
Evidence-Based Practice (EBP) in Speech Language Pathology and Audiology

Prática Baseada em Evidência (PBE) em Fonoaudiologia

Práctica Basada en Evidencia (PBE) en Fonoaudiología

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Abstract

This communication discusses the principles of Evidence Based Practice (EBP) as current trend, taking into account principles and foundations that serve as the basis for decision making in clinical work in speech therapy. EBP involves decision-making processes demanded in view of the significant number of clinical procedures focused on a variety of patient profiles, as shown by the latest scientific publications. In this sense, we focused on the concept of EBP and its implications in the use of diagnostic procedures and clinical intervention, scientifically validated within the speech. The development of technical skills, supported the concept of EBP is of relevance in the continuing education of the speech therapist, considering these clinical demands, It is considered that, in daily practice, EBP stimulates professional to act in alignment with the research results, add new knowledge to the practice experience and add value to the patient's preferences.

Keywords: Evidence-Based practice; Knowledge; Clinical competence.

Resumo

Esta comunicação aborda os princípios da Prática Baseada em Evidência (PBE) como tendência atual, levando em conta princípios e fundamentos que servem de base para a tomada de decisão no trabalho clínico em fonoaudiologia. A PBE envolve processos decisórios demandados em face à expressiva quantidade de procedimentos clínicos voltados para uma variedade de perfis de pacientes, conforme revelam publicações científicas mais recentes. Nesse sentido, estão focalizados o conceito de

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PBE e suas implicações no uso de procedimentos diagnósticos e de intervenção clínica, cientificamente validada no âmbito da fonoaudiologia. Considerando, pois, essas demandas clínicas, o desenvolvimento de competências técnicas, apoiadas no conceito de PBE, é de relevância na formação continuada do fonoaudiólogo. Considera-se que, na prática diária, a PBE estimula o profissional a atuar de forma alinhada aos resultados de pesquisas, somar novos conhecimentos à experiência de consultório e agregar valores às preferências do paciente.

Palavras-chave: Fonoaudiologia; Prática clínica baseada em evidências; Conhecimento; Competência clínica.

Resumen

Esta comunicación analiza los principios de la Práctica Basada en la Evidencia (EBP) como tendencia actual, teniendo en cuenta los principios y fundamentos que sirven de base para tomar decisión en el trabajo clínico en fonoaudiología. La PBE implica procesos de toma de decisiones exigidas en vista del gran número de procedimientos clínicos se centraron en una variedad de perfiles de pacientes, como lo muestran las últimas publicaciones científicas. En este sentido, se centran en el concepto de EBP y sus implicaciones en el uso de los procedimientos de diagnóstico y la intervención clínica, validados científicamente dentro del discurso. Considerando que, por lo tanto, estas demandas clínicas, el desarrollo de habilidades técnicas, apoyaron el concepto de PBE es de relevancia en la formación continuada do fonoaudiólogo.

Palabras claves: Fonoaudiología; Práctica Clínica Basada en Evidencias; Conocimiento; Competencia Clínica.

Introduction

In the healthcare area, as a rule, the interpretation of clinical findings was exclusively limited to the professional subjectivity, their beliefs, as well as to the opinions of researchers, officials and experts on specific subjects. In the past, medical decisions were made based on pathophysiology theories, textbooks and conjectures and intuitions¹

At the time, research reports contained unsuccessful scientific conclusions due to the absence of explicit criteria on the data produced based on investigative work. In this past history, the medical practice model caused losses for the effectiveness and efficiency in health services¹. However we found no data in the literature review of research on these occurrences in the clinical context of speech therapy.

Possibly due to the criticism from scientific community regarding the fragile criteria adopted in the verification of medical treatment efficacy and, also, of therapeutic interventions; researches developed the study designs called randomized clinical trials^{2,3}. These trials can find, for each treatment, the scientific evidence adequate to the patient with the same clinical conditions, either in the therapeutic

intervention or preventive context. In this sense, the clinical practice in speech therapy should also be conducted by scientific evidence, ensuring the patient the efficacy and financing planning of the diagnostic and intervention procedures. From the focus of Evidence Based Practice (EBP) the responsibility of knowledge and action shall be added to the daily professional practice, contributing in an objective and coherent manner to the reality of each professional.

The definition of the EBP concept is based in the replication of therapeutic interventions, once the professional, when deciding on his/her conduct before certain patient, must integrate the empirical evidences applicable to the professional practice, with full knowledge of the intervention adopted.

During some time, the definition of EBP focused only in the best clinical evidence available. However, from the Systematic Literature Review (SLR), this exclusive concept of scientific evidence was dissipated from the professional context, allowing the consideration of other questions also essential for the EBP.

The first premise for engagement and motivation of the professional on the importance of scientific evidence in their practice should be attributed



to this concept, both in undergraduate and graduate courses. Sometimes the frequently asked questions of the professionals about the best intervention for a particular patient are direct consequences of ignorance on the bibliographical research sources reliable and available, such as social networking. Supposedly: the better professional training in the area of Health, the higher your compensation^{4,5} and, consequently, the better the quality in health care.

There is the imperative need to elect study designs that produce acceptable conclusive results for the EBP consolidation. And, in addition, it is recommended to consider that cultural factors may contribute to their generalization and effective use. In this context, the biggest challenges in the implementation of EBP in speech therapy, are the significant number of clinical procedures and diversity of patient populations^{4,5}.

It is necessary to take effective measures to assess the effects of the barriers caused by excess of clinical procedures available to the professional speech therapist, and also the diversity of the population served. For example, it is imperative to recognize the term “evidence” and define it operationally in order to facilitate the understanding of its applicability in the speech therapy practice. Furthermore, the identification and recognition of the “evidence” favor, greatly, the acceptance or rejection of technical procedures currently used by the professional. Both decisions - rejection and acceptance - should be based on results of studies approaching the efficacy of speech therapy intervention.

More important than the use of the terminology “Evidence Based Practice” is the relevance of how the evidence was originated; what the evidence means for clinical speech therapy; and when the evidence can be implemented in the professional practice⁵. The evidence can be conceived as a set of elements or evidence of studies confirming or refusing the hypothesis of a study⁶. Understanding the evidence allows for the promotion of knowledge and professional skills in speech therapy to evaluate, select and integrates the researches data. However, “the scientific evidence by itself is never enough”, as the EBP movement needs to recognize that professional experience, patients’ values and preferences may and must contribute to the clinical decision making. It is then established, the need to identify and make use of the scientific evidence as

an EBP component, in order to provide appropriate assistance to the each patient profile.

In fact, the commitment of the scientific research is to contribute to society by promoting improvement in the quality of care led by health professionals and thus improving their patients’ life. Thus, it is necessary to produce evidences that transform into knowledge disseminated and validated for both the speech therapist and the patient. Therefore, the EBP constitutes a movement whose goal is to bring the academic production of the possible solutions to the real problems experienced by health professionals.

Although the definitions of Evidence Based Practice present similarities, their emphases are different. Some authors describe the different perceptions of EBP, discussing the need for knowledge and the implementation of validated research results⁵⁻⁷. They argue that speech therapists relying solely on research evidence, without the integration of information on the client and his/her families, as well as the constraints of the clinical context do not apply evidence based practice appropriately. It should be noted, in respect for the patient, that the information on clinical procedures recommended by the speech therapist should be a priority, in the sense that their interest and participation always prevail. It should first be considered that in EBP, the treatment efficiency also depends on the adhesion of the patient’s relatives.^{8,9}

The current conceptions of Evidence Based Practice consider three principles as its essential components: the scientific evidence, professional experience and the patient’s values and preferences. Scientific evidence is analyzed based on results of high quality studies and systematic reviews. In addition, the experience offers an important resource, due to the theoretical knowledge and clinical experience. Clinicians need to consider the patient’s preferences as to the type of intervention and the procedures adopted in their own treatment, so they can work effectively with caregivers and other people from social groups such as parents, teachers and schools^{10, 11}.

Thus, the clinical decision-making based on the EBP must meet five steps, according to the precepts of the Centro Cochrane do Brasil (2003):

- a) prepare a question; b) look for evidence; c) critically evaluate the evidence for validity and relevance; d) make a decision by integrating evidence

from clinical experience and patient's values; and e) evaluate the performance of the evidence after its application in the patient¹².

Increasingly, researchers and clinicians are faced with applicability and feasibility issues for implementing EBP in a variety of situations before patients. The clinical audiologist uncertainty, given the varied therapeutic, prognostic and diagnostic demands, can lead to misunderstandings in the choice of appropriate procedures for each specific situation. Disparities between the growing evidence of health treatments with scientific basis and current practice are well-documented.

Considering the relevance of the Evidence Based Practice methodology, questions emerge regarding the productivity and investment in research, in national and international graduate programs: What to do with the excessive volume of quantitative data? What is the pragmatic function of academic research? How do health professional and general population can access and beneficially use the studies results?

These questions reflect the challenges in the dissemination of EBP, reiterating that the knowledge produced cannot remain "separate" from what happens in society, since contributions are linked to the efficiency and scientific and social effectiveness.

Thus, it is necessary to disseminate the scientific potential stored in universities, research centers and institutes, inserting them into the reality of public and private health services. To do so, professionals need to be willing to focus their actions on solid scientific evidence. That is, its position must be centered on empirical data, either of primary studies published, or through systematic literature reviews¹³.

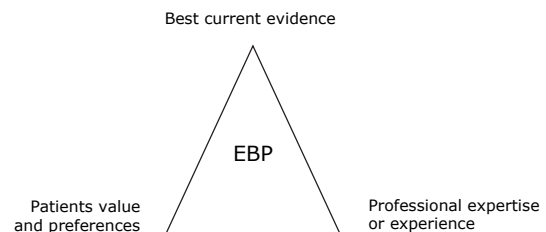
The amount of scientific production coupled with the speed of access to social networks has contributed to the expansion of the knowledge produced, in addition to promoting the sharing and ownership of research data by any professional. Such technological changes form the SLR research context, making possible a new way of understanding theoretical and empirical studies in the reality of professional practice.

The EBP promotes speech therapy practice associated with accurate information on possible interventions to be shared with patients, for the choice of a viable treatment, i.e., the professional

proposal is to encourage the relevance of the patient's role in guiding the treatment. In fact, the most obvious motivation for speech therapists to invest in EBP is to ensure that patients receive the best services possible, informed of available evidence. So embracing it in clinical decision making, can contribute to the achievement of improved service delivery in speech therapy¹⁴.

Researchers and practitioners define evidence based medicine as the integration of best research evidence with clinical skills and patient preference. For them, these three principles observed could prove, emphasize or disprove therapeutic interventions,¹⁵ because they do not focus only on evidence, but on how these are applied in the clinical situation context.

Thus, the *American Speech-Language-Hearing Association* (Asha) proposes the integration of three concepts as EBP objective: (A) "expertise" or clinical experience; (B) scientific evidence; and (c) the patient's perspective to provide high quality services that reflect the caregiver's interests, with the patient values, needs and choices,¹⁶ as shown in Figure 1.



Source: American Speech-Language-Hearing Association (ASHA)¹⁸

Figure 1 – Foundation principles for EBP

Scientific evidence

In a way, the principle presented here refers to the final result of well-designed and conducted empirical studies, represented by scientific evidence. This step requires better understanding and ability to assess the research work in its entirety.

The university should deepen lessons for the students, regarding the research methods, so that they build a collection and integrate into their daily practice and is easily incorporated as a working tool. Thus, perhaps the most important hypothesis formulated in determining best practices in speech therapy is the existence of high-quality research. Thus, we point out two types of literature, spe-



cific for this practice: Randomized Clinical Trials (RCTs) and Systematic Literature Reviews

RCTs are considered the gold standard for evaluating clinical interventions, throughout the provision of health services. In a suitable RCT, patients are allocated at random groups, and the result of treatment and no treatment is compared with a double-blind evaluation. Double-blind means that neither the clinician nor the patient assessed is aware if they received the study intervention. This RCTs research design, for medical studies provides a simple measure of the effectiveness of a single treatment, known by the facility to diagnose the patient's physiological condition. However, for speech therapy, the applicability of this research design compromises the achieving of clinical outcomes due to the difficulty of finding homogeneity in the study groups. The heterogeneity within diagnostic categories represents huge problems for research on treatment outcomes¹⁷

The difficulty in the population heterogeneity and the measurement results has led researchers to say that RCTs studies are not appropriate for speech therapy¹⁸. From the foregoing, it is evident that there are a limited number of systematic reviews in speech therapy, which configures quite discouraging findings^{19,20}

In the case of EBP in Public Health, the researchers suggest as most appropriate that the "main issue fits a type of research design able to detect the intervention benefits and harms, rather than the study having to fit the scientific hierarchy"²¹. In this sense, the EBP movement has generated a number of quality assessment tools, covering all types of research designs²². These tools help to increase the level and rate of systematic reviews, since, in that absence of randomized controlled trials, the professional does not have information on the best evidence, setting up a framework of lack of tested and proven interventions.

The promotion of scientific progress, represented by the production of systematic review, cannot be ignored in the health professionals training, considering that we are in the century of electronic information. Even if the professional is not prepared to qualify scientific evidence for lack of interest or lack of time²², the SLR can be found to confirm the efficacy or refute the scientific evidence given intervention. Thus one of the tasks of universities towards the identification of the sci-

entific evidence is to remove barriers to electronic databases access.

"Expertise" or Clinical Experience

The professional with continuing education in the *lato sensu* graduation and concomitant clinical experience gained over time, may not have developed sufficient technical skills that guarantee the use of more efficient procedures in the assessment and treatment of patients. It is worth emphasizing the need to offer continuing education programs also to the speech therapist, since the nature and work load are crucial in the acquisition of clinical experience. Thus, educational institutions and speech therapists associations recognize the need to add professional continuous development courses and supervised training to the therapist's experience.²³

The ability of the experienced professional is in the proper application of their patient knowledge, taking into account the odds and facilities in everyday clinical practice. Several authors define the expertise as skill and judgment ability acquired through clinical professional practice. The authors further argue that the improvement of "expertise" affects the effectiveness and diagnostic efficiency in the treatment indication, respecting the preferences and values of each patient²²⁻²³.

In conclusion, the importance of knowledge is necessary to clinical practice, but it is only one of the foundations for the improvement of clinical competence and professional experience.

Patient's values and preferences

Consider that the patient has a choice and autonomy on the speech therapist decision-making gives more meaning to the EBP proposal, since it values their and their family participation in the treatment. In this context, the EBP movement achieved its general visibility, in the 1990s, following the publication in the United Kingdom, of the, named "Patient's Letter", assuring full clarification of the proposed treatments, including the risks and alternatives, before their consent to any intervention²³.

It is worth noting the importance of the patient in the treatment, because the regular use of medication and attendance to treatment depend exclusively on their values and beliefs about the intervention, linking thus the effectiveness directly to personal involvement in any treatment²⁴.

The whole question of the therapeutic indication begins on the professional training quality. In fact, the gap between the lack of information provided to patients about the kind of effective procedure often is related to the “ignorance” of the professional on the available scientific evidence.

In short, the participation of the patient and their caregivers throughout the therapeutic process, contributes to the ethical speech therapy practice and committed with the service quality, since the ultimate goal of speech therapy is usually the patient discharge.

Difficulties in the implementation of the Evidence Based Practice in speech therapy

Although there is no revealed agreement on the importance of research for professional practice, there are many barriers that prevent professionals to often apply the appropriate intervention in the clinical practice. It should be noted that the EBP is not exempt from criticism. Several authors have pointed out certain difficulties for the successful implementation of EBP as “central barriers”, such as lack of time both for reading and for research application in clinical practice^{25,26}.

Another barrier identified in the literature is the difficulty of analyzing the research and correlate them with clinical practice. In addition to the lack of significant results, which complicates the interpretation of studies in the practice of speech therapy²⁷.

With regard to access to literature, possibly some professionals and speech therapy departments have limited access to research and studies, unless they are affiliated to the well-funded university libraries, which makes the purchase of these items expensive, requiring the database subscription.

Conclusion

Speech therapy is aligned to the paradigm focused in this communication, disseminating, thus, science as a basis for professional decision making, i.e., to suit EBP means promoting efficiency in contemporary clinical practice, such as support for scientific evidence.

On the other hand, science is an integral part of clinical practice, and must be considered as one

of the “reliable” means for the resolution of several clinical procedures.

Undoubtedly, the growing number of information and the development of systematic literature review have significant impact on the professional decision-making before the diagnosis, prevention, treatment or prognosis, since their behavior directly influences life.

Thus, the interaction of the clinical and research speech therapist is related to the need to add theory to practice. Thus, this integration should be the fundamental basis to the speech therapist career improvement and development, so that the EBP is a relevant component in their decision making, provided that the scientific evidence, work experience and patient preferences are considered as pillars for resolving health problems in the population.

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