



## STUDIES ON THE CARE OF VOICE PATHOLOGY IN TEACHERS

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*Hospital classroom*

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*Voice care*

*Practice teaching*

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### ABSTRACT

*Teachers in hospital classroom contexts worsen their voice problems during their professional activity when caring for children who are unable to attend school due to health situations. Caring for their voice is an urgent need since they are even exposed to sustained stress when approaching affectively in attention to the diversity of these children. Among the causes studied, limitations in the teacher's preparation for their protection, limited use of phonatory and respiratory techniques depending on the voice, unhealthy practices are highlighted, which is why it is necessary to carry out review studies regarding such a sensitive topic.*

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## 1. Introduction

Educational care is necessary and essential and needs to integrate the actions of all those factors and agents of socialization that contribute to the personal formation of children, adolescents and young people, but it is the responsibility of teachers and specialists to prepare them, to study in depth and interpret each situation and to have the resources available to provide the necessary responses in a timely manner. In view of the role that education must play in the 21st century, the State, within the framework of the transformation of the educational system, has been proposing the reform of the basic education level, in whose field some of the most debated aspects are the training and development of competencies (Gudiño et al., 2022).

Today's society needs teachers with excellent vocal health, since their main challenge is to communicate with students. Teachers are crucial in the educational process, and their voice is an indispensable working tool. It is used during the teaching days exposing them to the risk of vocal overload or overexertion that can impair the capacity for their professional performance (de Almeida & de Souza, 2018). Teachers act not only as trainers, but also as motivating agents who must innovate, employing pedagogical strategies that foster creativity (Reyes et al., 2014). Within this range of care, research and projects have been developed aimed at the comprehensive care of children with chronic diseases and who spend long stages in hospital institutions that also become educational spaces.

Hospital classrooms offer the right to education when a child or adolescent is unable to attend school due to hospitalization; in addition, they offer the possibility of maintaining the link to their educational process, allowing them to live with other patients, feel more autonomous, structure their time in the hospital day and can even modify, in a positive way, the memory of the hospitalization (Peña et al., 2022). The hospital classroom was created as a reinforcement of regular schooling to prevent school-age children who suffer from an illness or are admitted to hospitals from suspending their class attendance during their convalescence. In order to understand the context of the hospital classroom, we must take into account various factors such as: age, origin, emotional state, physical and psychological limitations, stay, time, and agents involved such as parents, family members, health personnel and teaching staff (Riera-Negre et al., 2021). Provide adequate educational care to hospitalized students to ensure the continuity of the educational process and avoid the school gap that may arise (Bagur & Verger, 2022).

Hospital classrooms have certain characteristics that make the activity to be developed in them, in a certain way, different: they are located inside a hospital center and are aimed at children suffering from different types of pathologies. These two premises mean that the school performance that the teacher must carry out requires different behaviors from those that would be carried out in a normal classroom. It is for this reason that the classroom should be an open and flexible space, attentive only to the needs of the hospitalized child, where he/she can go freely, with the possibility that whenever required by his/her medical and health care he/she can be absent, to later return to resume his/her school work (Ruiz et al., 2020).

Hospital pedagogy has an integral and proactive character where it is highlighted by the experiences of teachers and children sharing knowledge and affective processes from the hospital space. The objectives of hospital pedagogy are of a formative nature, meaning the implementation of actions aimed at ensuring that children and adolescents not only achieve the pedagogical competencies themselves, but also overcome the situations that may arise during their stay in the hospital (Bustos & Cornejo, 2014). In this sense, Yenel et al., (2021) express that hospital pedagogy is an act of love, which encloses a multidisciplinary face to enhance human feelings and emotions in inclusive environments.

These educational spaces are immersed in a hospital center, so the teaching work in them is not only about the acquisition of knowledge by the students, but also aims to alleviate the physical deterioration and promote the emotional, social and affective development of children. In this sense, hospital classrooms and their pedagogy help to interpret the disease, to make it profitable and to get to the bottom of the sick person, trying to understand his complaint to help him to resurface and overcome, in the least traumatic way possible, his process in the disease (Del Barrio & Castro, 2008).

According to Moreira et al. (2013), teachers are fundamental in achieving the objectives of these classrooms, and must consider all the circumstances surrounding the hospitalized child, anguish, anxiety and demotivation; thus, teachers act not only as trainers, but also as motivating agents who must innovate, using pedagogical strategies that encourage the creativity of these children. Latorre (2010) describes teachers in hospital classrooms with a profile that involves specific personal qualities that help them to cope with the context, including emotional balance, creativity, empathy, adaptability and communication, who are facilitators of teamwork and positive personal relationships, in addition to developing the ability to understand and solve any emotional situation of the student. Communication is one of the important behaviors that human beings perform daily, so it is important to know that this behavior is used for different purposes, in different situations, in different ways, which deserves a systematic study by students and professionals to use communication in their daily lives, in their work and their continuous development.

The service of teachers and specialists in hospital contexts is provided to those children who for certain reasons are totally unable to attend school due to motor or health limitations. On the other hand, there are hospital teachers who provide their services to a heterogeneous group of children, whose number is very variable according to the admission and stay of the children in children's hospitals; those who require the services of these hospital teachers are treated with medication or are immunosuppressed, and others are carriers of different transitory or chronic diseases. The works developed by Quevedo and De-La-peña (2018) establish psycho-pedagogical principles; from the school in the hospital and propose body stimulation and sensory training, likewise Montaner et al. (2019) propose a utilitarian character of education, with play as a means of learning, also states that any teacher can be a hospital educator if they have a warm affection for the students and a legitimate desire to share the knowledge that they consider useful. For Kennert (2019) the contemporary hospital pedagogue feels inspired by understanding that his role is not to teach what he thinks, but what the hospital student wants and needs, at his own pace, attenuating the syndrome of hospitalism, with a feeling of intellectual independence and curricular flexibility, in order to create pedagogical projects with quality of life, which are arguments to continue living with knowledge and emotionality.

In spite of the efforts made, there are shortcomings related to the preparation of teachers and specialists in charge of this mission in the operation of these modalities of attention, it has called for strengthening the didactic-methodological conceptions for the integral attention to children who are educated under this regime. That is to say, it is necessary to consider the integral and complex nature of the content selected for teaching, of the children and of the conditions of the context where they develop, which favor their creativity and initiative for the solution of problems that are part of their pedagogical practice, starting from the care of their voice. It is necessary then that in order to reach an adequate state of physical, mental and social well-being, an individual or a group must be able to identify and realize their aspirations, satisfy their needs to change or adapt to the environment. The relationships between living conditions and health are very important, and the conception of health as a positive fact recognizes individuals and groups as active subjects in the construction of their own health.

Today's society needs teachers with excellent vocal health, since their main challenge is communication with the students; given that the teaching figure is crucial in the educational process, and their voice is an indispensable working tool, it is also used during the teaching day, exposing them to the risk of vocal overload or overexertion that may impair their ability to perform professionally (Le Huche, 1982). One of the main resources in the teaching-learning process is the voice, but without specific work and with variable personal qualities, it can be an important risk factor for future vocal pathologies. In fact, the voice in teaching is often understood as occupational voice in reference to professionals who must make use of it, that is, who use the voice as the main tool and means of their work performance (De Moraes et al., 2019; D' Souza, 2021).

The incidence of voice pathologies in the professional in Latin America is higher than previously thought, the number of teachers who smoke has increased significantly in recent years, which leads us to believe that voice pathologies in the teaching profession are increasing according to research. It is necessary to consider from a critical position that this organic harmony is not always achieved due to the lack of knowledge, deficiencies and insufficiencies of voice professionals such as teachers and specialists, about the risk factors and causal agents that may affect the appearance of voice pathologies, even when they work in hospitals. In various countries of the world, a large number of pedagogues and some physicians have devoted themselves to the treatment of speech and voice disorders, and have achieved such progress that remains in force. Currently, in some large cities there are important children's organizations that provide these services where advice is issued for professional voice care in the aspects: hydration, clearing the throat, drugs, reflux diseases, self-destructive behavior and some suggestions for voice care as well as what to do for an optimal voice, voice care that refers to the rules of vocal hygiene and vocal hygiene measures.

From these aspects it can be inferred that every teacher is a voice professional and as such should know what are the requirements for a healthy voice, be aware that voice alterations not only affect their interpersonal communication skills, but also the satisfactory performance of their profession. The education professional should be aware that in order to use the voice effectively and keep it healthy, he/she should start by self-regulating it, relaxing and trying to transmit the most pleasant and enjoyable part of his/her experiences. The voice is the most evident sample of the mood and personality of the individual; since through it we can perceive feelings and thoughts even if they are not expressed in words to improve the quality of his voice (Schaeffler et al., 2023).

The preparation for voice care is an urgent need because some of these teachers and specialists in hospital contexts are generally carriers of vocal diseases, are constantly exposed to the aggressions of the work environment and suffer from sustained stress when they are affectively involved in the attention to the diversity of students. The objective of this study is to carry out a review of voice care in teachers and specialists in the context of hospital classrooms.

## **2. Development of the research**

In order to develop this systematic review research work, the review research method was applied with a descriptive approach; in addition, an analysis was made by means of descriptive comparisons of the results obtained. The inclusion criteria in the selection of the articles were research related to educational quality; for this purpose, the information was searched in the Scopus databases, and the information search was carried out between 2021 and 2022. The exclusion criteria were related to systematic reviews, conference abstracts, letters to the editor, reports and essays. When the exploration of the documents was carried out in

each of the databases, 90 articles were preselected from which 12 potentially relevant articles were chosen, according to the inclusion and exclusion criteria; subsequently, the analysis of each of the documents related to the objective of the research was carried out.

### 3. Results

When the previous authors conducted a study about voice diseases, it was identified that the voice is an indispensable tool for work and in turn, this professional use is considered a risk factor for the appearance of laryngeal pathology, which happens when the voice is not prepared for the professional performance of the teacher and the misuse and vocal abuse is continuous and recurrent, and also the misuse of the voice is a poor management of the qualities that the voice possesses. Vocal imitations, use of an inadequate tone or incorrect breathing, as well as when speaking too fast or with little opening of the mouth for articulation where vocal abuse is all improper and excessive behavior such as: shouting, speaking loudly or for a long time, speaking over noise or in polluted environments, without adequate acoustics, or by indiscriminate use of the voice relying on its natural conditions, among others.

The teacher is exposed to a bad use and abuse of the voice, when he does not make an adequate use of the teaching resources that allow him to economize his voice and reduce the vocal effort, he does not rest his voice during breaks and frequently uses the voice as a disciplinary control, all of which determines a mistreatment of his vocal organ. The vocal effort required by the teaching work is the cause of the vocal alterations of teachers and is attributed to different factors that are present in the working conditions, such as: teaching practice for several hours a day and especially in the morning hours, regular or bad discipline of children, variations in the tone and intensity of the voice during working hours; the environment with excessive noise, unfavorable acoustic conditions in the contexts of hospital classrooms.

The stress of working with children in these conditions and being subjected to stressful situations, shows stiff vocal cords and neck muscles, so when the voice is used in stressful situations, the exhaled air hits the vocal cords that become stiff, which do not vibrate easily, are hit and this constant trauma leads to the appearance of voice pathologies. Stress causes poor vocal practice and decreased lubrication of the larynx, resulting in dryness and dysfunctional activation. Research on vocal risk factors also suggests significant wear and tear after several years of professional use of the voice, pointing out that the teacher's voice is vulnerable to time and inappropriate use, without vocal orientation for the profession. All these risk factors contribute to the stress that favors vocal abuse.

However, for other researchers, the etiology of voice alterations in the teaching professional lies fundamentally in poor vocal technique and vocal abuse without taking into account vocal prophylaxis. Likewise, the intensity of very high voice that may be present since childhood due to shouting and screaming, singing without previous teaching or training, vocal exhaustion due to poor acoustic conditions, or speaking outdoors; a defective vocal attack. Also an incorrect breathing, given by an insufficient breathing, short and short-lived emission of the expiratory murmur, as well as a sudden expulsion of pulmonary air at the beginning of the word, clavicular type of breathing or lack of abdominal support during the emission of the word. In addition, the use of an inadequate tone, monotony; rapid, superficial or too accentuated articulation.

Among the psychosomatic causes, as phonation is the way to externalize conflicts, intense emotions; abuse of throat clearing, clearing the voice or forced coughing, and as risk factors can be classified as follows: Biological factors: this type of risk factor refers to all the disadvantages that the anatomy and physiology of the patient grants. Referring explicitly to the sex and age of the patient committed to this disorder or pathology that the voice. Organizational factors: organizational risk factors refer to the lifestyle of the patient, in order to reach a conclusion as to why he/she is more likely to develop dysphonia, such as the workload and the inadequate use of the voice, overexertion and irresponsible imposition of the same.

Among the risk factors provided by Alvarez et al. (2014), physical factors are mentioned: the type of physical risk factor explains that there are several ways to unconsciously misuse the voice, excessive noise does not allow a good performance of a teacher to his class hours, therefore, he will try to raise his tone of voice, causing a dysphonia almost automatically, when it is done frequently. Toxicological factors: the risk factors in this case, as its name says, refers to the toxicity that we can have in different areas, for example, food, which directly compromises the upper airway, often causing lesions or dryness in the vocal cords and larynx. The excess of beverages such as coffee or spicy drinks can increase the probability of contracting this voice disorder.

### **3.1. Voice alterations**

Voice alterations show physical and emotional consequences for the teacher. The repeated efforts made by the teacher or other vocal risk conditions to which he/she is exposed, can lead to modifications of the laryngeal tissues and the dysphonia that at the beginning is diagnosed as functional due to indiscriminate vocal efforts, can become organic with the presence of thickening, nodules or polyps in the vocal cords. The abuse and inadequate use of the voice, being in general the non-compliance of the hygienic measures for its conservation, makes the teacher more prone to suffer from professional dysphonia, alteration of the vocal qualities, especially of the timbre, due to an incorrect use of the voice because of his profession.

Among the most common voice alteration is aphonia, which is the total loss of voice, other terms used to name certain vocal disorders are the following: i) Rhinophonia: voice alteration due to anomalies in the resonance with the presence of nasal timbre due to scarce or excessive air outflow through the nose during emission; ii) dyspnea: is the affectation of the sung voice due to conditions that directly or indirectly affect the vocal cords; iii) laryngophonia: dysphonia located in the larynx, the most frequent are the result of poor vocal imposition; iv) phonasthenia: vocal fatigue that affects its qualities and is sometimes associated with inflammatory processes and sometimes associated with inflammatory processes: are dysphonias located in the larynx, the most frequent are the result of poor vocal imposition; iv) phonasthenia: vocal fatigue that affects its qualities and is sometimes associated with inflammatory and allergic processes; v) tonopathy: alterations in the pitch of the voice, usually caused by endocrine-mutational causes, where an excessively deep voice, high pitch or changes from low to high pitch and vice versa are observed.

The most frequent disorder that affects education professionals is dysphonia, and has several types: i) Functional dysphonia: the cause of the disorder is not found within the components of the larynx, but are due to vocal overexertion, psychogenic causes, poor vocal technique, fatigue, among others; ii) Organic dysphonia: the cause is due to injury within the larynx such as cysts, polyps and nodules in vocal cords, acute laryngitis, laryngeal cancer, vocal cord paralysis, gastroesophageal reflux.

All this can lead to the fact that the child's school performance can be affected in various ways. A teacher or bearer of a dysphonic voice may be psychologically rejected by the student as a response to difficulties in the psychological contact between teacher and student. The use of an inappropriate tone (very high-pitched or low-pitched) as well as monotony on the part of the teacher can have unpleasant effects and cause fatigue in the child. There are risk factors that should be taken into account related to healthy lifestyles and healthy practices that are often omitted.

### **3.2. Voice care**

Some of the risk factors are related to lifestyles, which should be healthy with healthy practices, which are often omitted; and influence the care of the voice; so among these practices are mentioned a) exercise regularly, b) eat a balanced diet, including vegetables, fruits; c) maintain good hydration such as drinking two liters of water a day; d) avoid artificial, dry indoor climates and breathing polluted air; e) limit the use of the voice in restaurants or noisy parties; f) avoid clearing your throat or coughing loudly or with sound; g) stop shouting, do not shout from room to room; h) avoid forced aggressiveness of the vocal folds with words that begin with vowels; i) speak in sentences instead of paragraphs, and breathe a little before each sentence.

In the development of the different World Education Conferences, UNESCO has recognized the central role of teachers in raising the quality of the educational processes in which they participate, proclaiming the need to strengthen the training, preparation and improvement of teachers, this idea was clearly stated in the UNESCO and ILO Recommendation concerning the status of teachers, when it states that The 2030 Agenda for Sustainable Development recognizes in its Goal 4 the importance of having qualified teachers to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Nothing better reflects a country's capacity to achieve educational outcomes than the quality of the national teaching force, and thus a quality teaching force is the sustainable element of the education development goal.

## **4. Conclusions**

The care of the voice of teachers and specialists requires a complementary work from the hospital pedagogy with the intention of providing the most integrated and complete education to the child who is in atypical conditions since its formation. The hospital classroom represents not only an atypical structure in the world of education, but also in the hospital world. Teachers must take care of their voice and this education in the voice can make the child maintain a positive attitude, receptive and excited by the learning that is continuing.

The work of the teacher and hospital specialist requires patience, understanding, hard work with the family, with the staff of the institution together with a constant scientific, methodological, research and preparation because since its inception it has not had this projection, where he must take into account the care of its main working organ; the voice, to avoid future pathologies from their performance.



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