



Tinnitus and primary health care: a literature review

Zumbido e atenção básica: uma revisão de literatura

Acúfeno y atención primaria: una revisión de la literatura

Carla Salles Chamouton*

Helenice Yemi Nakamura*

Abstract

Introduction: Tinnitus has had a significant increase in its prevalence in the last decade and may have a negative impact on the quality of life of the patient. However, it is still little explored in the context of primary health care. **Objective:** To demonstrate the scarcity of literature addressing tinnitus in primary health care. **Method:** A literature review was carried out using PubMed, Bireme, SciELO, Web of Science, Medline and Cochrane Library databases. Articles published in English, Portuguese and Spanish and approaching tinnitus in the specific context of primary care were considered. **Results:** 33 articles were found, of which 10 met the inclusion criteria. The selected papers highlight the impact of tinnitus on the individual's life, the importance of its approach in primary care, the need for the training of professionals involved in the care line and the relevance of having a multiprofessional team. **Conclusion:** Tinnitus is a relevant factor to be considered, but it is necessary to strengthen related actions in primary health care and to expand studies in this specific area.

Keywords: Tinnitus; Primary Health Care; Review.

Resumo

Introdução: O zumbido teve um aumento significativo de sua prevalência na última década e, conseqüentemente, pode ter impacto negativo na qualidade de vida de seu portador. No entanto, ainda é pouco explorado no contexto da atenção básica. **Objetivo:** Evidenciar a escassez de literatura que aborde o zumbido no âmbito da atenção básica. **Método:** Foi realizada uma revisão de literatura, utilizando as bases de dado PubMed, Bireme, SciELO, Web of Science, Medline e Cochrane Library. Foram considerados os

*UNICAMP, Campinas, São Paulo, SP, Brazil.

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CSC , HYN: responsible for the design, planning and preparation of the study.

Correspondence address: Carla Chamouton - carla.chamouton@gmail.com

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artigos publicados em inglês, português e espanhol e que abordassem o zumbido no contexto específico da atenção básica. **Resultados:** Foram encontrados 33 artigos, sendo que 10 cumpriram os critérios de inclusão. Os trabalhos selecionados evidenciam o impacto do zumbido na vida do indivíduo, a importância de sua abordagem na atenção básica, a necessidade da capacitação dos profissionais envolvidos na linha de cuidado e a relevância de se ter uma equipe multiprofissional. **Conclusão:** O zumbido é fator relevante no cuidado, sendo necessário fortalecer ações relacionadas na atenção básica e ampliar os estudos nesta área específica.

Palavras-chave: Zumbido; Atenção Básica; Revisão.

Resumen

Introducción: El acúfeno hay tenido un aumento significativo de su prevalencia en la última década y puede tener un impacto negativo en la calidad de vida de su portador. Todavía, es poco explorado en el contexto de la atención primaria. **Objetivo:** Demostrar la falta de literatura que aborda el acúfeno en el contexto de la atención primaria. **Método:** Una revisión de la literatura fue hecha utilizando las bases de datos PubMed, Bireme, SciELO, Web of Science, Medline y la Cochrane Library. Fueran considerados, los artículos publicados en inglés, portugués y español y que abordan el acúfeno en el contexto específico de la atención primaria. **Resultados:** Se encontraron 33 artículos, de los cuales 10 cumplieron los criterios de inclusión. Las obras seleccionadas muestran el impacto del tinnitus en la vida del individuo, la importancia de su enfoque en la atención primaria, la necesidad de formación de los profesionales que intervienen en la línea de cuidado y la importancia de contar con un equipo multiprofesional. **Conclusión:** El acúfeno es un factor relevante para el cuidado, siendo necesario reforzar las acciones relacionadas en la atención primaria y ampliar los estudios en esta área específica.

Palabras clave: Acúfeno; Atención Primaria de Salud; Revisión.

Introduction

While health is understood as a resource for social, economic and social development, it is also part of a philosophical, scientific, technological, political and practical problem. Health itself is polysemic and, as so, it embraces the multiplicity of meanings of the various elements involved in it, such as the biological regulation, the interaction with psychic factors, the relationship with the environment, the dialogue with the holistic approach and the pursuit of global welfare^{1,2}.

The current health model still has a hybrid composition and is an evolution of the biomedical model based on the health-disease process, which, in turn, is a result of the interventions of the health movement. This represents the understanding that health is an element under construction within a dialogic and co-production process. All the subjects, institutions, management, professionals and individual involved are potential modifying forces of this subjectivity³.

Not only avoiding the binding with the disease, but creating a conception of health-care not based

on survival, but in the pleasure of living, which is linked to all the subjective specificities, whether they are cultural, social, or economic, that permeate the life of the subject and turn care into something meaningful. The composition of these actions takes place in health practice itself, through the combination of knowledge and ways to take care of all the parties concerned that, following a cultural health conception, aims to the quality of life^{4,5}.

The tinnitus, which is a condition characterized as an internal perception of a sound in the absence of an external sound source, is known to negatively impact the life of sufferers. Such change directly affects the social and professional life of the individual, and it may be related to the occurrence of insomnia, anxiety, depression, panic attacks and abuse of alcohol⁶.

In the last decade, the incidence of tinnitus had a significant increase reaching 25.3% of the global population.⁷ Its prevalence in children and adolescents is still not well established due to variations of samples and methodologies of the studies conducted⁸; however, in the population over 60 years old, the incidence rate exceed 30%, which

is enough to be considered an important condition in the comprehensive health care⁷.

The comprehensiveness as a precept of the Unified Health System (SUS) (Brazil, 2000), along with universality and equity, strengthens the idea of health as “a right of all and duty of the State”⁹, establishing a healthcare network that aims to decentralize, regionalize, hierarchize, and also social participation¹⁰.

The Primary Care National Policy¹¹ aims at strengthening the capillarity of the healthcare network through the proximity of the territory, and it is responsible for managing care, by focusing on elements that allow the humanization and comprehensiveness. The actions developed are essential and decisive for all the health-disease-care process of subjects¹².

The definition of a comprehensive care line is provided by the strengthening of the healthcare network, in the creation of a link, when the subject doesn't face barriers, and will be able to access the system through the synergy between the care levels. From the management and care decentralization and regionalization, the aim is to avoid the fragmentation of care and to establish a dialogical relationship among the parties involved in the process. It is possible to integrate the various activities in health and the comprehensiveness of care by rethinking the health practices and the organization of work processes.^{3,13}

The sheltering represents a way to do health and a structuring of the service to be organized to welcome the different demands provided by the user. From these demands, the creation of an expanded clinic allows understanding the complexity involved in the primary care processes, thus promoting a generalist care with the specificity required. In this way, the health care is constructed through shared responsibility, involving the promotion and prevention, health education and assistance so as to have a health practice that produces sense.⁴

This study aims to highlight the scarcity of literature addressing tinnitus in primary health care.

Method

A literature review was carried out on published articles with respect to tinnitus and primary

care indexed in the following databases: PubMed, Bireme, SciELO, Web of Science, Medline and Cochrane Library.

Descriptors were extracted from the *Medical Subject Headings* (MeSH), to the PubMed, Web of Science, Medline and Cochrane Library databases, through the following search strategy: “Tinnitus” [Mesh] AND “Primary Health Care” [Mesh] OR “Primary Care” [MeSH].

The descriptors included in the Health Sciences Descriptors (DeCS) were used in the Bireme and SciELO databases, following the advanced search strategy: “Zumbido” AND “Atenção Primária à Saúde” OR “Atenção Básica”.

Inclusion criteria included articles published in English, Portuguese and Spanish and approaching tinnitus in primary health care context.

Results

From this search, it was possible to find 11 studies in the PubMed, eight in the Medline, seven in the Bireme, four in the SciELO, two in the Web of Science and one in the Cochrane Library. 33 articles were found from 1995 to 2016. Of these, 19 were excluded, since they were repeated among the databases used and other four were also excluded since they didn't approach tinnitus and/or the specific scope of primary care.

The 10 studies that met the inclusion criteria were from the United States,^{14,15,16,17} Brazil,^{18,19} Austria,²⁰ Spain,²¹ Netherlands,²² and England²³, and they were focused on: Medicine,^{15,17,20,21,22,23} Nursing,^{14,16} Speech, Language and Hearing Sciences¹⁸ and Dentistry.¹⁹

As per the methodology, there was a literature review,²¹ a case report,²⁰ two trials^{14,16} and six cross-sectional studies^{17,18,19,20,22,23} among the selected papers. The sample size of the cross-sectional studies ranged from 29 to 2,000 subjects.

Among the samples, four studies were focused on patients^{17,18,20,22} while three addressed health professionals^{15,19,23}.

As for the age group, five papers indicate the elderly population with a higher incidence of tinnitus and greater risk factor due to the more frequent presence of multi-comorbidities.^{17,18,20,21,22}

Chart #1. Characterization of the studies

Study	Year	Institution	Methodology	Sample	Applicability in the primary care
1. The latest buzz on tinnitus Daugherty JA.	2007	University of South Florida	Trial	-	The care with the tinnitus must start in the primary case, as its early recognition is essential, since, although it is normally benign, it can cause a psychological change and can also be a symptom of life-threatening diseases. Thus, it is necessary that the professionals are aware of the diagnosis and of the existing treatment options.
2. Conhecimento auditivo da população usuária do Sistema Único de Saúde Santana CJ, Scopinho PAB, Ferreira RS, Simões TC, Santos JN.	2009	Faculdade de Estudos Administrativos de Minas Gerais	Cross-sectional study	255 users of Primary Healthcare Units.	About half of the population reported tinnitus. There was great prevalence of harmful auditory habits on the part of the users, while the knowledge concerning hearing care was also insufficient. Guidance and referrals to appropriate services were poor. Thus, the paper questions the effectiveness of Hearing Health actions in the Primary Care, which requires greater attention to health promotion actions.
3. The relationship between various psychosocial factors and physical symptoms reported during primary-care health examinations Dorner TE, Strongegger WJ, Rebhandl E, Rieder A, Freidl W.	2010	Medical University of Graz	Cross-sectional study	312 men and 374 women who are monitored in primary care	The tinnitus was more related to the factors such as sexual dissatisfaction, stress in the workplace and problems in family relationships. Psychosocial factors should be considered in the physical symptoms care in primary care.
4. Tinnitus: Patients do not have to 'just live with it' Newman CW, Sandridge SA, Bea SM, Cherian K, Cherian N, Kahn KM, Kaltenbach J.	2011	Cleveland Clinic Lerner College of Medicine of Case Western Reserve University	Trial	-	Primary care physicians need to have knowledge to diagnose and treat tinnitus and other hearing disorders. The referral to a specialist is helpful, but the physician should be able to listen to the patient and provide hope and encouragement with realistic expectations within a care that requires a multidisciplinary team.
5. Diagnostic indicators of anxiety and depression in older dizzy patients in primary care Maarsingh OR, Dros J, van der Windt DA, ter Riet G, Schellevis FG, van Weert HC, van der Horst HE.	2011	Vrije Universiteit Amsterdam	Cross-sectional study	415 elderly patients who are monitored in primary care	The primary care physicians should consider the existence of anxiety and depression in elderly patients with dizziness and other symptoms related, as the tinnitus.

Study	Year	Institution	Methodology	Sample	Applicability in the primary care
6. Primary care for tinnitus: practice and opinion among GPs in England El-Shunnar SK, Hoare DJ, Smith S, Gander PE, Kang S, Fackrell K, Hall DA.	2011	University of Nottingham	Cross-sectional study	2000 primary care general practitioners in England	The knowledge and care on tinnitus by general practitioners represents an inequality between the services. Few professionals are able to provide hearing health care, despite the recommendation of the national healthcare guidelines. The disparity between the professionals on the relevance of the complaints of tinnitus, show the need for training of these professionals.
7. Tinnitus evaluation in primary care Ruppert SD, Fay VP.	2012	Texas Woman's University	Trial	-	Considering the multifactorial etiology of tinnitus and the negative impact of it on quality of life, the approach should start in primary care with a detailed history of the subject and of the complaint, as well as physical examination including acumetric tests, and finally a speech-language pathology assessment. Care must focus on the causes of tinnitus and must include a physician, a nurse, an otolaryngologist, an audiologist and a psychologist.
8. Tool Kit for Screening Otologic Function of Older Adults Weinstein BE.	2013	City University of New York	Cross-sectional study	29 subject from two otolaryngologic clinics	Tinnitus appears as an otological change that can occur in the elderly with multi-comorbidities and who would have early identification and treatment by the SOFI instrument in primary care, aiming at the quality of life.
9. Manejo de hipoacusia neurosensorial súbita en atención primaria Muñoz-Proto F, Carnevale C, Bejarano-Panadés N, Ferrán-de la Cierva L, Mas-Mercant S, Sarría-Echegaray P.	2013	Universidad de Mallorca	Literature review	-	There is still little knowledge on sudden hearing loss on the part of health professionals and the diagnosis requires a detailed history, an unchanged otoscopy and an audiological evaluation. Tinnitus is indicated as present in 80% of the subjects who have hearing loss. The importance of the primary care physician is addressed in identifying hearing changes by detailed anamnesis and physical exam, including acumetric tests, which favors the early diagnosis.
10. Tinnitus and temporomandibular disorders: the knowledge of professionals for primary health care in the city of Curitiba Martins PF, Stechman JN, Marques JM, Martins SK, Cristoff KE, Sampaio RS, Massi G, Hummig W	2016	Universidade Tuiuti do Paraná	Cross-sectional study	54 dental surgeons	Results show that professionals failed to evaluate temporomandibular disorders and masticatory muscles in routine physical examination. There is a need to inform dentists on the relationship between temporomandibular disorders and tinnitus. In addition, managers need to be encouraged to develop a continuing education that strengthens the role of the dentist in primary care. Thus, routine dentist visits can mitigate the problems and promote better quality of life.

The psychosocial impacts that tinnitus can cause are shown in five articles^{14,16,17,19,20,22} that discuss the possible disorders, such as difficulties on family relationships, stress in the workplace, sexual disorders, anxiety and depression, and they highlight the need for care aiming at improving the quality of life of the subject.

The approach to tinnitus and the strengthening of hearing health actions in the primary care are discussed in seven articles^{14,16,17,18,19,20,22}. The need for training of health professionals is evidenced in six articles^{14,15,19,21,23}. Two of these works indicate that this training should be part of the permanent training of the primary care professionals^{19,23}. In addition, two research endorse the importance of a multidisciplinary team for the effective assistance to the tinnitus sufferer^{15,16}.

Discussion

Among the selected papers, three show greater relevance for specificity. El-Shunnar et al.²³ applied a questionnaire including questions on tinnitus and hearing health in 2,000 primary care general practitioners in England, in which they obtained a significant disparity between the answers regarding the behaviors with respect to the complaint of tinnitus. These results show the lack of guidance on the part of professionals, in relation to the hearing health care, as well as the need to train the primary care professionals.

Martins et al.¹⁹, also used questionnaires addressing the knowledge on tinnitus, but focusing on temporomandibular changes, for 54 dental surgeons who work in primary care. Results showed that professionals still need to be more informed on the relationship between the temporomandibular disorders and tinnitus, thus endorsing the need of services managers to prioritize continuing education in order to improve health practice and promote quality of life.

The study by Newman et al.¹⁵ also shows the importance of knowledge on the part of primary care professionals for the care of tinnitus and other hearing disorders. The authors highlight that the referral to specialized care is necessary, but the primary care professionals need to develop their listening skills to address expectations and other possible demands; therefore, the relevance and need of a multidisciplinary care is highlighted.

Since it negatively impacts different aspects of life of the subject, the care of the tinnitus sufferer requires a multidisciplinary team^{15,16}. When you think about healthcare network, it is possible to establish bridges between services aimed at systemic and ongoing assistance.

In addition to the accountability of the subject in their own process of care, there is the need for awareness of the relevance of each professional role in establishing care actions that are essential for the health-disease-care process^{5,24}.

The speech-language pathologist has a crucial role within the required staff, as being responsible for the care of the changes related to hearing. Despite the increasing demand in the primary care, there is still a shortage of speech-language pathologist professionals^{25,26} and this may be the only reason to explain the presence of only one study of this specific field in the literature review¹⁸.

The Hearing Health Care National Policy²⁷, aims to ensure the hearing healthcare at all levels of healthcare. However, even 13 years after its creation, there is still difficulty in strengthening the network capillarity, mainly in relation to actions in the primary care. Hearing is still seen as a scope of specialized care, hindering the combination of efforts from the primary care; therefore, the services provided remains as a fragmented and cross care.

One of the meanings of comprehensiveness is to seek care from the need of the individual, and not from the disease. In this sense, with the National Policy of Humanization²⁸, some tools that were established, such as the sheltering, allow to establish qualified spaces for hearing with efficaciousness²⁴ in the different levels of healthcare. When considering tinnitus as a demand that impacts quality of life^{29,30}, it is necessary to approach it within the idea of longitudinal follow-up of the primary care.

Conclusion

Tinnitus is a relevant factor to be considered in the health care context and it should be made within a comprehensive care. As its approach is still predominant in the specialized care, it is necessary to strengthen related actions in primary health care. In this context, tinnitus-related studies in this specific area must also be expanded.

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