



ANALYSIS OF THE PRODUCTION ABOUT TUBERCULOSIS IN ELDERLY IN LUSA AND ENGLISH LITERATURE

ANÁLISE DA PRODUÇÃO ACERCA DA TUBERCULOSE EM IDOSOS NA LITERATURA LUSA E INGLESA

ANÁLISIS DE LA PRODUCCIÓN ACERCA DE LA TUBERCULOSIS EN ANCIANOS EN LA LITERATURA LUSA E INGLESA

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ABSTRACT

Objective: to analyze the discourse in the results of publications related to tuberculosis in elderly propagated in *online* journals from 2004 to 2014, under the reference of the French analysis discourse (AD). **Method:** this is an integrative review guided by the question “What the discourse of publications reveals about tuberculosis in the elderly in the national and international literature, in *online* journals, in the last ten years?”. The consultation was performed on BIREME, LILACS, MEDLINE and SCIELO virtual library databases, with the keywords: tuberculosis, elderly, *tuberculosis*, *aged*, employing the analysis discourse, on the French side. **Results:** the TB (Tuberculosis) affects older men, with cough as the main symptom; delayed diagnosis of the disease and prophylaxis, generally not performed due to side effects; obstacles for the diagnosis and monitoring of treatment. **Conclusion:** there is a shortage of studies sensitives to the weaknesses not only of the service or of a vulnerable group, but to identify what permeates the elderly and living with the disease. **Descriptors:** Tuberculosis; Aging; Elderly Health; Health Services; Literature.

RESUMO

Objetivo: analisar o discurso nos resultados de publicações relacionadas à tuberculose em idosos difundidas em periódicos *online* no período de 2004 a 2014, sob os referenciais da análise de discurso francesa (AD). **Método:** revisão integrativa norteada pela questão “O que revela o discurso das publicações sobre a tuberculose em idosos na literatura nacional e internacional, em periódicos *online*, nos últimos dez anos?”. A consulta foi realizada nas bases de dados BIREME, LILACS, MEDLINE e na biblioteca virtual SCIELO, com as palavras chave: tuberculose, idoso, *tuberculosis*, *aged*, empregando a análise de discurso, na vertente francesa. **Resultados:** a TB acomete mais idosos homens, com a tosse como principal sintoma; retardo no diagnóstico da doença e profilaxia geralmente não realizada devido aos efeitos colaterais; entraves para o diagnóstico e seguimento do tratamento. **Conclusão:** há escassez de estudos sensíveis às fragilidades não só do serviço ou de um grupo vulnerável, mas que identifique o que permeia o ser idoso e o estar com a doença. **Descritores:** Tuberculose; Envelhecimento; Saúde do Idoso; Serviços de Saúde; Literatura.

RESUMEN

Objetivo: analizar el discurso en los resultados de publicaciones relacionadas a la tuberculosis en ancianos difundida en periódicos *online* en el período de 2004 a 2014, bajo los referenciales del análisis de discurso francesa (AD). **Método:** revisión integradora guiada por la pregunta “Qué revela el discurso de las publicaciones sobre la tuberculosis en ancianos en la literatura nacional e internacional, en periódicos *online*, en los últimos diez años?”. Realizada la consulta en las bases de datos BIREME, LILACS, MEDLINE y en la biblioteca virtual SCIELO, con las palabras clave: tuberculosis, anciano, *tuberculosis*, *aged*, empleando el análisis de discurso, en la vertiente francesa. **Resultados:** la TB ataca más ancianos hombres, con la tos como principal síntoma; retardo en el diagnóstico de la enfermedad y profilaxis generalmente no realizada debido a los efectos colaterales; barreras para el diagnóstico y seguimiento del tratamiento. **Conclusión:** hay escasez de estudios sensibles a las fragilidades no solo del servicio o de un grupo vulnerable, pero que identifique lo que impregna el ser anciano y el estar con la enfermedad. **Descritores:** Tuberculosis; Envejecimiento; Salud del Anciano; Servicios de Salud; Literatura.

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INTRODUCTION

Tuberculosis (TB) is a disease that over the years remains a major problem in global health. In 2012, there were registered, worldwide, about 8.6 million of new cases, showing a number reduction in recent years, concomitant to TB death occurrences, which had a 45% reduction in the last two decades, from 1.3 million in 1990 to 940,000 in 2012.¹

In the international scenario, Brazil occupies the 16th position in the group of 22 countries that account nearly 80% of cases. It is noted that the incidence of TB is higher in Brazilian men aged from 40 to 59 years old, with 71,123 new cases diagnosed in 2013, relevant in the North, Northeast and Southeast, showing a profile that influences directly in the maintenance transmission chain of the disease, i.e., most of the diagnosed cases had as clinical feature, lung, and bacillus.²

Associated with the wide spread of TB, worldwide, there is currently a population increase of people aging. Accentuating the problem, TB affects certain groups with a great tendency to illness, among which are the elderly.³

The delay in diagnosing TB in aging people is often determined by the concomitant presence of other problems, such as the Congestive Heart Failure (CHF), Chronic Obstructive Pulmonary Disease (COPD) and Pneumonia, which contributes to its continuity and possible dissemination. The lack of celerity in diagnostic confirmation is still justified by the attempt to find the most common diseases of age at the expense of specific workup, which promotes routine admissions and determines the rise in cases of death among the elderly.⁴⁻⁵

Thus, the increase in the number of elderly combined with the impact of TB in this population, in particular, imposes greater concern to studios and the health authorities. The fact justifies the need for specific studies and more forceful actions against the disease.⁶ In this light, compared to the growth of the elderly population associated with vulnerability for the development of TB, as well as the scientific production shortage in the area, emerged the interest in identifying national and international studies published about the subject in the last ten years. The purpose is to analyze the speech contained in the results and thus, meet the remaining gaps that lead to reflect on new possibilities that guide actions to promote the health of elderly and propitiate the development of future research

that will strengthen the field of knowledge about the subject.

Based on these, it aimed to analyze the speech in the results of publications related to tuberculosis in elderly disseminated in *online* journals from 2004 to 2014, under the reference of the French analysis discourse (AD).

METHOD

The research consists of an integrative review, and six stages were carefully followed for its elaboration: issue identification and formulation of the research question; choice of search strategy in the literature; selection of publications as inclusion criteria; reading, evaluation and categorization of relevant data; analysis of listed information; interpretation and presentation of results.⁷

This study aimed to answer the following question: what does reveals the discourse of publications about tuberculosis in the elderly in the national and international literature in *online* journals in the last ten years?

With the intention to identify publications about the theme, an *online* search in journals in the area of Health concentration was used, with national and international indexing. A research was held at the Regional Library of Medicine (BIREME), *Latin American and Caribbean Health Sciences Literature (LILACS)*, *International Literature in Health Sciences (MEDLINE)* and *electronic library Scientific Electronic Library Online (SCIELO)* databases using terms in Portuguese and English, respectively, registered in Descriptors of Health Sciences (DeCS).

The used research strategy was initiated by advanced search subject. The terms tuberculosis and elderly were used in Portuguese and English. As research delimiter, we used the Boolean operator *AND* together with the selected terms: TB *AND* elderly and tuberculosis *AND* aged, and for better delineation of the study, the following inclusion criteria were selected: complete original articles discussing the proposed theme, published between 2004 and 2014, available for free.

The universe of the study consisted of sixty articles, and fifty-five published in English and five in Portuguese. Then, a refinement of the results was performed excluding terms that were not related to the purpose of the study, such as the articles written in Japanese, Spanish, and French languages. After analyzing the final result of the search, the duplicate articles were eliminated, and that did not relate directly to the theme. Thus, the

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discursive corpus was made up of nine articles, of which five were published in English and four in Portuguese.

After the composition phase of the empirical material, effective in January 2014, we used an instrument⁸ containing the following items: article title, authors, publication journal name, year of publication, modality, study approach as well as the evidence level.⁹ After obtaining the results, they were grouped and presented in tabular form, to facilitate the visualization of the studies inserted in integrative review, forming the discourse corpus analyzed through theoretical and analytical device of Analysis Discourse (AD) of French line.¹⁰⁻¹ Furthermore, a search for selecting studies, thus increasing the reliability of the survey was carried out by two researchers, independently.

AD aims to explain the processes of significance that are in a text, thus enabling the understanding of how this text makes sense through its operating mechanisms.¹²

We used the methodology proposal of Souza (2014) for the analysis based on the AD device, which proposes an analytical reading of the discursive corpus using three heuristics questions, which help the analyst to evidence the senses present in the discourse. The first constitutes the definition of the analysis-concept, the second concerns the construction of the meaning of this analysis-concept via textualization, and its textual or linguistic marks, and the third question seeks to relate the meaning built with discursive and ideological formations.¹³

The "Tuberculosis in the elderly" is the analysis-concept of this research. Once defined the concept-analysis, as well as the acquisition of discursive corpus, it moved then to identify the textual brands that build a sense to the analysis-concept. Through the textual brands, there is the possibility to check what ideologically supports the speech.

Therefore, after initial reading of the discursive corpus, the following text marks were observed:

The deaths were more frequent in the elderly; presence, among the elderly, comorbidities, immune deficiency; to present a greater number of predisposing factors; more frequent in males; a cough was the symptom also more common; longer diagnosis in the elderly due to low clinical suspicion in these patients; suggests disease reactivation of latent infection; elderly residents in long-term care facilities are at increased risk; it is suggested that the control measures are undertaken by the health services; missed appointments and the high rate of abandonment of treatment, both in elderly and non-elderly, suggests the existence of similar factors related to the public health system; common side effects of anti-TB treatment were rash [...] itching [...] gastrointestinal problems [...] and hepatotoxicity; highest frequency of the underlying disease, a higher incidence of adverse reactions and increased mortality.

From checking the recurrence of such marks, and its grouping, two discursive formations (DF's) emerged related to the approaches of the publications: the first was named "Prevalence and clinical aspects of tuberculosis in the elderly" and the second "Diagnosis and treatment of tuberculosis in the elderly."

Each DF is affiliated to a set of network, updated in a decoder embodiment. It is the FD that allows a statement to be textualized and performed by the subject, throwing texts to the linguistic surface, which are the theoretical object of AD.

Such elaboration of DF's led to the process of forming the third heuristics question, which sought to meet to which speech belong such language marks, that circumscribe the meaning of tuberculosis in the elderly.

RESULTS

After the identification and selection of articles, the reading and analysis of the nine publications were made, that deal with the theme tuberculosis in elderly and formed the study corpus exposed in Figure 1.

Title	Authors	Journal/year	Modality	Evidence Level
Analysis of treatment of pulmonary tuberculosis in elderly patients at a university hospital in <i>Rio de Janeiro</i> . ¹⁴	Cantalice Filho JP, Bóia MN, Sant'Anna CC.	Brazilian Pulmonology Journal 2007	Original article	IV
Clinical aspects of pulmonary tuberculosis in elderly assisted at a university hospital in <i>Rio de Janeiro</i> . ¹⁵	Cantalice Filho JP, Bóia MN, Sant'Anna CC.	Brazilian Pulmonology Journal 2007	Original article	IV
Tuberculosis characteristics of elderly in <i>Recife</i> (PE): contribution to the control program. ¹⁶	Cavalcanti ZR, Albuquerque MFPM, Campello ARL, Ximenes R, Montarroyos U, Verçosa MKA.	Brazilian Pulmonology Journal 2006	Original article	IV
TB diagnosis in elderly: access barriers related to health services. ¹⁷	Oliveira AAV, Sá LD, Nogueira JA, Andrade SLE, Palha PF, Villa TCS.	Magazine of the USP School of Nursing 2013	Original article	VI
Tuberculosis in Older Adults in the United States, 1993-2008. ¹⁸	Pratt RH, Winston CA, Kammerer JS, Armstrong LR.	Journal American Geriatrics Society 2011	The Brief report	IV
Prevalence of Tuberculous Infection and Active Tuberculosis in Old Age Homes in Hong Kong. ¹⁹	Chan-Yeung M, Chan FHW, Cheung AHK, Dai DLK, Chu LW, Lam WK, Leung CC, Kam KM, Tam CM.	Journal American Geriatrics Society 2006	The Original article	IV
Treatment Response and Adverse Reactions in Older Tuberculosis Patients with Immunocompromising Comorbidities. ²⁰	Kim SY, Lee SM, Yim JJ, Yoo CG, Kim YW, Han SK, Yang SC.	Yonsei Medical Journal 2013	Original article	III
Diagnostic and Therapeutic Problems of Pulmonary Tuberculosis in Elderly Patients. ²¹	Lee JH, Han DH, Song JW, Chung HS.	Journal Korean Medical Science 2005	Original article	III
Characteristics of tuberculosis in patients older than 65 years in the sanitary area of Cadiz (Spain). ²²	López-Pelayo I, García-Martos P, Saldarreja A, Oca MM, Moreno I, González-Moya E.	Del Chile Medical Magazine 2004	Research article	III

Figure 1. Title, author, publishing journal, year, modality and evidence level.

The data shown in Figure 1 indicate that, as regards the national journals, the Brazilian Pulmonology Journal deserves emphasis to contemplate three publications. At the international level, the *Journal The American Geriatrics Society* is evident with two published articles. This fact may be justified because the listed journals are specific to large areas of Pulmonology and Geriatrics.

Regarding the years of publication, there is evidence for 2007 and 2013 because it corresponded to periods of most published articles about the researched theme, followed by 2004, 2005, 2006 and 2011, with only one publication each.

By observing the publications modality, the "original article" was highlighted, making a total of nine productions. This result suggests the performance of studies that cover the subject in focus, being indispensable the development of empirical and applied research to provide knowledge about the

reality of TB involvement in vulnerable groups, such as the aging population, on which there is no evidence significant production of knowledge, especially in Brazil, a country worldwide appointed by the phenomenon of population aging and the prominent position related to TB.

Concerning the methodological quality of the study, five articles presented evidence level IV and three level of evidence III, cohort studies, and well-designed case-control, as well as controlled clinical trials without randomization, respectively, considered moderate evidence. Moreover, only one production presents weak evidence, with VI level, resulting from descriptive or qualitative study.⁹

DISCUSSION

As the focus of publications, after the textual marks were observed, two discursive

formations emerged (DF'S): 1) Prevalence and clinical aspects of tuberculosis in the elderly and 2) Diagnosis and treatment of tuberculosis in the elderly.

Title	Focus
Prevalence of Tuberculous Infection and Active Tuberculosis in Old Age Homes in Hong Kong. ¹⁹	Prevalence of tuberculosis infection and active tuberculosis in nursing homes.
Tuberculosis in Older Adults in the United States, 1993-2008. ¹⁸	Description of elderly patients with tuberculosis and comparison of demographic factors disease characteristics and treatment effects among older adults and adults with tuberculosis.
Clinical aspects of pulmonary tuberculosis in elderly patients at a university hospital in <i>Rio de Janeiro</i> . ¹⁵	Clinical characteristics and diagnosis of pulmonary tuberculosis in the elderly.
Tuberculosis characteristics elderly in <i>Recife</i> (PE): contribution to the control program. ¹⁶	Demographic characteristics, of lifestyle habits, socioeconomic, clinical and epidemiological profiles and access to health care services for elderly people with TB.
Characteristics of tuberculosis in patients older than 65 years in the sanitary area of Cadiz (Spain). ²²	Evolution of TB in patients older than 65 years old, from 1987 to 2002 and description of the epidemiological, clinical and microbiological characteristics.

Figure 2. DF1 articles, according to the title and focus of the publications selected for the study.

The studies inserted in DF1 are expressed in Figure 2 and show that TB is still a global health problem, especially in the elderly who are in a fragile situation because with advancing age there is a progressive lag of immune system allied to the frequent comorbidities that affect them, as shown in the following text marks:

[...] Deaths were more frequent in the elderly ($p < 0.05$), according to the literature data and probably, related to the presence, among elderly, comorbidities, immune deficiency and major adverse reactions to drugs used to treat the disease.¹⁶

[...] To present a greater number of predisposing factors, mainly a chronic obstructive pulmonary disease and cancer. This population could contribute in some way to high persistence of TB in Spain.²²

By analyzing the speeches of authors who are part of the DF1 (Prevalence and clinical aspects of tuberculosis in the elderly), it is seen through the text marks, that most cases of TB in the elderly predominated in males, corroborating the findings of the World Health Organization (WHO) in its latest report.¹

[...] Of the total of 581 TB patients, 391 (67.3%) were male and 190 (32.7%) female.¹⁵

[...] In the studied elderly, the TB was more frequent in males [...]¹⁶

[...] The estimated rate of active TB in nursing homes in Hong Kong was 669 per 100,000, significantly higher in men (1,101 per 100,000) than in women (530 per 100,000).¹⁹

The epidemiological characteristics of patients older than 65 years old follow the same guidelines as in the general population,

in gender, predominantly in men, with a proportion of 3 to 1, approximately.²²

This fact can be justified by the greater susceptibility to the illness of men, in general because of the lifestyle adopted by them, which is strongly associated with the cultural factor and gender, affecting the demand for health services and the self-care practices, different of what often happens to women.^{1,23} This event is closely related not only to the cultural aspect but also to a discursive memory that is already part of the male universe in which man takes care alone. This discursive memory is understood not in the sense of directly psychologist "individual memory," but in crisscrossing directions of mythical memory and social memory inscribed in practice²⁴ that last over many years and are linked to a particular ideology.

In the clinical aspect, TB manifests most commonly by coughing, being considered as respiratory symptoms (RS) every individual who submit a specific manifestation for an equal or less time than three weeks.²⁵⁻⁶ Most of DF1 studies reveals that a cough was the respiratory symptom that stood out and is present in most of the diagnosed cases.

[...] Cough was the symptom also more common in the entire sample [...]¹⁵

The symptoms were common in old age home residences. At the time of the survey, about 30% of the residents complained of a cough [...]¹⁹

The predominant symptoms in this population group were: a cough 44.9% [...]²²

As shown in the following text marks, still regarding to clinical status of TB in the

elderly, compared to the symptomatic period (symptom onset time period until the diagnosis and early treatment), the findings of national research has demonstrated that in most cases the time was around 60 to 90 days, pointing to extrinsic and intrinsic reasons, such as, respectively, the difficult access to health services by the population and the difficulty of elderly expression for symptoms and the symptom profile similar to other diseases, which difficult the diagnosis in this population group.

There are few clinical and laboratory differences between the age groups and the delayed diagnosis in the elderly due to the low clinical suspicion in these patients.¹⁵

[...] A delay of more than 60 days to start the treatment, common to the entire population, demonstrates failure in the health system.¹⁶

Concerning the intrinsic reasons, it can be seen in the speeches of these studies that there is an ideological affiliation that leads the responsibility of the non-recognition of TB symptoms presented by the elderly. As the discursive memory is directly related to ideology which subjects are affiliated, understanding by ideology in this study as a set of ideas and values that make possible to built the speeches, it is noted that in the discursive memory of the subjects, authors of articles about the tuberculosis analysis-concept in the elderly, the so-called elderly person is presented as passive to their TB condition.

As in AD, the fact does not change and what can be changed is the interpretation, such authors could put the difficulty of recognizing the TB symptoms in the elderly not as "difficulty of expression" by aging people, but as a lack of perception of some professionals or family, being enhanced by the lack of elderly to know their health condition.

Another relevant point found in the study was the relationship between TB in the elderly and the illness history at a young age since most of the cases may result from endogenous reactivation and not for current transmission.

[...] Most of the elderly does not mention contact with people with TB, suggesting disease reactivation of latent infection [...] ¹⁶

[...] Tuberculosis in older adults is often reactivation of latent infection characteristic instead of recent transmission.¹⁸

Latent infection in the elderly has barriers to their treatment because the drug of choice, isoniazid, has the hepatotoxicity as an adverse reaction, which increases with age.²⁷

It is seen that the elderly have a high risk of developing TB, due to their biological aspects. Those living in long-stay institutions (LSI) have a greater risk, as the speech of some authors of DF1, stating that the incidence rate of the disease is higher when compared to those who do not live in those places.

[...] Elderly residents in long-term care facilities are at increased risk because the spread of TB can easily occur.¹⁸

[...] The TB rate in nursing homes is higher than in older people who do not live in institutions.¹⁹

Concerning the institutionalization and its relationship to the illness of the elderly, it is believed that this certainly contributes to the worsening of some acute and/or chronic conditions, because of the frequent family abandonment and consequent loneliness faced by them, the possible mistreatment and low qualification of health professionals, which affects in meeting their real needs.²⁸

About the publications framed in DF2 (Diagnosis and treatment of tuberculosis in the elderly), exposed in figure 3, it is verified that the TB diagnosis in the elderly is an obstacle for its control, since the disease can be confused and masked by other health problems inherent in this age group, and essential rethinking diagnostic actions that are more efficient for people age.

[...] Because of the vulnerability of the elderly, control actions are suggested by the health services to prevent the disease becoming a common injury for this population.¹⁷

[...] Elderly patients with pulmonary TB are more likely to present with nonspecific symptoms and atypical radiological findings.²¹

Title	Focus
TB diagnosis in elderly: access barriers related to health services. ¹⁷	Barriers to the diagnosis of tuberculosis in the elderly related to health services.
Diagnostic and Therapeutic Problems of Pulmonary Tuberculosis in Elderly Patients. ²¹	Differences between the clinical, radiological and microbiological factors of pulmonary tuberculosis in young people and the elderly.
Treatment analysis of pulmonary tuberculosis in elderly patients at a university hospital in <i>Rio de Janeiro</i> . ¹⁴	Clinical and therapeutic aspects of pulmonary tuberculosis and compare of the adverse effects and treatment results among elderly and non-elderly.
Treatment Response and Adverse Reactions in Older Tuberculosis Patients with Immunocompromising Comorbidities. ²⁰	Immuno-compromising comorbidities effects on response to treatment and adverse reactions in elderly patients with tuberculosis.

Figure 3. Articles of DF2, according to title and focus of publications selected for the study.

Studious point out that the TB diagnosis in the elderly can be prevented by access barriers existing in health services, such as opening hours of the service units, transfer of responsibilities between professionals, the absence and/or lack of quality in home visits, delay of the suspicion disease and numerous goings to the service for a definitive diagnosis.¹⁷ As the diagnosis, follow-up of TB treatment also is influenced by factors related to the public health system, contributing to the failure to attend scheduled appointments and the high abandonment rates of therapy.

Barriers related to access to diagnostic confirmation were: working time of the health units of the family; transfer of responsibilities; home visits without communicants control; delay of the health service in suspecting the disease; and repeated visits of the patient to the health service to obtain the diagnosis.¹⁷

The high number of missed appointments and the high rate of treatment abandonment, both in elderly and non-elderly, suggests the existence of similar factors related to the public health system [...] ¹⁴

In an integrative study about factors associated with the abandonment of anti-TB therapy, side effects caused by TB patients are mentioned.²⁹ Authors of articles comprising the DF2 refer in their research that the adverse effects present in most elderly, were dermatological, gastrointestinal and hepatic.

[...] the scheme I has a higher toxicity in the elderly, especially of gastrointestinal origin, and less effective.¹⁴

The most common side effects of anti-TB treatment were rash/pruritus (13% vs 11%, $p = 0.79$), gastrointestinal problems (14% vs. 9%, $p = 0.25$) and hepatotoxicity (14% vs. 7%, $p = 0.09$).²⁰

The most frequently observed side effects were liver toxicity and skin side effects in both groups.²¹

Moreover, it is alluded in the investigated publications that adverse reactions and

treatment results are configured as aggravating issues for elderly patients, being common the occurrence of complications and death, probably by the interaction between the drug toxicity and the high prevalence of diseases associated with this age group.²⁰⁻¹

Concomitant treatment with anti-TB drugs, other medications for coexisting diseases and malnutrition in the comorbid group may have contributed to the higher prevalence of hepatotoxicity.²⁰

[...] We find a higher frequency of the underlying disease, a higher incidence of adverse reactions and increased mortality related to TB in elderly TB patients.²¹

It is important addition that in the service cast perspective, the difficulty of access to tests by users, the lack of inputs and the lack of social incentives contribute to the abandonment of therapy, requiring the strengthening of integrality and inter-sectoral, as well as the actors involvement in the problematic coping process, being essential to strengthen the actions in the care offered to the TB patient.³⁰

The AD is based that there is no discourse without a subject, and there is no subject without ideology and that discourse is the place where the relationship between language and ideology can be observed, including this way how the language makes sense by and for the subject.¹¹

Through the analysis of the studies cited above, it is noted that the speeches are ideologically linked to a medical discourse, since only present aspects of the medicalization of TB treatment in the elderly. There is a silencing in response to social aggravating as causes for the difficulty of TB diagnosis in the elderly and treatment adherence and maintenance.

The problem of TB undoubtedly remains a challenge for the scientific community and also for managers and professionals who directly assist patients. It is known that this reality is still present regarding the aging society, related to the disease and the

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difficulties inherent in the service, which highlights the need to rethink the academic background in health care, for the quality of graduates of universities, whether public or private.

It is essential to be based on the design of health promotion about expectations that include an integrated dimension, alternative to traditional approaches to interventions. Therefore, one should think the user in a holistically way, covering the specificities of each being, social and cultural, where the elderly emerges and the multiplicity of perceptions that influence the health-disease process. With the same degree of importance, the design of actions by the health services is necessary, and based on the principle of comprehensiveness and longitudinal of care of people that aging in a vulnerable way, so to TB.

CONCLUSION

The analyzed articles revealed that TB affects, mostly elderly men, may be due to a latent infection of youth, presenting cough as the main symptom. It was also evidenced that there is a delay in the diagnosis of the disease in this population and prophylaxis commonly becomes ineffective due to the side effects produced by the drugs, which are dermatologic and gastrointestinal as well as hepatotoxicity. Furthermore, they found up serious obstacles to the diagnosis and treatment follow-up for the sick, as the difficulties of access to health services, which contributes to the high abandonment rates.

Concerning the analysis of DF's 1 and 2 (Prevalence and clinical aspects of tuberculosis in the elderly and Diagnosis and treatment of tuberculosis in the elderly), it was noticed that the predominant discourse found in the analyzed articles is directed to a medical discourse, but merely to specific findings of the disease, predominantly clinical, a fact which constitutes a limitation and even as the central gap in the study, since one can not speak of TB without emphasizing social issues and care, that goes beyond drug treatment. There is a shortage of sensitive studies to fragility, not only of the service or a vulnerable group but to identify what permeates the elderly and living with TB.

REFERENCES

1. World Health Organization. Global tuberculosis report 2013. 2013 [cited 2015 Dec 29]. 306p. Available from: http://apps.who.int/iris/bitstream/10665/91355/1/9789241564656_eng.pdf

2. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Boletim Epidemiológico - O controle da tuberculose no Brasil: avanços, inovações e desafios. Ministério da Saúde [Internet]. 2014 [cited 2015 Oct 13];45(2):1-13. Available from:

<http://portalsaude.saude.gov.br/images/pdf/2014/abril/10/Boletim-Tuberculose-2014.pdf>

3. Oliveira HMMG, Ribeiro FCV, Bhering ML, Ruffino-Netto A, Kritski AL, Lopes AJ. Tuberculose no idoso em hospital de referência. *Pulmão RJ*. 2005; 14(3):202-7.

4. Santana ANC, Takagaki TY. Tuberculose Pulmonar em Idosos. In: Santana ANC, Takagaki TY. *Atualizações diagnósticas e terapêuticas em Geriatria*. São Paulo: Atheneu; 2007. p.475-480.

5. Shin JY, Jung SY, Lee JE, Park JW, Yoo SJ, Park HS, et al. Characteristics of pulmonary Webb-Yates M. Tuberculosis in the elderly: a different disease? tuberculosis in elderly people. *Tuberc Respir Dis [Internet]*. 2010 [cited 2015 Dec 2];69(3):163-70. Available from:

http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342013000100018

6. Tavares LM, Oliveira ABM, Braga LAV, Andrade FB, Ferreira Filha MO. Incidência de casos de tuberculose em idosos no município de Cabedelo, Paraíba, Brasil. *Fiep Bulletin [Internet]*. 2010 [cited 2015 Dec 29]; 80(Special). Available from:

<http://www.fiepbulletin.net/index.php/fiepbulletin/search/titles?searchPage=69>

7. Mendes KDS, Silveira RCCP, Galvão CM. Revisão integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. *Texto contexto-enferm*. 2008;17(4):758-64.

8. Ursi ES, Galvão CM. Prevenção de lesões de pele no perioperatório: revisão integrativa da literatura. *Reva Latino-Am de Enfermagem [Internet]*. 2006 [cited 2015 Oct 16]; 14(1):124-31. Available from:

<http://www.scielo.br/pdf/rlae/v14n1/v14n1a17.pdf>

9. Stillwell SB, Fineout-Overholt E, Melnyk BM, Williamson KM. Evidence-based practice, step by step: searching for the evidence. *Am J Nurs [Internet]*. 2010 [cited 2015 Feb 22];110(5):41-7. Available from:

http://download.lww.com/wolterskluwer_vitalstream.com/Permalink/NCNJ/A/NCNJ_546156_2010_08_23_SADFJO_165_SDC216.pdf

10. Pêcheux M. *Semântica e discurso: uma crítica à afirmação do óbvio*. 4th ed. Campinas: Unicamp; 2009.

11. Orlandi EP. *Análise de discurso: princípios e procedimentos*. 8th ed. São Paulo: Pontes; 2009.

Trigueiro JS, Tomaz MLRP, Souza RFRC de et al.

Analysis of the production about tuberculosis...

12. Orlandi EP. Interpretação. 2nd ed. Petrópolis: Vozes; 1998.
13. Souza SAF. Análise de discurso: procedimentos metodológicos. Manaus: Instituto Census; 2014.
14. Cantalice Filho JP, Bóia MN, Sant'anna CC. Análise do tratamento da tuberculose pulmonar em idosos de um hospital universitário do Rio de Janeiro, RJ, Brasil. J Bras Pneumol [Internet]. 2007 [cited 2015 Dec 2];33(6):691-8. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-37132007000600013
15. Cantalice Filho JP, Bóia MN, Sant'Anna CC. Aspectos clínicos da tuberculose pulmonar em idosos atendidos em hospital universitário do Rio de Janeiro, RJ, Brasil. J Bras Pneumol [Internet]. 2007 [cited 2015 Feb 22];33(6):699-706. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-37132007000600014
16. Cavalcanti ZR, Albuquerque MFPM, Campello ARL, Ximenes R, Montarroyos U, Verçosa MKA. Características da tuberculose em idosos no Recife (PE): contribuição para o programa de controle. J Bras Pneumol [Internet]. 2006 [cited 2015 Feb 22];32(6):535-43. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-37132006000600011
17. Oliveira AAV, Sá LD, Nogueira JA, Andrade SLE, Palha PF, Villa TCS. Diagnóstico da tuberculose em pessoas idosas: barreiras de acesso relacionadas aos serviços de saúde. Rev Esc Enferm USP [Internet]. 2013 [cited 2015 Dec 29];47(1):145-51. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342013000100018
18. Pratt RH, Winston CA, Kammerer JS, Armstrong LR. Tuberculosis in Older Adults in the United States, 1993-2008. J Am Geriatr Soc [Internet]. 2011 [cited 2015 Dec 29];59(5):851-7. Available from: https://www.researchgate.net/profile/Lori_Armstrong/publication/51074775_Tuberculosis_in_Older_Adults_in_the_United_States_1993-2008/links/54ad8e4f0cf2828b29fcac4.pdf
19. Chan-Yeung M, Chan FHW, Cheung AHK, Dai DLK, Chu LW, Lam WK, et al. Prevalence of Tuberculous Infection and Active Tuberculosis in Old Age Homes in Hong Kong. J Am Geriatr Soc [Internet]. 2006 [cited 2015 Dec 29];54(9):1334-40. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1532-5415.2006.00850.x/abstract?userIsAuthenticated=false&deniedAccessCustomisedMessage>
20. Kim SY, Lee SM, Yim JJ, Yoo CG, Kim YW, Han SK, et al. Treatment Response and Adverse Reactions in Older Tuberculosis

- Patients with Immunocompromising Comorbidities. Yonsei Med J [Internet]. 2013 [cited 2015 Feb 22];54(5):1227-33. Available from: <http://synapse.koreamed.org/Synapse/Data/PDFData/0069YMJ/ymj-54-1227.pdf>
21. Lee JH, Han DH, Song JW, Chung HS. Diagnostic and Therapeutic Problems of Pulmonary Tuberculosis in Elderly Patients. J Korean Med Sci [Internet]. 2005 [cited 2015 Feb 22];20(5):784-9. Available from: <http://synapse.koreamed.org/Synapse/Data/PDFData/0063JKMS/jkms-20-784.pdf>
22. López-Pelayo I, García-Martos P, Saldarriaga A, Oca MM, Moreno I, González-Moya E. Characteristics of tuberculosis in patients older than 65 years in the sanitary area of Cadiz (Spain). Rev méd Chile [Internet]. 2004 [cited 2015 Dec 29];132(3):325-30. Available from: http://www.scielo.cl/scielo.php?script=sci_arttext&pid=S0034-98872004000300007&lng=en&nrm=iso&tlng=en
23. Gomes R, Nascimento EF, Araújo FC. Por que os homens buscam menos os serviços de saúde do que as mulheres? As explicações de homens com baixa escolaridade e homens com ensino superior. Cad Saúde Pública [Internet]. 2007 [cited 2015 Dec 29];23(3):565-74. Available from: <http://www.scielo.br/pdf/csp/v23n3/15.pdf>
24. Achard P, Davallon J, Durand J, Pêcheux M, Orlandi EP. Papel da memória. 4th ed. Nunes JH, tradutor. Campinas: Pontes; 2015.
25. Comissão de Tuberculose da Sociedade Brasileira de Pneumologia e Tisiologia, Grupo de Trabalho das Diretrizes para Tuberculose. III Diretrizes para Tuberculose da Sociedade Brasileira de Pneumologia e Tisiologia. J Bras Pneumol [Internet]. 2009 [Cited 2015 Dec 2];35(10):1018-48. Available from: http://www.jornaldepneumologia.com.br/detalhe_artigo.asp?id=927
26. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Manual de recomendações para o controle da tuberculose no Brasil. Brasília: Ministério da Saúde; 2011.
27. Sant'Anna CC. Quimioprofilaxia da tuberculose. Pulmão RJ. 2007;16(2):82-5.
28. Carvalho AA, Gomes L, Loureiro AML. Tabagismo em idosos internados em instituições de longa permanência. J Bras Pneumol [Internet]. 2010 [cited 2015 Feb 22];36(3):339-46. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-37132010000300012
29. Lopes RH, Menezes RMP, Costa TD, Queiroz AAR, Cirino ID, Garcia MCC. Fatores associados ao abandono do tratamento da

Trigueiro JS, Tomaz MLRP, Souza RFRC de et al.

Analysis of the production about tuberculosis...

tuberculose pulmonar: uma revisão integrativa. Rev Baiana Saúde Pública [Internet]. 2013[cited 2015 Dec 29];37(3):661-71. Available from: <http://www.scielo.br/pdf/tce/v20n3/23>

30. Sá LD, Oliveira AAV, Souza KMJ, Palha PF, Nogueira JA, Villa TCS. Early treatment and cast services in the care of tuberculosis patient. J Nurs UFPE on line [Internet]. 2010 [cited 2015 Dec 29];4(3):1515-22. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/viewFile/1216/pdf_150

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