

## The Active Search for Respiratory Symptomatics for the Control of Tuberculosis in the Potiguara Indigenous Scenario, Paraíba, Brazil<sup>1</sup>

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This study sought to analyze the actions of an active search for respiratory symptomatics (RSs) in the control of tuberculosis (TB) in the Potiguara Special Indigenous Sanitary District, Paraíba, Brazil, between May and June 2007. After approval by the Research Ethics Committee, 23 professionals were grouped, including physicians, nurses, nurse technicians and indigenous health agents. The focus group technique was used as an instrument for data collection, based on the discourse analysis technique. Weaknesses of an operational nature that became apparent, related to the organization of local health service for the implementation of routines for diagnosing TB: absence of a systematic routine for searching for RSs, difficulties in organizing the material for bacteriological examination, inadequate approach to patient during sputum collection and inadequate professional training. It is deemed necessary to improve the organization of services for early detection of TB cases in the local indigenous scenario.

Descriptors: Tuberculosis; Indigenous Population; Health Services.

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## **A busca ativa de sintomáticos respiratórios para o controle da tuberculose, no cenário indígena potiguara, Paraíba, Brasil**

Procurou-se analisar as ações de busca ativa de sintomáticos respiratórios (SR) para o controle da tuberculose (TB), no Distrito Sanitário Especial Indígena Potiguara, na Paraíba, Brasil, no período de maio a junho de 2007. Após aprovação do Comitê de Ética em Pesquisa, foram reunidos 23 profissionais entre médicos, enfermeiros, técnicos de enfermagem e agentes indígenas de saúde. Utilizou-se a técnica de grupo focal como instrumento de coleta de dados, cujo tratamento fundamentou-se na técnica de análise de discurso. Evidenciaram-se debilidades de natureza operacional, relacionadas à organização do serviço de saúde local para a implantação de rotinas de diagnóstico para a TB: ausência de rotina sistematizada para a busca de SR, dificuldades na organização do material para exame bacteriológico, abordagem inadequada ao paciente, durante a coleta do escarro, e insuficiente capacitação profissional. Julga-se necessário melhorar a organização dos serviços para a detecção precoce dos casos de TB, no cenário indígena local.

Descritores: Tuberculose; População Indígena; Serviços de Saúde.

## **La búsqueda activa de sintomáticos respiratorios para el control de la tuberculosis en el escenario indígena Potiguara, estado de Paraíba, Brasil**

Este estudio analiza las acciones de la búsqueda activa de sintomáticos respiratorios (SR) para el control de la tuberculosis (TB) en el Distrito Sanitario Especial Indígena Potiguara, en Paraíba, Brasil, en el período de mayo a junio de 2007. Después de aprobado por el Comité de Ética en Investigación, fueron reunidos 23 profesionales, entre médicos, enfermeros, técnicos de enfermería y agentes indígenas de la salud. Se utilizó la técnica de grupo focal como instrumento de recolección de datos, cuyo tratamiento se fundamentó en la técnica de análisis de discurso. Se evidenciaron debilidades de naturaleza operacional, relacionadas a la organización del servicio de salud local para la implantación de rutinas de diagnóstico para la TB, que fueron: ausencia de una rutina sistematizada para la búsqueda de SR, dificultades en la organización del material para examen bacteriológico, abordaje inadecuado al paciente durante la recolección del esputo, e insuficiente capacitación profesional. Se juzga necesario mejorar la organización de los servicios para la detección precoz de los casos de TB en el escenario indígena local.

Descriptorios: Tuberculosis; Población Indígena; Servicios de Salud.

### **Introduction**

Tuberculosis (TB) remains a public health problem of great magnitude among indigenous populations. According to estimates by the National Health Foundation (FUNASA), the incidence of TB among indigenous people which, in 2002, reached a peak of 210.3/100,000 inhabitants fell to 60.9/100,000 inhabitants in 2007<sup>(1)</sup>. However, this percentage still exceeds the national mean, which is currently about 39/100,000 inhabitants, according to Ministry of Health estimates<sup>(2)</sup>.

Paradoxically, data recorded in the Potiguara Special Indigenous Sanitary District (SISD) in the book *Registro e Controle do Tratamento dos Casos de Tuberculose*, according to the standards of the National Tuberculosis Control Program of the Ministry of Health (NTCP/MH), highlights the low endemic pattern for TB in the Potiguara population, revealing that, in the period 2004 to 2008, there were only twelve cases diagnosed in the local indigenous population, resulting in an mean incidence rate of 21.7/100,000 inhabitants.

Data from the literature<sup>(3)</sup> emphasize that the high endemic patterns for TB in the indigenous population involve more isolated ethnicities and may be related to their recent contact with the white population of the country. With regard to the Potiguara population, their contact with the non-indigenous society dates back to the beginning of colonization<sup>(4)</sup>, suggesting an old contact with the Koch bacillus, which does not mean that TB is absent from the local indigenous scenario, but that it does not promote the decimation or extinction of the group, as still happens in other regions of Brazil<sup>(5)</sup>.

The Potiguara SISD is located in three contiguous areas of the municipalities of Rio Tinto, Marcação and Baía da Traição, in Paraíba. These municipalities encompass the officially recognized indigenous population in this state, bringing together about 11,763 individuals\*, one of the largest in Brazil and in the Northeast ethnographic region. This population is distributed in 26 villages located on indigenous lands of the referred municipalities<sup>(4)</sup>.

The basic health care network of the Potiguara SISD is linked with the Brazilian National Health System, known as the Unified Health System (SUS), developing actions previewed in the District Plan, including the control of TB<sup>(4)</sup>. The implementation of the Tuberculosis Control Program (TCP) in SISDs intensified control actions, such as early diagnosis, active search of transmitters and supervised treatment, in the indigenous population<sup>(1)</sup>. Putting these actions into operation is the starting point for improvements in disease control, since this is an activity recommended by the Ministry of Health, particularly with regard to vulnerable groups such as indigenous people.

However, unfavorable indicators for TB control in the Potiguara population have triggered a series of reflections regarding the probable reasons that may be contributing to the permanence of this condition over the years. Among them, the underreporting of cases is prominent, often associated with not performing the active search for new cases as a systematic practice of the health service and the failure to search for transmitters and to conduct Respiratory Symptomatic (RS) examinations. These difficulties are related to the health service and also contribute to the permanence of TB among indigenous populations that possess high indices of disease<sup>(3)</sup>.

It is believed that many cases of TB are not being diagnosed, due to users not having access to health services or because health professionals are not alert to

the RSs<sup>(6)</sup>. Thus, the active search for RSs and contacts should be a permanent attitude, incorporated into the routine activities of all members of the health teams in order that early detection of TB cases is a priority addressed in the NTCP.

Considering the findings involving TB already documented in this periodical<sup>(7-11)</sup>, this study brings a new contribution on the subject, given the paucity of published articles on TB in culturally differentiated populations. This research aims to analyze the actions of an active search for RSs for TB control in the routine of indigenous healthcare teams of the Potiguara SISD.

## Methodological framework

This qualitative study was conducted in the Potiguara SISD, in the state of Paraíba, from May to June 2007. The study involved 23 health professionals, including physicians, nurses, nurse technicians, and Indigenous Health Agents (IHAs), belonging to three different health care teams. In this context, the role of the IHA is to search for RSs during visits, using elements not incorporated into the protocol of searching for symptomatics, such as forms to identify the signs and symptoms of TB, and delivering the containers for sputum collection when necessary.

For data collection, three focus groups were conducted at different times, bringing together, respectively, seven, five and eleven professionals of each municipality involved in the study. The guiding instrument of the discussion was created from a script containing a list of topics related to the identification of the RS in the service routine, supplies, laboratory flow, monitoring of transmitters and professional training.

The focus group is a research technique that allows qualitative data to be obtained from group sessions in which four to twelve people, who share a common trait, discuss various aspects of a specific theme, with the presence of a moderator and an observer<sup>(12)</sup>.

After the transcription of the statements, they were decomposed and organized into texts with the lines numbered. In the sequence, the identification of issues related to the object of study was carried out, followed by the grouping of coincident themes allowing the formation of blocks of meanings that guided the construction of the empirical category: *The need for the active search for TB cases in the indigenous population and weaknesses in the current practice*. In analyzing

\* Data provided by the Potiguara SISD, relating to the indigenous census of 2008.

the statements, the study subjects were represented by the letter "S" followed by numbers relative to them and the lines corresponding to their statements. For the interpretation of the material produced the technique of discourse analysis was used<sup>(13)</sup>.

Beyond the ethical requirements set out in Resolution 196/96 which contains guidelines and rules for research involving human subjects, the provisions of Resolution 304/2000, regarding the special thematic "indigenous populations"<sup>(14)</sup> were considered in this study. The project that led to this research was approved by the Research Ethics Committee of the Center for Health Sciences of the Federal University of Paraiba on 28/02/07, protocol number 891/07.

## Results

From the statements related to the active search for RSs in TB control in the Potiguara SISD, the thematic category was identified: *the need for the active search for cases of TB in the indigenous population and current weaknesses in this practice*. Thus, the difficulties associated with this large theme presented in the statements relating to professional practice and to the organization of indigenous health services will be addressed.

### The need for the active search for cases of TB in the indigenous population and current weaknesses in this practice

The active search for RSs represents the initial strategy for detecting new TB cases and the first among the various control actions necessary for the continuity of care<sup>(9,11)</sup>. This is an activity that must be incorporated by the professionals of the health teams through the systematic search for suspected cases, in the spontaneous demand for health services, during domicile visits, in specific groups (people living in closed institutions) and in community events (educational campaigns)<sup>(15)</sup>.

Among the possibilities presented, it was observed that, in the Potiguara SISD environment, the actions of the active search for RSs were restricted to the investigation in spontaneous demands and mobilization of the Division of Epidemiological Surveillance, in accordance with the statements that claim: *The routine [of active search] is by free demand [...] because the number of families we have is very large [...] but we have a special view of these patients with chronic coughs, fever, hemoptysis [...]* (S1-L: 36/41).

*[...] About six months ago the coordinator [of the Epidemiology division] gave us a list [...] to interview the families and to know whether they have any signs, any symptoms that could be tuberculosis. So I did this, but I could not finish the entire village. (S19 - L: 76/79).*

The statements portray weaknesses in the active search for cases in the community, despite the recognition of its importance in TB control. When dependent on the spontaneous demand, the responsibility to seek the service is attributed to the patient, contributing not only to delay in the diagnosis of TB, but also to the underreporting of cases. Cultural factors inherent in this demand, for example, the concept of the health-disease process, beyond the historical legacy of the stigma that surrounds TB, are factors that may limit the demand for health services and contribute to noncompliance with TB treatment<sup>(8,16)</sup>.

Although being valid, the initiative of the Division of Epidemiological Surveillance to mobilize the IHAs to search for cases of TB in the community, it was observed that this action is configured in an isolated and discontinued way, disrupting the continuity of care. The following statements reveal how the active search for RSs is carried out: *The nurse [of the division] of Epidemiology made some forms and delivered them to the [health] agents, advising them that, in the case of persistent cough, fever [...] they could ask for sputum from the patient and [...] notify the center for the driver to collect it the next day. (S8 - L: 67 / 71).*

*The [responsibility] is that of the patient who submits the sputum, and the driver collects it from their house and takes it to the laboratory. (S8 - L: 92/93).*

It denotes, therefore, a fragmented action rather than an integral one, which demonstrates a contradiction to what is proposed to the health team, regarding the integrality of health actions. A study<sup>(6)</sup> showed that the range of activities of the professionals can generate an overload of work, resulting in the cutting of some actions, such as the search for RSs.

However, identifying the RS does not mean just questioning the individual if they arrive presenting a cough. There is a need to ensure that health professionals carry out all the steps that are involved in this process, considering the anthropological aspects that permeate this action. This implies an educational activity by the professional with the patient in which the concept regarding health and disease, as well as the values that are attributed to the stigma, are references that guide the interaction. It also involves teaching the method of collect sputum, explaining why the material needs to be collected, and presenting the basics about

the disease, about the treatment and its relationship with the cure. There is still the need to ensure that the material collected will reach the Health Unit and that this service has, within its routine, storage conditions for the material collected and the flow through the laboratory<sup>(6)</sup>. Thus, the active pursuit of RSs requires a set of actions governed by aspects related to the patient and/or the health service.

In the literature, reports were encountered of patients that had delayed visiting health units for fear of receiving a diagnosis of TB, due to the stigma and the prejudice that surround the disease<sup>(17)</sup>. Therefore, attempts to collect sputum in the domicile will be frustrated, if the doubts, concerns and fears of the RSs are not addressed<sup>(6)</sup>.

Another determinant component concerns the availability of supplies, such as collection pots and labels, conditions for adequate preservation and storage of the material collected, as well as laboratory flow and the information system<sup>(6)</sup>. In the statements, the availability of bacilloscopy containers and the improvisation given the lack of this supply were observed: *We have pots. If you need one today we have. (S2 - L: 570). Already run out [...] I told them to get a bottle and to boil it. (S8 - L: 441).*

Another limiting factor in the sputum collection procedure in the Potiguara SISD is related to the lack of guidance for performing the examination, compromising the quality of the material and leading the team to opt for ordering exams of higher diagnostic accuracy such as sputum culture: *[...] it is a collection that depends heavily on the patient. He'll cough, it depends how he will cough, if will see this bacillus. We ask immediately for the culture because even with a small sample the culture [...] can already identify. (S1 - L: 368/370).*

An important aspect that influences the quality of the sputum samples is the guidance conducted by health professionals and the understanding of this guidance by the patient<sup>(18)</sup>. It is expected that the professional can orient them with simple information regarding the collection of sputum, as well as perform this action in its entirety, observing the quality and quantity of the sample up to the storage and transportation of the material.

The problems of geographical accessibility of the laboratory network which is located in the Baía da Traição municipality should be highlighted, as there is a need for a vehicle to transport the samples originating from the municipalities of Marcação and Rio Tinto within the right time: *[...] the doctor asks or even the nurse asks the bacilloscopy in two samples; it is then immediately taken to the Baía da Traição, until you can get transport [...] this is a*

*difficulty in our reality [...]* (S2 - L: 375/380).

The adequacy of transport is related to the geographical accessibility and is configured as a major weakness in the local health service, due to the distance between the villages and the diagnostic services located in the municipality headquarters. This condition culminates in several difficulties in the routine of the service, given the need to move the patient to another municipality, to provide transportation, the occurrence of delays in dissemination of results, among other such situations that result in loss of time and a burden on the Health System *[...] the X-ray is done in João Pessoa and it is often delayed [to be performed]. (S8 - L: 81/83).*

With regard to the transmitters, the active search, in compliance with the protocol relative to indigenous populations, is a constant concern of the team that are shown to be aware of the risk factors that involve this population: *[...] it is worth pointing out that our concern should also be with the transmitters, [...] to search for these transmitters and show them the importance of treatment if necessary. [...] It is complicated, especially in our area, which is a risk area [where] the families are grouped together in a single house, in one domicile [...]* (S8 - L: 131/140).

In this group, chemoprophylaxis is indicated for all contact with the tubercles bacillus, those presenting a strong reaction to the PPD test, regardless of age and vaccination status, after discounting the possibility of tuberculosis-disease, through bacilloscopy and radiographic examination<sup>(15)</sup>. However, the active search for transmitters is surrounded by resistance of the group, according to reports of an approach: *[...] In my experience, one family resisted! 'No, I'm not sick! He is the one who is sick!' Then all this struggle for us to clarify the importance [...] until they understand [...] that they may also be carriers without knowing it and thereby infect the entire community. (S8 - L: 309/313).*

Another aggravating factor observed during the research relates to the unpreparedness of the professionals in identifying the RS, in view of the lack of experience of TB cases in the local scenario and not understanding the pathology. This fact has aroused doubts and insecurity in the professionals in dealing with the actions developed in the service. *[...] Sometimes you're experiencing a little, you are afraid, in that anguish: 'Is it that I'm not finding these cases because I do not know the symptoms of a patient with tuberculosis?' [...]* (S1 - L: 208/210).

*I do not feel prepared to face a case of this [...] myself [I'm afraid] of people having a case and going unnoticed [the patient] does not want to go to the Health Center and goes unnoticed by us AIS. (S7 - L: 676/684).*

Professional formation and the training of human resources are important requirements for the incorporation and sustainability of actions of control of various diseases in the context of Primary Care, including TB. Professional formation plays a key role in disseminating knowledge and practices in health<sup>(19)</sup>, and the training of human resources for TB control in a culturally differentiated context follows the need for an adequate approach to the patient with TB: *The biggest difficulty is the way to approach tuberculosis in a patient's home. For this it is necessary to train personnel for when it arrives [...] it's not because it is tuberculosis, since everyone will go there like vultures and it is in this way that this has to be done! [...]* (S13 - L: 252/261).

Considering the stigma surrounding the disease, this report stressed that the receptivity to the teamwork during a suspected case will depend on how this approach is going to be made, requiring prior preparation for the indigenous health teams.

Observing the major weaknesses associated with the active search for RSs for TB control, identified in this study, it is noted that most of them reflect the operational problems of the health services of the Potiguara SISD evidenced in the practice of the health professionals.

## Discussion

The actions of active search for RSs in the Potiguara SISD show how under-notified tuberculosis may be in this scenario. A study involving TB in indigenous populations of the upper Rio Negro<sup>(16)</sup> speculated that the absence of an active search system causes the frequency of tuberculosis in this region to be estimated imperfectly.

It may be affirmed that TB cases in the Potiguara population are, possibly, not being identified because the local service has not yet effectively and systematically incorporated the active search for RSs, due to the weaknesses related to the organization of the health services and the lack of technical support in the implementation of actions inherent in the TCP.

Despite the above program being widely disseminated in the country, as well as Noel Nutels having implemented actions to control TB in indigenous areas in the fifties<sup>(20)</sup>, professionals of the Potiguara indigenous areas have been acting without supervision and without updated training, a fact also reported among professionals working in the Kaingáng indigenous areas of Rio Grande do Sul<sup>(20)</sup>.

As observed in other studies<sup>(20-21)</sup>, the weaknesses related to the organization of the health service directed

towards indigenous populations have generated discontinuity in health actions. Among them, the lack of service structure and shortage of supplies are prominent. Within these aspects, the lack of suitable bacilloscopy containers was mentioned in this investigation, although this does not constitute a common condition in the reality of local indigenous health teams.

A study conducted in Ribeirão Preto-SP<sup>(18)</sup> found that among the difficulties for the performance of sputum bacilloscopy, the lack of material was reported by 25% of the professionals, with the pots and polystyrene ice chests for storage of sputum the supplies most commonly mentioned.

Other evidence reported in this study<sup>(18)</sup> indicate the geographic barriers related to difficult access to diagnostic resources located in neighboring municipalities that act as referral services. The difficulty, as regards the transportation of the patient for examination, was present in the testimonies of professionals working in the Potiguara territory as well as in other indigenous scenarios<sup>(20,22)</sup>.

The actions of the active search for RSs in the Potiguara SISD faces unique challenges to its effectiveness because it does not incorporate, in the exercise of this practice, the cultural context inherent in the indigenous population. This condition impedes the implementation of the TCP in the local scenario. In line with other authors<sup>(20)</sup>, it was observed that this program needs to be appropriate to the cultural reality, not being efficient if it merely reproduces the guidelines established at the national level.

To designate the active search for RSs, investigated in this study, as a practice centered on spontaneous demand reflects a reality which is subject to discussion in other study scenarios<sup>(23)</sup>, revealing that the concept of health and disease existing among indigenous peoples interferes with recommended care models. Therefore, health professionals, by the lack of a deeper understanding of these concepts, find it difficult to adapt such models, thus provoking weaknesses in the organization of the health services<sup>(23)</sup>.

In dealing with TB in a different cultural context it is necessary to know how the Indians think and live the health-disease process that, in most cases, differs completely from the perception of non-Indians. There is already expressive literature on the concepts that associate TB with a disease of shamanic sorcery<sup>(24-25)</sup>. In these terms, it would not be considered contagious as sorcery needs to be addressed to a given person or a community to take effect.

Due to the requirements necessary for the transmission of tuberculosis infection - intensity of contact with a contagious person, unhealthy houses, little or poorly ventilated - the transmission of the disease occurs mainly in the family environment. However, some societies do not accept the possibility of infection between family members, because of consubstantial ties, but only between people outside the biological family<sup>(24)</sup>.

The impossibility of infection in the family may call into question the preventive procedures recommended by western medicine, highlighting the active search for transmitters in the family of a patient diagnosed with tuberculosis, with them refusing to talk about the diagnosis. Moreover, these concepts may explain the behavior of certain patients, with respiratory symptoms consistent with a diagnosis of tuberculosis, who refuse to undergo bacteriological examinations, will not collect the results, do not start treatment or that interrupt it<sup>(24)</sup>.

It is worth pointing out the relevance that the health services assume in this context, since these may facilitate or limit their use by individuals who demand attention<sup>(7)</sup>. Thus, it becomes imperative to establish a dialogue between the medical practice, cultural specificity and their traditional knowledge, contributing to the development of an adequate health care system for the reality of the Potiguara people, as well as for the local logistic conditions, aiming for the early diagnosis and treatment of TB patients.

### Final considerations

The study permitted the identification of gaps that render the implementation of diagnostic routines for the

control of TB in the local indigenous scenario unviable. It is deemed necessary to improve the organization of the services in the Potiguara SISD so that new strategies are assumed that incorporate the systematic active search for RSs in the routine of these teams.

Thus, once the performance of bacilloscopy is accepted by the user, the health service must guarantee the continuity of care initiated through a sequence of activities ranging from identification of the RS, guidance on sputum collection, availability of supplies and transportation as determinant factors for the flow of the examination to the laboratory for analysis, receipt of the results by the service up to the referral for outpatient follow-up of the diagnosed cases.

To make such activity possible requires planning and organization of the service, as well as the preparation of professionals to acquire understanding that transcends biological knowledge, in a way that a set of actions is assumed which advance towards a new work logic, especially when considering the differentiated cultural context that characterizes the scenario of the practice of these teams.

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### References

1. Fundação Nacional de Saúde (BR). Funasa constata queda nos índices de tuberculose entre indígenas. Brasília (DF): Ministério da Saúde; 2008. [Internet]. [acesso 02 julho 2009]. Disponível em: <http://www.funasa.gov.br/Web%20Funasa/not/not2008/not154.htm>.
2. Cimieri F. Diminui taxa de incidência de tuberculose no Brasil. Estadão.com.br 24 mar 2009 [acesso 02 janeiro 2010]. Disponível em: [http://www.estadao.com.br/vidae/not\\_vid344041,0.htm](http://www.estadao.com.br/vidae/not_vid344041,0.htm).
3. Marques AMC, Cunha RV. A medicação assistida e os índices de cura de tuberculose e de abandono de tratamento na população indígena Guaraní-Kaiwá no Município de Dourados, Mato Grosso do Sul, Brasil. Cad Saúde Pública. 2003;19(5):1405-11.
4. Nóbrega RG. As ações de controle da tuberculose desenvolvidas pelas equipes de saúde indígena da Paraíba: análise da dimensão de coordenação. [dissertação de mestrado]. João Pessoa (PB): Universidade Federal da Paraíba; 2007.
5. Moonen F. Os índios Potiguara da Paraíba. Recife (PE); 2008. [acesso03 jul 2009]. Disponível em: [http://www.dhnet.org.br/direitos/sos/ciganos/a\\_pdf/moonen\\_indios\\_potiguara\\_pb\\_2008.pdf](http://www.dhnet.org.br/direitos/sos/ciganos/a_pdf/moonen_indios_potiguara_pb_2008.pdf).
6. Muniz JN, Palha PF, Monroe AA, Gonzales RC, Ruffino A Netto, Villa TCS. A incorporação da busca ativa de sintomáticos respiratórios para o controle da tuberculose na prática do agente comunitário de saúde. Ciênc Saúde Colet. 2005;10(2):315-21.
7. Oliveira SAC, Ruffino A Netto, Villa TCS, Vendramini SHF, Andrade RLP, Scatena LM. Health services in tuberculosis control: family focus and community orientation. Rev. Latino-Am. Enfermagem. maio/junho 2009;17(3):361-7.
8. Sanchez AIM, Bertolozzi MR. Beyond DOTS (Directly Observed Treatment Short-Course) in tuberculosis' control: interfacing and sharing needs. Rev. Latino-Am. Enfermagem. setembro/outubro 2009;17(5):689-94.

9. Gazetta CE, Santos MLSG, Vendramini SHF, Poletti NAA, Pinto JM Neto, Villa TCS. Tuberculosis contact control in Brazil: a literature review (1984-2004). *Rev. Latino-Am. Enfermagem*. março/abril 2008;16(2):306-13.
10. Villa TCS. Nursing knowledge production in tuberculosis control in Brazil. *Rev. Latino-Am. Enfermagem*. julho/agosto 2008;16(4):655-56.
11. Hino P, Costa-Júnior ML, Sasaki CM, Oliveira MF, Villa TCS, Santos CB. Time series of tuberculosis mortality in Brazil (1980-2001). *Rev. Latino-Am. Enfermagem*. setembro-outubro 2007;15(5):936-41.
12. Cruz O Neto, Moreira MR, Sucena LFM. Grupos focais e pesquisa social: o debate orientado como técnica de investigação. Rio de Janeiro (RJ): Escola Nacional de Saúde Pública; 2001.
13. Fiorin JL. Linguagem e ideologia. 6. ed. São Paulo: Ática; 1998.
14. Ministério da Saúde (BR). Conselho Nacional de Saúde. Comissão Nacional de Ética em Pesquisa. Resolução Nº 304 de 09 de agosto de 2000: diretrizes e normas regulamentadoras de pesquisa envolvendo populações indígenas. Brasília (DF): Ministério da Saúde; 2000.
15. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Departamento de Vigilância Epidemiológica. Coordenação Geral de Doenças Endêmicas. Área Técnica de Pneumologia Sanitária. Programa Nacional de Controle da Tuberculose. Brasília (DF): Ministério da Saúde; 2004.
16. Buchillet D, Gazin P. A situação da tuberculose na população indígena do Alto Rio Negro (Estado do Amazonas, Brasil). *Cad Saúde Pública*. 1998;14(1):181-5.
17. Khan A, Walley J, Newell J, Imdad N. Tuberculosis in Pakistan: socio-cultural constraints and opportunities in treatment. *Soc Sci Med*. 2000;50(2):247-54.
18. Nogueira JA, Ruffino A Netto, Monroe AA, Gonzales RIC, Villa TCS. Busca ativa de sintomáticos respiratórios no controle da tuberculose na percepção do agente de saúde. *Rev Eletr Enferm*. 2007;9(1):106-18.
19. Carvalho YM, Ceccim RB. Formação e Educação em Saúde: aprendizados com a Saúde Coletiva. In: Campos GWS, Mianyo MA, Drumond M Júnior, Carvalho YM. *Tratado de Saúde Coletiva*. São Paulo-Rio de Janeiro: Hucitec; 2007. p. 137-170.
20. Hokerberg YHM, Duchiate MP, Barcellos, C. Organização e qualidade da assistência à saúde dos índios Kaingáng do Rio Grande do Sul, Brasil. *Cad Saúde Pública* 2001; 17(2): 261-72.
21. Garnelo L, Sampaio S. Organizações indígenas e distritalização sanitária: os riscos de "fazer ver" e "fazer crer" nas políticas de saúde. *Cad Saúde Pública* 2005; 21(4):1217-23.
22. Chaves MBG, Cardoso AM, Almeida C. Implementação da política de saúde indígena no Pólo-base Angra dos Reis, Rio de Janeiro, Brasil: entraves e perspectivas. *Cad Saúde Pública* 2006; 22(2):295-305.
23. Athias R, Machado M. A saúde indígena no processo de implantação dos Distritos Sanitários: temas críticos e propostas para um diálogo interdisciplinar. *Cad Saúde Pública* 2001; 17(2):425-31.
24. Buchillet D. Tuberculose, cultura e saúde pública. *Série Antropologia*. Brasília; 2000.
25. Garnelo L, Wright R. Doença, cura e serviços de saúde. Representações, práticas e demandas Baniwa. *Cad Saúde Pública* 2001; 17(2):273-84.