



HEALTH OF THE INDIGENOUS ELDERLY IN BRAZIL: INTEGRATIVE REVIEW

SAÚDE DO IDOSO INDÍGENA NO BRASIL: REVISÃO INTEGRATIVA

SALUD DEL ANCIANO INDÍGENA EN BRASIL: REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to learn about the scientific evidence in the Brazilian literature on the health of indigenous elderly. **Method:** an integrative review, aiming to answer the question << What scientific knowledge is produced and available in the national literature on the health of indigenous elderly in Brazil? >>. The literature, 2009-2014, was taken from the databases LILACS, BDENF and Scielo Virtual Library, using the key words in Portuguese: indigenous health, indigenous and health and elderly health. Data was analyzed with literature, with outlines of the conclusions and interference of researchers. **Results:** the themes that stood out were: prevalence of diabetes mellitus, impaired glucose tolerance, metabolic syndrome and the indigenous elderly. **Conclusion:** there are few studies developed with the public. There is the importance of developing studies, especially in the field of nursing, seeking to learn the diversities of each indigenous group and the context of care. **Descriptors:** Health of Indigenous people; Population, Indigenous; Health Services for the Aged.

RESUMO

Objetivo: conhecer as evidências científicas na literatura brasileira sobre a saúde dos idosos indígenas. **Método:** revisão integrativa, com vistas a responder a questão << Qual o conhecimento científico produzido e disponível na literatura nacional sobre a saúde dos idosos indígenas no Brasil? >>. O levantamento bibliográfico, de 2009 a 2014, foi realizado a partir das bases de dados LILACS, BDENF e Biblioteca Virtual Scielo, empregando os descritores em português: saúde indígena, indígenas e saúde do idoso. Os dados foram analisados com a literatura, com delimitações das conclusões e interferência dos pesquisadores. **Resultados:** os temas que mais se destacaram foram: prevalência de diabetes mellitus, tolerância à glicose diminuída, síndrome metabólica e o idoso indígena. **Conclusão:** há escassez de estudos desenvolvidos com esse público. Verifica-se a importância de desenvolver estudos, especialmente na área da enfermagem, em busca de conhecer as diversidades de cada povo indígena e o contexto do cuidado. **Descritores:** Saúde Indígena; Indígenas; Saúde do Idoso.

RESUMEN

Objetivo: conocer la evidencia científica en la literatura brasileña en la salud de los ancianos indígenas. **Método:** una revisión integradora, con el fin de contestar a la pregunta << ¿Cuál el conocimiento científico producido y disponible en la literatura nacional sobre la salud de los ancianos indígenas en Brasil? >>. La literatura, 2009-2014, se llevó a partir de las bases de datos LILACS, BDENF y biblioteca virtual Scielo, usando las palabras clave en portugués: salud indígena, indígenas y salud del anciano. Los datos fueron analizados con la literatura, con contornos de las conclusiones y la interferencia de los investigadores. **Resultados:** los temas que se destacaron fueron: la prevalencia de la diabetes mellitus, tolerancia a la glucosa reducida, síndrome metabólico y los ancianos indígenas. **Conclusión:** hay pocos estudios desarrollados con el público. Se verifica la importancia de desarrollar estudios, especialmente en el campo de la enfermería, buscando conocer las diversidades de cada pueblo indígena y el contexto de la atención. **Descriptores:** Salud de Poblaciones Indígenas; Población Indígena; Salud del Anciano.

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INTRODUCTION

The elderly population has been increasing in recent years, especially in developing countries like Brazil. This led to the development of studies on people in this age group, as well as the implementation of attention focused policies to the public.

In this aspect, there are few studies that involve the cultural, racial and socioeconomic issues of the indigenous, which shows how Brazil is still in a very precarious state of knowledge when it comes to indigenous health. So it is crucial that social rights to conform to the cultural practices of different ethnic groups, providing quality public services to meet people's needs, without forgetting to respect the cultural differences.¹

In Brazil, the indigenous population is made up of 896,917,000 people occupying more than 4,200 indigenous lands, located 432 municipalities of 24 states, where most are in the Brazilian Amazon region and Northeast.²

Indigenous people are embedded in modern society, and as every citizen, the Indians have rights and duties, especially in its peculiarities, as they are legally supported by the Federal Constitution of 1988, which gives priority to health as a right for all. This constitution refers to a milestone in the relationship between the state and indigenous peoples because it recognizes the social organization of the Indians, language, customs, beliefs, traditions and rights to the lands they traditionally occupy.³

The question of the health of indigenous policies has been created, such as the National Policy of Health of Indigenous Peoples (NPHIP), which has the support of a complementary and differentiated model of organization of services focused on protection, promotion and restoration of health, ensuring their access to quality care and ensuring the integrity and equity of health services.⁴

When it comes to elderly health, there is a need for new health actions for this population, especially the indigenous elderly. The National Health Policy for the Elderly in its guidelines recommends implementing active aging promotion and healthy, comprehensive care and integrated health of the elderly, and health professionals carry out actions in various population groups, including the indigenous.⁵

In this study, we take the health of indigenous elderly as a focus and the lack of scientific research on the justification of this study of integrative review of literature to

find and organize the knowledge of what is being published in national journals of the subject in question. Thus, the relevance of the study will contribute to quality assistance planning, as well as expanding and spreading knowledge for both nursing field as well as other areas of health, especially in the political proposition for the health of the indigenous elderly.

Given the above information, this research aims:

- To learn about the scientific evidence in Brazilian literature on the health of the indigenous elderly.
- To characterize the studies published in journals on the health of indigenous elderly in Brazil.
- To identify the issues addressed in the articles on the health of indigenous elderly in Brazil.

METHOD

Integrative review from six stages: preparation of the guiding question, search or sampling in the literature, data collection, critical analysis of the included studies, discussion of results and presentation of integrative reviews.⁶

In the first step of the integrative review the elaboration of a guiding question was carried out: "What is the scientific knowledge produced and available in the national literature on the health of indigenous elderly in Brazil?"

In the second stage, the search and sampling of the study on the health of indigenous elderly was conducted through an online search, in the databases LILACS (Latin American and Caribbean Health Sciences), BDENF (Basic Nursing Data) and the Scientific Electronic Online Library (SciELO).

Inclusion criteria for articles were: original primary articles and published in Portuguese, free online, with full text; scientific studies that addressed the health of the indigenous elderly. The enclosed timeline was from January 2009 to April 2014.

Exclusion criteria were: papers as reporting experience, reflection and study that were not found in full in the search address, repeated in data bases, which are counted only once for analysis.

The search was conducted by two researchers, ensuring rigor to the process of selection of articles in the following databases: Latin American and Caribbean Health Sciences (LILACS), Nursing Database (BDENF) and Scientific Electronic Online Library (SciELO) in the months of May and

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June 2014, with standardized and available descriptors in the Descriptors in Health Sciences (DeCS): "indigenous health" [and] "indigenous" [and] "health of the elderly."

Os descritores utilizados na base de dados LILACS, BDENF e biblioteca Scielo contemplaram o idioma português.

The descriptors used in the LILACS database, BDENF and Scielo library contemplated the Portuguese language.

In the LILASC database key words were used in the research: "indigenous health" [and] "indigenous" [and] "health of the elderly", obtaining 35 publications and otherwise used was "indigenous" [and] "health of the elderly" with the result of 52 articles. In BDENF used the descriptors: "indigenous health" [and] "health of the elderly" [and] "indigenous health", both obtained a publication. In Scielo library various forms of searches were used with the keywords "indigenous health" [and] "indigenous" [and] "health of the elderly", with a result of 4 publications; "Indigenous health" [or] "indigenous" [and] "health of the elderly", with five publications and "indigenous health" [and] "health of the elderly," resulting in 67 articles. Thus, in each database and library, first, held all the terms in the subject (indigenous health, indigenous, elderly health) using "AND" and then there was the cross

between the three themes by the Boolean "OR".

After conducting this search strategy 87 articles were found in LILACS, 63 in Scielo and 1 BDENF totaling 151 publications, these six were duplicates. In a first analysis, by reading the title and abstracts of 145 articles, 28 articles were pre-selected and 117 articles were excluded, because they don't relate to the theme and the repetition of articles in databases and libraries, and; in a second analysis, by reading the articles in full, resulting in a sample of ten publications (Figure 1).

In the third step of the integrative review, the collection of data from selected studies, after the selection of relevant articles to the subject, they were arranged in an instrument which was designed for the study, which includes the job title, authors (titration, training and origin of the institution), journal title (year, volume and number), study design, objectives, study site, themes, study results, completion of the study and periodical score of the Qualis CAPES system. The instrument was completed individually, after careful reading of selected articles in full. The results were presented following this instrument used to collect data, in addition to meeting the objectives proposed in this study.



Figure 1. Description of the study selection in the database, 2014.

In the fourth step, and critical analysis of the included studies, there was the application of the adapted instrument of the *Critical Appraisal Skills Programme (CASP)* - a critical reading skills program prepared by the University of Oxford in 2002.⁷ This validated instrument classifies studies with the following scores 06 to 10 points (good methodological quality and reduced bias) and a minimum of 5 points (satisfactory methodological quality, but with increased risk of bias). Thus, we chose to use only items classified from 6 to 10 points.

Regarding the classification of the level of evidence a second instrument was used, the Classification Hierarchy of the Evidence for Study Ratings:⁸ 1 - systematic reviews or meta-analysis of relevant clinical trials; 2 - evidence of at least one well-designed randomized controlled clinical trial; 3 - well-designed clinical trial without randomization; 4 - cohort studies and well-designed case-control; 5 - systematic review; 6 - evidence of at least one qualitative or descriptive study; 7 - authorities of opinions or expert committees including interpretations of information not based on research.

In the fifth step, the discussion of the results, proceeded to compare the data by the findings of other authors in the literature, with outlines of the conclusions and interference of researchers.

In the sixth stage, presentation of integrative review aimed to present the findings through figures and tables using Microsoft Excel (version 2007). Data was analyzed descriptively, in order to enable the reader to have a better understanding of the study.

Regarding the ethical aspects of the research, it is noteworthy that all the authors consulted were mentioned in the text and referenced. The integrative review waiver submission of the study to a Research Ethics Committee / CEP.

RESULTS

- **Characterization of Articles**

Of the ten articles analyzed, 20 were developed by PhD lectures, six studying for health care masters, three with masters, two post-doctoral, two medical residents, two PhD researchers and one for masters researcher,

one for doctoral student, and one for nursing academic.

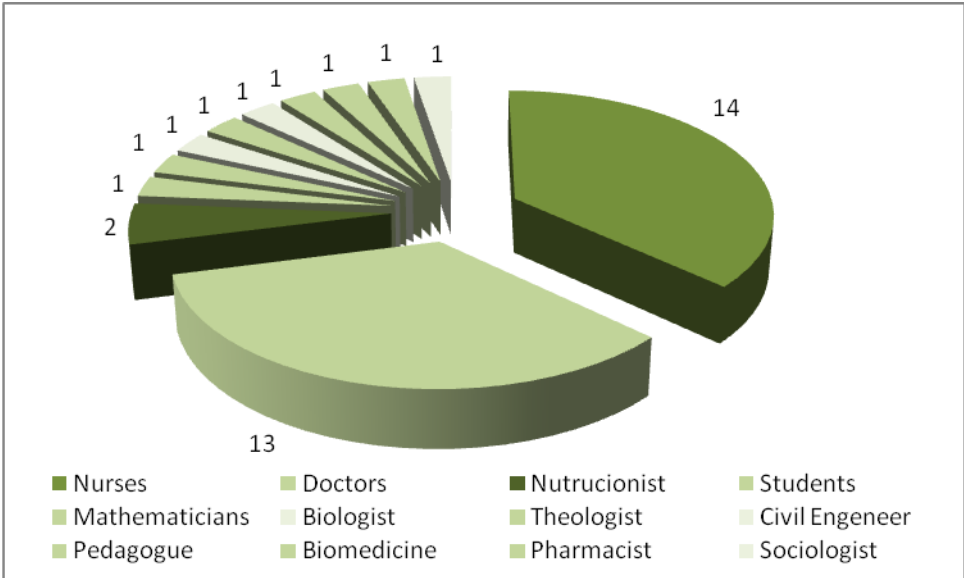


Figure 2. Distribution of articles by training the authors.2014.

Another finding worth highlighting concerns formations of the authors, who are represented by 14 nurses and 13 doctors (Figure 1).

According to Figure 3 data, it is observed that the State University of

Maringá accounted for eleven articles with the author's origin followed by the Federal University of Grande Dourados with five.

Author's institution of origin	n
State University of Maringá	11
Federal University of Grande Dourados	5
Pontifical Catholic University of Rio Grande do Sul	4
Oswaldo Cruz Foundation	3
Federal University of Paraná	3
University of Pernambuco	3
State University of Londrina	3
Federal University of Ouro Preto	3
Federal University of Minas Gerais	1
Federal University of Amazonas	1
University of Brasília	1

Figure 3. Distribution of articles by the author's institution of origin. 2014.

Regarding the design of the studied articles, five were developed with a quantitative approach, two qualitative and one with a literature review (Figure IV).

Articles regarding the indigenous ethnic group of the sample of surveyed studies in journals, it appears that the Kaingang ethnicity was the most studied, appearing in four articles, then two studies did not specify

the indigenous ethnic group studied in journals.

As for the site and region where the research was conducted, it resulted in a higher concentration of such studies in the south (Parana, and Rio Grande do Sul) with four items, and then the Midwest region (Mato Grosso do Sul) two articles.

Title of the article	Outline of the study	Location/Region	Indigenou s ethnicity	year	Journal	Quali s	Level of Evidenc e
Sexually Transmitted Diseases in Indigenous populations in Brazil. Critical Analysis and Review of Literature.	Revision	-	NI	2011	DST-J Braz sexually transmitted diseases	B3	V
Exploration of risk factors for breast cancer in Kaingangs ethnic women, indigenous land Faxinal, Paraná, Brazil.	descriptive cross-sectional exploratory study	Paraná/South	Kaingang	2009	Cad Public Health	A2	VI
Promotion of Indigenous Health Pankararu.	PQL. descriptive study	Pernambuco/Northeast	Pankararu	2012	Brazilian Nursing Magazine	A2	VI
Prevalence of metabolic syndrome in indigenous people with more than 40 years in two cities in Rio Grande do Sul, Brasil.	cross-sectional, descriptive and analytical study.	Rio Grande do Sul/South	Kaingang and Guarani	2011	Panamerican public health mag	B2	VI
Demographics and mortality of indigenous people of Mato Grosso do Sul State, Brasil.	NI	Mato Grosso do Sul/Mid west	*	2011	Cad Public Health	A2	VI
Nutritional profile of Xukuru-Kariri indians, Minas Gerais according to different anthropometric indicators and body composition.	epidemiological cross-sectional study	Minas Gerais/Southeast	XuKuru-Kariri	2013	Science & Collective health	B1	VI
Tuberculosis in the Amazonian municipalities of the Brazil-Colombia-Peru-Venezuela region: epidemiological situation and factors associated with abandonment.	Retrospective epidemiological study	Amazonas/North	NI	2013	Panamerican public health mag	B2	VI
Organization of health services and care to the indigenous elderly: synergies and singularities of the professional context.	PQL. Descriptive ethnographic study	Paraná/South	Kaingang	2014	Rev Esc Nursing USP	A2	VI

Diabetes mellitus prevalence and impaired glucose tolerance in the indigenous village Jaguapiru, Brazil	Cross-sectional study	Mato Grosso do Sul/Midwest	Jaguapiru	2011	Panamerican public health mag	B2	VI
Social and family dynamics: An ethnographic description of elderly Kaingang families.	PQL. Ethnographic.	Paraná/MidSouth	Kaingang	2011	Science and healthcare	B2	VI

Figure 4. Distribution of articles according to title of the article, study design, site and region, indigenous ethnicity, year of publication, journal, Qualis and levels of evidence. 2014.
Note: MDT Quantitative Research; PQL-Qualitative Research; NI-No reports * Eight ethnic groups: Guarani Kaiowá, Terena, Kadiwéu, Kinikinau, Guató, Ofaié and Atikum.

In relation to the year of publications we found five articles involving the health theme of the indigenous elderly in 2011, two articles in 2013 and finally, in 2009, 2012 and 2014 an article each year.

In relation to journals identified in the study from 2009 to 2014, it is observed that the largest number was identified in the Pan American Journal of Public Health with three publications and followed by the Public Health Journal with two.

Another aspect discussed in the articles relating to the score of these journals in the QUALIS Capes system found that A2 and B2 each had four, then B1 and B3 each had one. As for the level of evidence, the highlight was the level of evidence six in nine articles analyzed.

◆ The thematic content of the articles

Selected articles were submitted to a reading in full and then an overview of the objectives and main results of the study was carried out, which was presented through themes (Figure V).

The themes: "prevalence of diabetes mellitus, impaired glucose tolerance, metabolic syndrome" and "health of the elderly" were addressed in two articles. The subjects with less percentage were "sexually transmitted disease in the Indians", "breast cancer", "promotion of indigenous health," "mortality of the indigenous population", "nutritional profile of the Indians" and "tuberculosis" with one article each.The first study (A1) sought to study the prevalence of metabolic syndrome (MS) in indians aged greater than 40 years in two cities in Rio Grande do Sul.

Identification	The thematic content of the articles	Authors	n
(A1)	Prevalence of diabetes mellitus, impaired glucose tolerance, metabolic syndrome	Rocha AKS, Bós AJG, Huttner E, Machado DC; ⁹ Oliveira GF, Oliveira TRR, Rodrigues FF, Corrêa LF, Ikejiri AT, Casulari LA. ¹⁰	2
(A2)	Elderly indians	Rissardo KL, Carreira L; ¹¹ Moliterno ACM, Padilha AM, Faustino RC, Mota LT, Carreira L. ¹²	2
(A3)	Sexually transmitted diseases	Carvalho NS, Cho R, Flores LP. ¹³	1
(A4)	Breast cancer	Silva EP, Pelosso SM, Carvalho MDB, Toledo MJO. ¹⁴	1
(A5)	Promotion of Indigenous Health	Oliveira JWB, Aquino JM, Monteiro EMLM. ¹⁵	1
(A6)	Mortality of the indigenous population	Ferreira MEV, Matsuo T, Souza RKT. ¹⁶	1
(A7)	Nutritional profile	Simões SB, Machado-Coelho GLL, PENA JL, Freitas SN. ¹⁷	1
(A8)	Tuberculosis	Belo EN, Orellana JDY, Levino A, Basta PC. ¹⁸	1

Figure 5. Distribution of the thematic content of the sample articles of the study. 2014

The second survey (A1), presented as objective to detect the prevalence of Diabetes Mellitus (DM) and impaired glucose tolerance and its relationship with cardiovascular risk factors in individuals 18-69 years old. With regard to age the prevalence of DM was 0.81% in the range 18-29 years and 12.8% in the range of 60 to 69 years.

The third study (A2) was intended to describe the consequences of the organization of primary care services for indigenous health care for the elderly Kaingang in the

perception of health professionals working in the area. Due to the influence of the chief in the health service organization of Faxinal indigenous land.

The fourth survey (A2) sought to understand the dynamics of the social organization of families in which are inserted the indigenous elderly of Kaingang ethnicity. Yet we realized that the predominant economic activity in the village is the craftsmanship. However the social issue of the elderly in relation to the financial support of the children, the education of grandchildren in the transmission of knowledge and the role of centralizing the family groups in the organization of domestic group's grandchildren. So you can see how the indigenous elderly are active in their interpersonal relationships.

The fifth study (A3) was about sexually transmitted diseases (STDs) in indigenous populations in Brazil. Sexually transmitted diseases, including HIV infection (STD / HIV) in the Amerindians are little known and reported in Brazil. The results showed important features that show the reason for the growth of these diseases in indigenous people. The first case of AIDS in Indians occurred in the South in 1988. The members of the villages, most of the time, blame the "white" for the diseases, claiming that before contact there was no disease. The comparative data from 2000 to 2005 show a significant increase in the number of cases is difficult to establish the reasons for this increase; there is a real increase in transmission, or greater epidemiological research included in this period. The point of this comparison is to realize that the incidence continues to be more important in large urban centers, which confirms the importance of contact with the white population.

The sixth study (A4), aiming to analyze aspects of the health of Kaingangs women in the Faxinal indigenous land in relation to knowledge and the presence of risk factors for breast cancer. An interesting feature to point out is that we found a small number of elderly indians, in an age group at which the incidence of chronic degenerative diseases such as cancer is usually high.

In the context of promotion of indigenous health, we found a study developed in the seventh study (A5), that was intended to learn how Pankararu Indians perceive their health status, and identify what actions they prioritize as necessary for the promotion of health in their community. The study was conducted through interviews with 25 indians. The survey data showed that there is

humanized, permanent assistance and, above all, more resolute, that will put on the agenda principles such as territoriality, bond professionals with the community, continuity and comprehensiveness of health actions, local planning, social control and promote the health in its real meaning, and the enormous lack of access to information about the conditions that prevail in the community, contagion modes and / or triggering factors, preventive measures and treatment. Health actions necessary for its promotion were the registration of indigenous people with chronic diseases; health education activities for the community; hiring of a multidisciplinary team willing to work in exclusive dedication; treatments of competence of primary care services; training of indigenous health workers for home care; need for training of health professionals with expertise to establish a good interpersonal relationship respecting their customs and culture; providing the return of indigenous training in indigenous health.

The eighth study (A6) analyzed the demographics and the mortality pattern of indigenous population in a village of Mato Grosso do Sul State, Brazil, in comparisson with the total population of the state. The result showed in comparisson with the total population among the Indians showed higher proportion of individuals under 15 years (47.7%) and less elderly (5.9%). Regarding mortality rates at early ages infectious and parasitic diseases were present. While the Indians of 60 years or more accounted for 36.9% of deaths from cardiovascular diseases. The respiratory diseases among the indigenous population had higher mortality rates than the total population compared and circulatory diseases were significantly lower. In mortality by gender and age, male mortality is evident in the indigenous population in almost all age groups, except in the age groups 10-14 and 55-59 years. Indigenous men had significantly higher rates for external causes, respiratory and infectious diseases. Among women, only external causes and infectious diseases were higher.

In the ninth study (A7), the researchers sought to evaluate the nutritional profile of Xukuru-Kariri indians between 7 years and 78 years in villages in Minas Gerais according to the different anthropometric indicators and body composition. The result showed that the population consisted of 58 individuals. According to the body mass index (BMI) classification, it was observed that only 1.7% of the subjects had low BMI, 65.5 were normal, but 27.6% were overweight and 5.2%

obese. Regarding the waist circumference 21.4% had an excess of central adiposity. Overall 29% of subjects were classified as having excess body fat and 50% of subjects had high body adiposity in relation to body mass index and waist circumference.

The tenth survey (A8), aimed to describe the epidemiological situation of tuberculosis, mapped the incidence and investigated factors associated with treatment dropout in the municipalities of Amazonas integrating the Arco Norte international border region of Brazil. The data showed that there is a predominance of cases in indians (51.9%) and in individuals aged 25-44 years (31.4%) of age with tuberculosis.

DISCUSSION

In this integrative review, it was found that in relation to the authorship of the articles analyzed that they were mostly teachers with doctorates, as well as nursing education and the institution of origin that produced more knowledge about the topic was the State University of Maringá.

Regarding the articles analyzed not all contained information about training / titles of the authors, in a way that reached the goal proposed in this study. Thus, the search of this data was conducted by accessing the Lattes curriculum of all authors in the CNPq Lattes Platform.

In terms of representation of the presence of the articles, we highlight the year 2011 with more publishing, the journal with more frequency in the subject area of research was the Pan American Public Health magazine with Qualis A2 and B2 of the evaluated publications.

Regarding regions of the publications analyzed in this study the South showed the highest prevalence. In contrast to this study, it was observed in other researches¹⁹, that the two regions with the highest number of studies were the North and Central West regions of Brazil. This difference is due to the fact that the majority of indigenous people focus on first the North and then the Midwest.²

As for the indigenous groups in the reviewed articles, the Kaingang was the most found in the study. This data corroborates with integrative review of literature study, which analyzed the articles in the area of women's health in the years 2005 to 2011, and also highlighted the Kaingang ethnicity as more described in its research.¹⁹ This coincidence may be related to the large

number of published studies with this ethnic group in Brazil.

Regarding the theme, they were two who had higher prevalence, one of them being diabetes mellitus prevalence, impaired glucose tolerance - metabolic syndrome and indigenous elderly. Diabetes mellitus and its complications such as cardiovascular disease, arterial hypertension is considered today as a major public health problem. The aging population, increasing urbanization, and various unhealthy lifestyles, are contributing factors to the high prevalence and incidence of disease.²⁰ We understand metabolic syndrome as being, a number of risk factors for developing cardiovascular disease and Diabetes mellitus.²¹

The survey of 82 Indians from Kaingang ethnicity of the central region of Parana State, found that the prevalence of metabolic syndrome was 11%, all in women between 20-49 years of age, in addition also fasting hyperglycemia (9.8%), hypercholesterolemia (4.9%), HDL cholesterol reduction (13.4%), with hypertriglyceridemia (11%), abdominal obesity (37.8%), general obesity (26.8%), hypertension (26.8%), and anemia (46.3%). The authors consider that the anthropometric and metabolic profile is associated with the lifestyle of the indigenous people themselves, which has largely been transformed over the years by contact with western society.²²

In Colombia a study was conducted with indigenous of Cañamomo-Lomapieta ethnicity, which showed that the prevalence of diabetes mellitus in this town was 8%, and 5% metabolic syndrome, while dyslipidemias were very high 69% and central obesity 89%, with a higher prevalence in women, which according to what was observed in the survey were analyzed in greater numbers compared to males. These results show the predisposition of indigenous people developing cardiovascular disease.²³ In this sense sudden changes are recommended in indigenous routine, guided practice of daily physical activity, introduction of healthy eating and exclusion of some unhealthy habits in order to decrease certain risk factors and thus the high prevalence of these chronic diseases.⁷⁻⁸

Another theme found in the sample of the study concerns the indigenous elderly, with two publications. Importantly, the indigenous elderly are responsible for memory, customs and tradition of their people, in addition, to convey and teach the knowledge of their ancestors to the younger people, be counselors in certain situations to be considered as a wise person.

The issue related to sexually transmitted diseases in the indigenous population was found in only one article. The increase of STDs and HIV / AIDS is due to lack of information among the Indians on the mode of transmission, prevention means and some cultural factors such as language barriers that hinders communication with them. To have some control in this regard, it is necessary to find ways to insert prevention and awareness measures about the seriousness of these diseases.²

In the study with 55 Potiguara Indians belonging to the village of São Francisco, in the the city of Baía da Traição, Paraíba, shows results that among the diseases most frequently cited in the community were AIDS and STDs. The cause for the onset of these diseases were related to contacts with non-Indians close to the villages through involvement, especially by the Indians, who frequent the bars in the village, not using condoms during sexual intercourse and the influence of media by introducing values related to sexuality.²⁴

Infectious and parasitic diseases account for most deaths in the indigenous population, especially before the age of five, which confirms with the data of the article on the topic of mortality.²⁵ Indigenous infant mortality in Brazil recorded a reduction of 43.8 % from 2000 to 2009, and also it shows values above the mortality rate, which is also a serious public health problem.²⁶ This large number of deaths mainly at early ages in the indigenous population is probably due to conditions in poor health, the constant presence of malnutrition and recurring infections.²⁷ While the group aged 50 years or more have a lower probability of mortality when compared to infant mortality.

In a survey with 179 Indians of a remote indigenous community along the Amípiyacu and Yaguasyacu in Loreto, Peru, noted that the survey participants reported that the infant mortality rate in the villages was high, corresponding to 38.4%, moreover, they mentioned the increase in deaths in children aged one year or more.²⁸ A considerable fact in our study, since nowadays this public health problem is present mostly in indigenous peoples that are geographically isolated and without access to health.

A healthy diet is based on eating habits that have social and cultural significance, in addition, being able to promote health and well-being to the body, which is approaching the subject found in this research on the nutritional profile. Studies such as nutritional status of indigenous elderly is scarce and most

publications are meant for indigenous children, who present an increased health risk in this aspect.²⁹

In analyzing issues, tuberculosis was present in the study of the indigenous population, which showed an incidence of TB, especially in adulthood. Such prevalence may be related to the fact of some conditions of ill health, and the proximity of indigenous localities where the incidence of tuberculosis is higher.^{30,16}

FINAL REMARKS

The literature integrative review brought together studies addressing issues on the health of indigenous elderly in Brazil, with the aim of knowing the scientific evidence available in the literature on the subject. The method contributed greatly with respect to the development and analysis of the results.

Regarding the results of this study, with respect to the characterization of the publications of the articles analyzed, it was observed that there was a predominance of authors with doctorates, lecturers, Nursing training, from the State University of Maringá, with the publication in 2011, and also the southern region with the largest number of studies developed. Regarding the methodological design of the revised research, cross-sectional and descriptive exploratory studies prevailed. Regarding ethnicity, Kaingang was the most studied among the analyzed articles.

With regards to the analysis of the studies, it was found that the most frequently studied issue on the health of elderly indigenous was the prevalence of diabetes mellitus, impaired glucose tolerance, and metabolic syndrome and the indigenous elderly. Regarding the prevalence of diabetes mellitus found in the population studied in the reviewed articles, it is considered as a major public health problem and, in the elderly, is considered as disease expected by aging, which is not so different to Indians who are increasingly approaching the white culture.

This increasing number reflects some changes in habits and customs in indigenous people due to constant contact with the white man as already mentioned. What draws attention, which influences their way of life, because the indigenous people of today do not hunt, fish and much less survive with the sustenance of nature. On the contrary, many prefer to study, work to ensure their livelihoods and in the question of food, they prefer processed foods. These changes in dietary and cultural habits of these people

can influence the emergence of chronic diseases that are common in Caucasians.

The data collected in this study shows that the contact with the white man reflected in the increasing number of some changes in habits and customs in the indigenous people.

It is also important to note that few studies have been verified and developed with this public and with that comes the importance of developing studies, especially in the field of nursing, seeking to know the diversities of each indigenous group and different contexts in the matter of care.

With this study, a lack of a program designed to meet the needs indigenous elders was found, thus making them vulnerable beings and more susceptible to diseases of old age. Thus, it is salutary to emphasize the need for public policies to develop programs to serve this population in all areas.

This study has methodological limitations for questions of inclusion criteria, may not have occurred to the selection of some studies on the subject of research, however, the search process of the articles was extremely strict, particularly the articles selected for the specific search period. Thus, the results of this study can spark interest in other authors for the development of new studies involving indigenous elders, in order to promote and trigger measures the quality of assistance and political attention to indigenous health, and encourage new discoveries on the health indigenous elders in Brazil with a view on prevention and health promotion and disease control.

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