograma explicativo da seleção das publicações. João Pessoa, 2014.



Source: Prepared by the authors.

**Table 1:** Description of studies included in the integrative review. João Pessoa, 2014.

| <b>Thematic axis I: Aids in the indigenous population: contexts of vulnerability and risk</b>   |   |   |
|---|---|---|
| <b>Title</b>  | <b>Authors</b>  | <b>Journal (year, volume, number, and page)</b>               |
| Structural Factors That Increase HIV/STI Vulnerability Among Indigenous People in the Peruvian Amazon   | Orellana ER, Alva IE, Cárcamo CP, García PJ.  | Qualitative Health Research 2013; 23(9):1240-1250.            |
| Decolonizing Strategies for Mentoring American Indians and Alaska Natives in HIV and Mental Health Research   | Karina L, Walters KL, Simoni JM.  | American Journal of Public Health 2009; 99(suppl 1): S71-S76. |
| The Cedar Project: Historical trauma, sexual abuse and HIV risk among young Aboriginal people who use injection and non-injection drugs in two Canadian cities        | Pearce ME, Christian WM, Patterson K, Norris K, Moniruzzaman A, Craib KJP, Schechter MT, Spittal, PM.             | Social Science & Medicine 2008; 66:2185-2194.                 |
| Migración y ruralización del SIDA: relatos de vulnerabilidad en comunidades indígenas de México   | Hernández-Rosete D, García OM, Bernal E, Castañeda X, Lemp G.   | Rev Saúde Pública 2008;42(1):131-138.                         |
| AIDS in Latin America: assessing the current status of the epidemic and the ongoing response  | Bastos FI, Cáceres C, Galvão J, Veras MA, Castilho EA.  | International Journal of Epidemiology 2008;37:729-737.        |
| Confronting HIV/AIDS in a South African village: The impact of health-seeking behaviour   | Golooba-mutebi F, Tollman SM.   | Scand J Public Health 2007; 69(Suppl 1): S175-S180.           |
| The Culture of Condoms: Culturally Grounded Variables and Their Association With Attitudes to Condoms.  | Liddell C, Giles M, Rae G.  | Psychosomatic Medicine 2008;70(4):496-504.                    |
| The burden and treatment of HIV in tuberculosis patients in Papua Province, Indonesia: a prospective observational study  | Pontororing GJ, Kenangalem E, Lolong DB, Waramori G, Sandjaja, Tjitra E, Price RN, Kelly PM, Anstey NM, Ralph AP. | BMC Infectious Diseases 2010;10:362                           |
| High prevalence of hiv and syphilis in a remote native community of the peruvian amazon   | Zavaleta C, Fernández C, Konda K, Valderrama Y, Vermund SH, Gotuzzo E.  | Am J Trop Med Hyg 2007; 76(4):703-705.                        |
| <b>Thematic axis II: Confronting AIDS and the challenges of indigenous health</b>   |   |   |
| Anonymous HIV testing in the Canadian aboriginal population   | Tseng AL.   | Canadian Family Physician 1996;42: 1734-1740.                 |
| Barriers and incentives to HIV treatment uptake among Aboriginal people in Western Australia  | Newman CE, Bonar M, Greville HS, Thompson SC, Bessarab D, Kippax SC.  | AIDS 2007; 21(suppl 1):S13-S17.                               |
| HIV Stigma and Depressive Symptoms are Related to Adherence and Virological Response to Antiretroviral Treatment Among Immigrant and Indigenous HIV Infected Patients | Sumari-de Boer IM, Sprangers MAG, Prins JM, Nieuwkerk PT.   | AIDS Behav 2012; 16:1681-1689.                                |
| Prevention of HIV/AIDS in Native American Communities: Promising Interventions  | Vernon IS, Jumper-Thurman P.  | Public Health Reports 2002; 117(suppl 1): S96-S103.           |

|  |  |  |
|--|--|--|
| Alternative medicines for AIDS in resource-poor settings: Insights from exploratory anthropological studies in Asia and Africa | Hardon A, Desclaux A, Egrot M, Simon E, Micollier E, Kyakuwa M.          | J Ethnobiol Ethnomed. 2008; 4:16.        |
| Tuberculosis in indigenous children in the Brazilian Amazon  | Gava C, Malacarne J, Rios DPG, Sant'Anna CC, Camacho LAB, Basta PC.      | Rev Saúde Pública 2013;47(1):77-85.      |
| Risk factors for tuberculosis  | Narasimhan P, Wood J, MacIntyre CR, Mathai D.                            | Pulmonary Medicine 2013;                 |
| Impact of immigration and HIV infection on tuberculosis incidence in an area of low tuberculosis prevalence                    | Baussano I, Bugiani M, Gregori D, Pasqualini C, Demicheli V, Merletti F. | Epidemiol Infect 2006; 134(6):1353–1359. |

Source: Prepared by the authors.

## DISCUSSION

Two categories which will be discussed below emerged from the results:

### *Thematic Axis I - AIDS in the indigenous population: contexts of vulnerability and risk*

Although there have been medical advancements with regard to AIDS in recent years, many marginalized populations (such as indigenous peoples) continue to have limited or no access to them. The fact that most indigenous villages are located in isolated rural areas makes it difficult to implement preventative actions for fighting HIV, such as campaigns for the mass dissemination of information about the disease. In the Brazilian scenario, the urgency for this communication would also encounter a number of obstacles related to the language of natives, characterized by a diversity of linguistic families, such as the Tupi, Aruak, Karib, Tukano, Pano and the Gê, who are still represented by natives of the Amazon<sup>(4, 8)</sup>.

Thus, it is difficult to expect the native peoples to be familiar with the etiology, the means of transmission and prevention of HIV. The poverty and poor education of the indigenous people also reflect negatively on the process of knowledge acquisition, in terms of

the disease, and the consequent reduction in risk behaviors<sup>(11)</sup>.

The poverty endured by the indigenous population includes the search for the means of survival, leading indigenous women to live as sex workers. Commercial sex was approached as a vulnerability vehicle for HIV in indigenous communities in Canada and in the Peruvian Amazon. In this case, river ports and docks, mining sites and other resource extraction fields formed favorable environments for unprotected sexual practice, involving more than twenty sexual partners over a lifetime in some cases<sup>(7-8; 12)</sup>.

The role of the Amazon River and its tributaries, regarding the transmission of HIV, has been swiftly investigated, pointing to the existence of actual floating brothels that operate day and night. These brothels mainly jeopardize the indigenous men who work in the ports, since they consume excessive alcohol and end up having unprotected sex with sex workers. In addition, there was the regular practice of unprotected sex among the passengers and crews of vessels<sup>(8)</sup>.

The association between HIV and migrant workers, especially mine workers, and a thriving commercial sex industry has been well established in other scenarios<sup>(11; 13)</sup>. The migration of natives who leave their villages, their wives

and families, is a reality commonly associated with the spread of HIV in some communities, as the indigenous people themselves report extramarital sex and little condom use<sup>(8)</sup>.

A study conducted in some indigenous communities of Mexico, where there was a high incidence of HIV, investigated the vulnerability of women living in concubinage with migrants. It was observed that these migrating men acknowledge themselves as absent and were concerned about the possibility of female adultery. They believe in pregnancy as a control resource for wives who are forced to have unprotected sex when their husbands return from a trip. The lack of autonomy and the fear of generating a marital conflict leads women to accept such a situation, whilst recognizing that they are exposed to contamination<sup>(7)</sup>. Moreover, another study pointed out that indigenous women of the Peruvian Amazon are forced to have forced sex with their husbands and boyfriends and, in some cases, are compelled to maintain sexual intercourse with strangers to contribute to the family's economy<sup>(14)</sup>.

The wedding in the village does not necessarily imply monogamy. The practice of having more than one partner at the same time occurs from dating, and is more frequent in men than in women, and can occur in the community or outside. However, the practice of a man having several families has been restricted due to the economic situation<sup>(15)</sup>.

A study conducted in the Shawi villages in the Peruvian Amazon included sex between men as being one of the socio-cultural factors that shape sexuality and favor the risk of HIV infection. In some communities, it was reported that it was common for boys to initiate their sexual lives with another man. Often this sexual debut with a person of the same sex was carried out with a man from a different community, who was called *Mapero* or *Maparete*, a local

slang that refers to boys who had sex with other men. It is emphasized that they did not consider that this was homosexual behavior, but a male behavior where they liked to have sex with men and women. Thus, there was an apparent acceptance of this behavior in some villages, to the detriment of other more distant ones. In the villages near the river ports, the openly gay natives suffered discrimination. Faced with few job opportunities, they were most often hired to work as kitchen helpers and were expected to provide sexual favors, being forced to have sex in any way<sup>(8)</sup>.

Another problem involving AIDS in the indigenous scenario is related to sexual initiation. A study conducted in the Puerto Belén community, Peru, pointed out that the onset of sexual activity occurs between 12 and 15 years of age and, in some cases, it may occur shortly before, at age 11, and is earlier in women. In this case, the onset of sexual activity takes place immediately after menarche, since it is a very important moment for the Amazonian peoples, from whence the young person is prepared to take on the role of wife and mother. Having sex earlier has been associated with a higher number of sexual partners and the increased risk of STD<sup>(8, 12)</sup>.

Early sexual initiation in natives was also related to a history of sexual abuse. A study based on indigenous youth in two Canadian cities showed that the average age for the first sexual abuse incident was six years. Many of these abuses occurred in women; therefore, there was a strong relationship between a previous sexual trauma and vulnerability to HIV. It was found that sexually abused indigenous youth were twice as likely to have more than twenty sexual partners over a lifetime, in addition to reporting some kind of sexually transmitted disease and the irregular use of condoms during sexual intercourse<sup>(12)</sup>.

These data are consistent with studies that link the sexual vulnerability of indigenous people, in terms of HIV, to the non-use of condoms. In research conducted in the Chayahuita community, in the region of the Peruvian Amazon, it was observed that condom use is not part of the culture of this group<sup>(14)</sup>. Having little interest in protecting themselves was observed equally in other indigenous communities, due to the beliefs of such people, in terms of the disease and ancestral protection, identifying AIDS as a "disease of the others"<sup>(16-17)</sup>.

In the indigenous communities of Peru, many believe that the only option for the cure of AIDS is treatment with medicinal plants such as cat's claw and the copaiba oil because the treatment is effective in the early stages of disease and the advancement of the treatment is controlled by the health system. The emphasis on educational campaigns is related to the incurable nature of this syndrome, reinforcing the culture of fear. Despite knowing that the main route of transmission is sexual, they consider other forms of contagion; for example, sharing utensils such as toilet bowls and cups, or mosquito bites and bathing in the same river. Thus, in some communities there arise stigmatizing attitudes towards the disease<sup>(17-18)</sup>.

The culturally rooted variables contradict the biomedical models of HIV prevention. Knowing the indigenous beliefs, in terms of ancestral protection and AIDS, helps us to understand how traditional beliefs and cultural constructions of HIV/AIDS can be used more effectively in educational programs aimed at the indigenous population. Such a challenge constitutes a major attribution of the indigenous health teams to confront this epidemic, especially for the practice of nurses integrated into the teams of Special Indigenous Health Districts. In developing their attributions and competences, elements that consider cultural

specificities as effectively capable of directing the promotion of care must be inserted<sup>(19)</sup>.

### *Thematic Axis II - Confronting AIDS and the challenges of indigenous health*

The AIDS' control activities within the villages have been directed to the combination of biomedical, behavioral and structural interventions, optimizing the tools available to meet the cultural needs of this population. However, it is observed that what is proposed is not fulfilled for the most part and prevents adequate control of HIV transmission in this scenario<sup>(3)</sup>.

In order to know the possible risk factors and vulnerabilities that indigenous peoples are subject to, strategies involving the identification of social networks that permeate these communities, as well as their key interlocutors, are created in order to characterize them in their anthropological and political dimensions. Regarding the implementation of these actions in the indigenous scenario, a study indicates difficulties in the implementation of actions for controlling and preventing AIDS, considering the cultural differences of the various ethnic groups. The results show that each ethnic group has its own culture and only when respecting the culture and getting to know the people, do you get effective results<sup>(20)</sup>.

Other studies report criticisms concerning the monitoring of cases and prevention actions within the villages, due to the fact that they exhibit isolated characteristics and often disregard the indigenous systems of representation, values and practices related to illness and their traditional healing systems<sup>(14, 21)</sup>.

In this respect, the interethnic relationships and the understanding of transmission networks in the villages from the social and cultural determinants, originating from



contact with the society, are guiding elements for the adoption of more appropriate measures for preventing and controlling the AIDS' epidemic in this population. Regarding the cases of TB/HIV interventions, such as early HIV counseling, early diagnosis and the initiation of antiretroviral therapy (ART) for co-infected individuals, have been reported as effective strategies<sup>(22)</sup>.

Anonymous HIV testing was cited in a study, conducted in Canada, as an appropriate strategy for the local indigenous population, as it guarantees confidentiality, encouraging the person to undergo the test individually<sup>(23)</sup>. The fear of spreading the disease has been identified as a major barrier for diagnosing and treating AIDS in Australia and the Netherlands. The possibility of exposure of the case to the tribe can generate stigmatizing attitudes, which will reduce the adhesion of these individuals to the coping strategies of the disease<sup>(24-25)</sup>.

Pregnancy, psychosocial support and health care are among the success stories cited as the diagnostic and therapeutic adherence for HIV on the part of indigenous tribes, from a holistic perspective<sup>(24)</sup>. A similar result was identified in a study involving Native Americans<sup>(20)</sup>. In this study, the effective prevention experience for HIV/AIDS from the application of a holistic intervention model based on the concepts of the natives was discussed. In the Netherlands, the psychosocial approach was also targeted for interventions aimed at improving the adhesion of the indigenous patients in terms of HIV<sup>(25)</sup>.

From strategies consistent with the specific characteristics of the community, it is possible to overcome the challenge of addressing AIDS in a culturally different scenario. This challenge also permeates the health disparities that indigenous populations are subject to, requiring the improvement of diagnosis. In this regard, a study

highlights the importance of this approach in indigenous children, due to the observed cases of TB/HIV co-infection in a Brazilian tribe<sup>(21)</sup>. HIV is a well-established endogenous risk factor for the progression of active TB and specific groups such as the indigenous populations are identified as those most commonly affected by this infection<sup>(4; 21; 22)</sup>.

Interventions, such as early counseling in terms of HIV, triage of patients with tuberculosis (TB), early diagnosis and the start of ART for co-infected individuals, have been reported as effective strategies in preventing TB in indigenous scenarios. However, the management of TB/HIV co-infection is a huge challenge in resource-limited settings, as in the indigenous tribes of Indonesia<sup>(13)</sup>. In the specific case of the indigenous communities of Piedmont in Italy, a study<sup>(26)</sup> pointed out that this challenge can become more relevant in the future, given the fact of the low number of cases of co-infected patients there today.

## CONCLUSION

This study allowed for closer knowledge in terms of the developed universe of AIDS in the indigenous population. The issue related to sexuality, demonstrated in all the studied texts, proves the sociocultural influence as a factor that drives the indigenous peoples to life experiences that can increase their vulnerability to HIV.

Some risk situations are not unique to the indigenous peoples, but can be experienced more often by them, such as the infrequent use of condoms, leading these natives to become more exposed to HIV. Another point to be highlighted is the notion of a stable relationship, which emerges from the idea of fidelity as protection. Thus, when associated

with contraception, condoms are not regarded as important during sex.

The results of the analyzed publications guarantee the characterization of the major risk situations for HIV contamination to which the indigenous people are exposed. Due to the lack of studies involving this issue in Brazil, most of the analyzed publications included experiments relating to international scenarios. The development of studies targeted to the cultural aspects of the indigenous population and their sexuality are still incipient despite the fact that actions taken regarding the prevention of AIDS in this population are promising. We suggest the development of further research with a view to filling this important gap in our knowledge.

Therefore, it can be said that this study is relevant to subsidize the knowledge in the field of nursing, especially with regard to preventive actions, in terms of the risk behaviors of the indigenous population, adherence to drug therapy, the care for sick patients, amongst others. For nurses, who work directly with these issues, getting to know the particularities of the indigenous scenario regarding AIDS clarifies how indigenous beliefs and the cultural constructions of this epidemic can be used more effectively in prevention programs, with a view to minimizing the risks of HIV/AIDS contamination for the indigenous population.

## REFERENCES

1. Nóbrega RG, Nogueira JA, Ruffino-Netto A, Sá LD, Silva ATMC, Villa TCS. The Active Search for Respiratory Symptomatology for the Control of Tuberculosis in the Potiguara Indigenous Scenario, Paraíba, Brazil. *Rev Latino-Am Enfermagem* [periodic on the Internet]. nov-dez 2010 [cited 2014 dec 15];18(6):1169-76. Available from: [http://www.scielo.br/pdf/rlae/v18n6/pt\\_18.pdf](http://www.scielo.br/pdf/rlae/v18n6/pt_18.pdf)
2. Instituto Brasileiro de Geografia e Estatística (IBGE). Sinopse do Censo Demográfico 2010. [homepage da internet] 2011 [citado em 2015 Fev 10]; Disponível em: [http://www.ibge.gov.br/home/estatistica/populacao/censo2010/default\\_sinopse.shtm](http://www.ibge.gov.br/home/estatistica/populacao/censo2010/default_sinopse.shtm)
3. Ministério da Saúde (Brasil). Secretaria de Vigilância em Saúde - Departamento de DST, Aids e Hepatites Virais. *Boletim Epidemiológico Aids e DST*. 2012; 9 (1).
4. Karina L, Walters KL, Simoni JM. Decolonizing Strategies for Mentoring American Indians and Alaska Natives in HIV and Mental Health Research. *American Journal of Public Health*. 2009; 99(suppl 1): S71-S76. [included in the review]
5. Carvalho NS, Cho R, Flores LP. DST em Populações Indígenas no Brasil – Análise Crítica e Revisão da Literatura. *J bras Doenças Sex Transm*. 2011; 23(3):142-145.
6. Duncan KC, Reading C, Borwein AM, Murray MCM, Palmer A, Michelow W, Samji H, Lima VD, Montaner JSG, Hogg RS. HIV incidence and prevalence among aboriginal peoples in Canada. *AIDS Behav* [Internet]. 2011 [cited 2015 Mar 21]; 15(1):214-227. Available from: <http://link.springer.com/article/10.1007/s10461-010-9792-y#page-1>
7. Hernández-Rosete D, García OM, Bernal E, Castañeda X, Lemp G. Migración y ruralización del SIDA: relatos de vulnerabilidad en comunidades indígenas de México *Rev. Saúde Pública*. 2008; 42(1). [included in the review]
8. Orellana ER, Alva EI, Cárcamo CP, García PJ. Structural Factors That Increase HIV/STI Vulnerability Among Indigenous People in the Peruvian Amazon. *Qual Health Res*. 2013 Sept;23(9):1240-50. [included in the review]
9. Santos VL, Bermúdez XP, Toledo LM, Cruz MM, Moreira E. Reflexões sobre as políticas de controle das DST e Aids na população indígena. *Revista Tempus Actas em Saúde Coletiva*. 2010;89-100.
10. Ministério da Saúde (Brasil). Secretaria de Vigilância em Saúde - Departamento de DST, Aids e Hepatites Virais. *Boletim Epidemiológico Aids e DST*. 2013; 2 (1).
11. Bastos FI, Cáceres C, Galvão J, Veras MA, Castilho EA. AIDS in Latin America: assessing the current status of the epidemic and the ongoing res-

- ponse. *International Journal of Epidemiology*. 2008;37:729–737. [included in the review]
12. Pearce M, Mehrabadi A, Paterson K, Patel S, Craib KJ, et al. Cedar Project Partnership. Gender differences in HIV and hepatitis C related vulnerabilities among aboriginal young people who use street drugs in two Canadian cities. *Women Health* 2008;48(3):235-60. [included in the review].
  13. Pontororing GJ, Kenangalem E, Lolong DB, Waramori G, Sandjaja, Tjitra E, Price RN, Kelly PM, Anstey NM, Ralph AP. The burden and treatment of HIV in tuberculosis patients in Papua Province, Indonesia: a prospective observational study. *BMC Infectious Diseases*. 2010; 10:362. [included in the review]
  14. Zavaleta C, Mujica J, Ypanaqué PJ, Cueva N. Infecciones de Transmisión Sexual y VIH/SIDA en Comunidades Nativas de la Amazonía Peruana: Consideraciones Culturales. *Rev Peru Med Exp Salud Publica* [Internet] 2007 [cited 2014 Jan 20]; 24(3):315-16. Available from: <http://www.redalyc.org/articulo.oa?id=36324320>. [included in the review]
  15. Pozo JY. Promoción de la salud sexual y prevención del VIH-sida y de las ITS en los pueblos indígenas de las Américas. Organización Panamericana de la Salud (OPS) y Asociación Mundial de Sexología [Internet] 2003 [cited 2014 Nov 25]. Available from: [http://www.iidh.ed.cr/comunidades/diversidades/docs/div\\_enlinea/Salud%20sexual%20VIH-SIDA%20indigenas.pdf](http://www.iidh.ed.cr/comunidades/diversidades/docs/div_enlinea/Salud%20sexual%20VIH-SIDA%20indigenas.pdf)
  16. Golooba-mutebi F, Tollman SM. Confronting HIV/AIDS in a South African village: The impact of health-seeking behaviour. *Scand J Public Health* 2007; 69(Suppl 1): S175–S180. [included in the review]
  17. Liddell C, Giles M, Rae G. The Culture of Condoms: Culturally Grounded Variables and Their Association With Attitudes to Condoms. *Psychosomatic Medicine* 2008;70(4):496-504. [included in the review]
  18. Hardon A, Desclaux A, Egrot M, Simon E, Micollier E, Kyakuwa M. Alternative medicines for AIDS in resource-poor settings: Insights from exploratory anthropological studies in Asia and Africa. *J Ethnobiol Ethnomed* 2008; 4: 16. [included in the review]
  19. Sampaio Filho FJL, Gubert FA, Pinheiro PNC, Martins AKL, Vieira NFC, Nóbrega MFB. The life of the adolescent with hiv/Aids and self-care: a descriptive study. *Online braz j nurs* [Internet]. 2013 Apr [cited 2015 may 29]; 12 (1): 89-105. Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/3812>.
  20. Vernon IS, Jumper-Thurman P. Prevention of HIV/AIDS in Native American Communities: Promising Interventions. *Public Health Reports* 2002; 117(suppl 1): S96-S103. [included in the review]
  21. Gava C, Malacarne J, Rios DPG, Sant'Anna CC, Camacho LAB, Basta PC. Tuberculosis in indigenous children in the Brazilian Amazon. *Rev Saúde Pública* 2013;47(1):77-85. [included in the review]
  22. Narasimhan P, Wood J, MacIntyre CR, Mathai D. Risk factors for tuberculosis. *Pulm Med* 2013; 11. Article ID 828939. [included in the review]
  23. Tseng AL. Anonymous HIV testing in the Canadian aboriginal population. *Canadian Family Physician* 1996;42: 1734-1740. [included in the review]
  24. Newman CE, Bonar M, Greville HS, Thompson SC, Bessarab D, Kippax SC. Barriers and incentives to HIV treatment uptake among Aboriginal people in Western Australia. *AIDS*. 2007; 21(suppl 1):S13–S17. [included in the review]
  25. Sumari-de Boer IM, Sprangers MAG, Prins JM, Nieuwkerk PT. HIV Stigma and Depressive Symptoms are Related to Adherence and Virological Response to Antiretroviral Treatment Among Immigrant and Indigenous HIV Infected Patients. *AIDS Behav* 2012; 16:1681–1689. [included in the review]
  26. Baussano I, Bugiani M, Gregori D, Pasqualini C, Demicheli V, Merletti F. Impact of immigration and HIV infection on tuberculosis incidence in an area of low tuberculosis prevalence. *Epidemiol Infect*. 2006; 134(6):1353–1359. [included in the review]

---

All authors participated in the phases of this publication in one or more of the following stages, in accordance with the recommendations of the International Committee of Medical Journal Editors (ICMJE, 2013): (a) substantial participation in the planning or preparation of the manuscript or collection, analysis or interpretation of data; (b) preparation of the work or performance of critical review of the intellectual content; (c) approval of the submitted version. All authors declare for any purposes that the contents related to all aspects of the manuscript submitted to OBJN are their responsibilities. They ensure that the issues related to the accuracy or completeness of any part of the article have been properly investigated and resolved. Exempting therefore the OBJN of any joint participation in any imbroglios on the matter at hand. All authors declare that they do not have conflict of interest, whether financial or relationship, to influence the drafting and/or interpretation of the findings. This statement has been digitally signed by all authors as recommended by the ICMJE, whose model is available in [http://www.objnursing.uff.br/normas/DUDE\\_final\\_13-06-2013.pdf](http://www.objnursing.uff.br/normas/DUDE_final_13-06-2013.pdf)

---

**Received:** 05/01/2015  
**Revised:** 05/25/2015  
**Approved:** 06/23/2015