



## ARTICLES

### **“I'll be a kindergarten teacher and I don't sing well, but it doesn't matter". Analysis of self-concept and use of the singing voice in Early Childhood Education degree students**

**“Seré maestra de Infantil y no canto bien, pero no importa”. Análisis del autoconcepto y uso de la voz cantada en estudiantes del grado de Educación Infantil**

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#### **Abstract**

Singing in the classroom is important for children's development and for this to happen teachers must be competent in this activity. This transversal study analyses the use of the singing voice, vocal and emotional self-concept in relation to the context and vocal health of future early childhood education teachers (0-6 years) at three universities. For this purpose, a questionnaire was administered to 240 students (22-45 years; 200 females; 40 males). The results show that only about 30% of the students believe they have a beautiful voice, find it easy to sing in the written pitch and sing in tune and effortlessly. However, those who have a family context where singing is present, not only does their self-concept improve, but also understand that for a teacher it is necessary to sing and sing well, because, among other things, they will be a vocal role model for their students. Although the students perceive themselves to be in good vocal health, this is not what they observe in their internship tutors-mentors, who often use recorded music and present voice alterations. It is concluded that the Early Childhood Education degrees fail to provide enough resources to their students to improve their vocal competence and self-concept.

**Key words:** Self-concept; Singing; Initial Training; Voice Health.

#### **Resumen**

Cantar en el aula es importante para el desarrollo de niños y niñas y para que esto suceda el profesorado debe ser competente en dicha actividad. En este estudio transversal, se analiza el uso de la voz cantada, el autoconcepto vocal y emocional con relación al contexto y la salud vocal del futuro profesorado de Educación Infantil (0-6 años) de tres universidades. Para ello, se ha pasado un cuestionario a 240 estudiantes (22-45 años; 200 mujeres; 40 hombres). Los resultados muestran que sólo en torno al 30% del alumnado cree que tiene una voz bonita, les es fácil cantar en el tono escrito y cantan afinado y sin esfuerzo. Aunque en aquellas personas que tienen un contexto familiar donde el cantar está presente no solo el autoconcepto mejora, sino que comprenden que para el profesorado es necesario cantar y hacerlo bien porque, entre otras cosas, serán un modelo vocal para sus estudiantes. El alumnado percibe tener buena salud vocal, no es lo que observan en sus tutoras-mentoradas de prácticas, quienes a menudo usan música grabada y presentan alteraciones de la voz. Se concluye que los grados de maestro/a en Educación Infantil no consiguen dar suficientes recursos a sus estudiantes para mejorar su competencia y autoconcepto vocal.

**Palabras claves:** Autoconcepto; canto; formación inicial; salud vocal.

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## 1. Introduction

Singing is an essential part of childhood and growth (Welch, 2001). In early childhood settings, singing plays a vital role, not only in the development of musical skills but also in the development of physical, social, and language skills (Lorenzo, *et al.*, 2014). Singing enhances listening skills, aids in auditory memory, builds self-confidence, teaches performance skills, and facilitates group building. Furthermore, singing also contributes to the psychological and emotional development of the child (Pascale, 2005). For these reasons, it is important for both boys and girls to have ample opportunities to engage in singing.

School is a significant part of children's lives. Therefore, for singing to become a part of their daily routine, early childhood education teachers should perceive singing as a normal and easy activity. However, in many cases, this is not the reality. Lack of confidence, musical/vocal self-concept, past experiences, or vocal problems can be the reasons why such an important activity for child development is either omitted or avoided within early childhood education classrooms. From an educational standpoint, it is also crucial to equip prospective early childhood educators with the necessary tools to effectively incorporate vocal activities in their classrooms for children aged 0-6.

The aim of this research is to describe the use of the singing voice and vocal health of future early childhood education teachers during their initial training. Therefore, the following specific objectives are proposed: (i) to explore the students' self-concept regarding their vocal and musical abilities and their emotional perception of singing; (ii) to understand their self-perception of vocal health; (iii) to analyze the influence of family, school, and social context on emotional perception while singing and vocal abilities; (iv) to compare potential differences between first and fourth-year students; (v) to know fourth-year students' opinions on the use of the singing voice performed by the internship teachers in the classroom.

### 1.1. Singing Voice in Teachers and Vocal Competence: A Matter of Confidence?

The provision of music in many preschools and daycares often still consists of simply playing a CD for children to dance and sing along (Bainger, 2010). However, to make music and singing an important part of daily classroom work, teachers who have confidence in their own competence are required (Ehrlin, & Wallerstedt, 2014). A study conducted with New Zealand preschool education trainees shows that a significant number of them feel unprepared, consider themselves not very musical, and have negative feelings toward singing (Swain, & Bodkin-Allen, 2014). As a result, these beliefs and self-limitations lead to teachers who rarely sing with their students (Pascale, 2005).

Confidence plays a fundamental role, and when it is lacking, avoidance behaviors toward that skill or activity are often carried out (Heyning, 2011). It has long been known that generalist primary and preschool teachers face difficulties with musical practice in the classroom due, among other factors, to lack of confidence and singing abilities (Swain & Bodkin-Allen, 2017), negative feelings towards singing (Swain, & Bodkin-Allen, 2014) or towards their own voice (Lee Nardo, *et al.*, 2006), or uncertainty about vocal performance in the classroom (Ehrlin, & Tivenius, 2018). Confidence has been studied by authors like Heyning (2011) and Ehrlin and Wallerstedt (2014), who conclude that there is a close relationship between confidence and self-efficacy.

Another observed element is that people who refer to themselves as "non-singers" express anxiety towards singing and often resist situations in which they have to sing (Abril, 2007). This singing anxiety seems to arise in a social context where participants are concerned about the possibility of being personally evaluated by others; this phenomenon is rooted in past negative experiences, where music teachers and family members seemed to have the greatest influence on shaping their beliefs about singing ability and the identity of a singer (Abril, 2007). A common narrative is that this unpleasant experience would affect the perception of vocal ability and confidence in performance (Swain, & Bodkin-Allen, 2017). Criticism of the singing voice is often interpreted by the recipient as a personal attack because the voice is directly linked to one's self (Bodkin-Allen, 2009). Once criticized, individuals may alter their singing behaviors, leading to what West (Swain, & Bodkin-Allen, 2014) calls selective mutism for singing. In this case, an individual's singing ability remains intact, but is not used in specific circumstances for psychosocial reasons.

A common denominator among teachers is that they attribute their lack of music competence mainly to the limited amount of time dedicated to music in their undergraduate teacher training courses (Temmerman, 2006). On the other hand, research with teachers who sang in the classroom, conducted by Pascale (2013), showed that even without formal music training, all of them recalled positive musical experiences from their childhood: their mothers always sang to them, their family sang in the car, and they had attended symphony concerts.

## 1.2. Musical Self-concept

Self-concept plays a fundamental role in the formation of personality, directly influencing, among other aspects, how people learn and behave towards others, their thoughts, and their feelings (Clark, 2000). Furthermore, it is linked to a proper satisfaction of the individual with themselves and their surroundings (Esnaola, *et al.*, 2008). It is, therefore, a psychologically significant variable in the educational context, as it affects both academic performance and the emotions of individuals (Zubeldía, *et al.*, 2018).

The self-concept model, as a multidimensional and hierarchical construct proposed by Shavelson *et al.* (1976), has been universally recognized by the scientific community, although there is currently no consensus on the diversity of its component factors and the nature of their interrelation. Consequently, different classifications and models of self-concept can be found, with the following domains being predominantly accepted among researchers: (i) academic self-concept, (ii) social self-concept, (iii) emotional self-concept, (iv) physical self-concept (González, 2005).

Ruismäki and Tereska (2006) propose a musical self-concept model composed of 6 factors: (1) the general idea of one's musical abilities, (2) musical taste, (3) mastery of musical instruments, (4) activities related to music direction, (5) singing, and (6) musical listening. These same authors demonstrated the influence of early musical experiences in adulthood, both from the perspective of acquired musical training and the development of musical self-concept. For this study, we refer to the factors in this model related to musical abilities, instrument mastery –in this case, voice– and singing.

Additionally, for Austin (1990), students' self-concept as music learners has a decisive influence on their behavior in the classroom and their motivation to participate in musical activities. Therefore, music education research provides evidence that positive self-concept is

often associated with strong musical performance (Austin 1988). Likewise, it is possible to consider that a negative self-concept in music often originates in negative early childhood experiences (McLendon, 1982).

### **1.3. Voice Health**

Teaching is a high-risk profession for the development of voice problems (Behlau, *et al.*, 2012; De Alvear, *et al.*, 2011). Various studies highlight that more than half of the teachers report voice problems during their careers (De Jong, *et al.*, 2006; Roy, *et al.*, 2004). Furthermore, teachers who have experienced voice problems during their training report more work absences due to voice issues than colleagues without voice problems during their training. Teachers with voice problems have a significantly higher risk of speaking much louder in the classroom, experiencing physical discomfort due to the effort, reducing the course content of their teaching, changing their job satisfaction, and being emotionally affected (Chen, *et al.*, 2010).

The same holds true for Education students as for active teachers: they report a greater number of vocal symptoms and more frequently than other university students (Simberg, 2004). It has also been observed that, during their teacher training, some students begin to experience voice problems. Ohlsson (2016) found that 14% of students who started their studies without voice problems ended their studies with dysphonia. She also noted that those students who received vocal training during their studies improved their vocal capacity, indicating that vocal education in teacher training is essential.

## **2. Method**

### **2.1. Design**

This is a post-hoc statistical study based on a questionnaire. The methodology used is quantitative, and it employs the questionnaire as a data collection technique.

### **2.2. Sample**

The sample consists of 224 students, aged between 18 and 23, from the Bachelor's degree program in Early Childhood Education (ages 0 to 6) at three universities: Universidad Autónoma de Barcelona, Universidad Pública de Navarra, and Universidad Ramon Llull. A total of 120 first-year students (111 females and 9 males), and 104 fourth-year students (99 females and 5 males) participated. The sample was formed using the convenience sampling technique.

### **2.3. Instrument**

To assess students' perception regarding singing and its use in the classroom, a questionnaire (PUVCA) was constructed based on the review and adaptation of the following scales: the *Self-Concept in Music Scale* (SCIM) (Svengalis, 1978); the *Self-Esteem of Music Ability Scale* (SEMA) (Schmitt, 1979); the *Musical Self-Concept Questionnaire* (CAMU) by Zubeldía (2014); the *Evaluation of Ability to Sing Easily* (EASE) in its adaptation to Chilean

Spanish (Correa, *et al.*, 2020); and the *National Singing Programme Sing Up Questionnaire* (Welch, *et al.*, 2014). The instrument was validated by a panel of 6 expert judges, all of whom are teachers of Music Didactics in the Early Childhood Education degree programs at the following universities: Universidad Autónoma de Barcelona (the coordinator of the Early Childhood Education degree program and two Associate Professors with over 20 years of experience as Music teachers in Primary School and in the Early Childhood Education degree), Universidad Pública de Navarra (an Associate Professor with over 20 years of experience in as a Music teacher in Primary School and in the Early Childhood Education degree), and Universidad Ramon Llull (two professors in the Speech Therapy degree, experts in voice, one with over 20 years of experience and the other with more than 10 years).

To assess participants' vocal health perception, the *Voice Handicap Index* (VHI) by Jacobson (1997) was used, specifically the Spanish 10-item version: VHI10 (García-López, 2010).

Based on their feedback, the final version of the instrument was revised, consisting of 20 ordinal scale questions organized into categories: a) family, school, and social context (6 questions), b) emotional perception while singing (3 questions), c) self-concept regarding vocal and musical abilities (9 questions), d) the role of singing in the teaching profession (1 question), and e) belief that everyone can sing (1 question). The Cronbach's Alpha analysis yielded a score of 0.827 for 20 items, confirming the internal consistency of the questionnaire. Additionally, the self-perceived vocal health questionnaire (VHI10) was included. Furthermore, a section with 6 questions was added specifically for fourth-year students to gather their opinions on their vocal and musical learning during the degree and their perception of the use of voice by early childhood teachers during internships.

The questionnaire items are answered on a four-point ordinal scale, where 1 means *Strongly Disagree* and 4 means *Strongly Agree*. Participants are given this information to help them place their perception between these two extremes. An even number on the scale was used to avoid a "Neither Agree nor Disagree" response, and specifically, a four-point scale was used to maintain consistency with the other questionnaire they had to respond to (the *Voice Handicap Index* - VHI10 - which is a 5-point scale).

## **2.4. Procedure**

The questionnaire was administered in digital format and distributed through the Intranet of each participating university. All participants in the research were informed in advance about the confidential treatment of the collected information and the research's purpose, and they were required to provide informed consent.

## **3. Results**

### **3.1. Questionnaire results**

Table 1 shows the response percentages for each of the groups (1st and 4th grade) and for the overall dataset.

**Table 1.** Percentage of responses to each question in the questionnaire

| Values   | 1°       |      |       |      | 4°       |      |       |      | all      |      |       |      |
|--|----------|------|-------|------|----------|------|-------|------|----------|------|-------|------|
|  | Disagree |      | Agree |      | Disagree |      | Agree |      | Disagree |      | Agree |      |
|  | 1        | 2    | 3     | 4    | 1        | 2    | 3     | 4    | 1        | 2    | 3     | 4    |
| <b>Variables from the context category</b>                                   |          |      |       |      |          |      |       |      |          |      |       |      |
| My family sings  | 10       | 43.3 | 27.5  | 19.2 | 16.3     | 24   | 28.8  | 30.8 | 12.9     | 34.4 | 28.1  | 24.6 |
| We used to sing regularly at school  | 10.8     | 36.7 | 36.7  | 15.8 | 10.6     | 29.8 | 44.2  | 15.4 | 10.7     | 33.5 | 40.2  | 15.6 |
| I sing with my friends   | 13.3     | 38.3 | 31.7  | 16.7 | 11.5     | 26.9 | 35.6  | 26   | 12.5     | 33   | 33.5  | 21   |
| I sing when I'm alone  | 2.5      | 11.7 | 27.5  | 58.3 | 1        | 9.6  | 29.8  | 59.6 | 1.8      | 10.7 | 28.6  | 58.9 |
| My mother/father taught me to sing   | 77.5     | 15.8 | 5.8   | 0.8  | 60.6     | 23.1 | 11.5  | 4.8  | 69.6     | 19.2 | 8.5   | 2.7  |
| They tell me that I sing poorly  | 25.8     | 39.2 | 15.8  | 19.2 | 34.6     | 27.9 | 16.3  | 21.2 | 29.9     | 33.9 | 16.1  | 20.1 |
| <b>Emotional self-concept variables</b>                                      |          |      |       |      |          |      |       |      |          |      |       |      |
| I feel good when singing   | 0.8      | 7.5  | 40    | 51.7 | 0        | 11.5 | 37.5  | 51   | 0.4      | 9.4  | 38.8  | 51.3 |
| I feel confident when singing  | 22.5     | 33.3 | 26.7  | 17.5 | 18.3     | 26   | 28.8  | 26.9 | 20.5     | 29.9 | 27.7  | 21.9 |
| I prefer singing in a group to singing alone                                 | 15       | 22.5 | 25    | 37.5 | 10.6     | 21.2 | 23.1  | 45.2 | 12.9     | 21.9 | 24.1  | 41.1 |
| <b>Variables of the self-concept on musical and vocal abilities category</b> |          |      |       |      |          |      |       |      |          |      |       |      |
| I have musical skills  | 31.7     | 37.5 | 26.7  | 4.2  | 27.9     | 29.8 | 32.7  | 9.6  | 29.9     | 33.9 | 29.5  | 6.7  |
| I sing well  | 40       | 40   | 19.2  | 0.8  | 24       | 43.3 | 27.9  | 4.8  | 32.6     | 41.5 | 23.2  | 2.7  |
| Singing comes easily to me   | 24.2     | 35.8 | 31.7  | 8.3  | 21.2     | 32.7 | 34.6  | 11.5 | 22.8     | 34.4 | 33    | 9.8  |
| I have a beautiful voice   | 33.3     | 40.8 | 23.3  | 2.5  | 27.9     | 48.1 | 21.2  | 2.9  | 30.8     | 44.2 | 22.3  | 2.7  |
| I am expressive when singing   | 5.8      | 42.5 | 35    | 6.7  | 12.5     | 36.5 | 32.7  | 18.3 | 14.3     | 39.7 | 33.9  | 12.1 |
| I sing in tune   | 45       | 34.2 | 16.7  | 4.2  | 28.8     | 40.4 | 22.1  | 8.7  | 37.5     | 37.1 | 19.2  | 6.3  |
| I sing without tension/effort  | 22.5     | 45   | 28.3  | 4.2  | 30.8     | 37.5 | 26.9  | 4.8  | 26.3     | 41.5 | 27.7  | 4.5  |
| Singing in the written pitch comes easily to me                              | 32.5     | 45.8 | 19.2  | 2.5  | 26.9     | 45.2 | 22.1  | 5.8  | 29.9     | 45.5 | 20.5  | 4.0  |
| I find it easy to memorize songs   | 3.3      | 9.2  | 36.7  | 50.8 | 6.7      | 8.7  | 34.6  | 50   | 4.9      | 8.9  | 35.7  | 50.4 |
| I will be a vocal role model for boys and girls                              | 25       | 53.3 | 17.5  | 4.2  | 13.5     | 40.4 | 33.7  | 12.5 | 19.6     | 47.3 | 25    | 8    |
| All people can sing  | 20       | 23.3 | 33.3  | 23.3 | 12.5     | 19.2 | 29.8  | 38.5 | 16.5     | 21.4 | 31.7  | 30.4 |

For the analysis of frequencies, positive and negative trends for each variable have been combined. In this case, the results primarily reflect that people tend to sing more when they are alone than when they are with friends, and 85.5% do so over recorded music.

Despite not feeling confident (50.4%), not finding it easy (57.2%), and experiencing vocal strain (67.8%), 90.1% of the students feel good when singing. A significant portion (63.8%) believe they lack musical skills and are unaware that they will be a vocal role model for their students. Moreover, over a third think that singing is a skill reserved for a privileged few.

When comparing the means of the 1st and 4th-grade groups, significant differences are found only in the item "I will be a vocal role model" ( $p < .000$ ). We cannot attribute this result to education, as there are more fourth-grade students with singing family members (59.6%) compared to first-grade students (46.7%), and both variables are strongly correlated.

### 3.2. Self-perception of vocal health

The results indicate that 87.1% of the individuals who completed the questionnaire do not perceive any vocal problems ( $VHI \leq 9$ ), 8.8% perceive a moderate vocal problem, and only 3.9% perceive a severe problem. There are no significant differences in the results between the 1st and 4th-grade groups.

### 3.3. Correlation among the different studied variables

The correlation study was conducted within the same category of variables (intra) and among variables from different categories (inter).

The initial analysis reveals that, for the most part, variables within the same category exhibit a significant correlation, although with low strength. Concerning contextual variables, "They tell me that I sing poorly" does not show a significant correlation. Those who do not sing when they are alone receive more criticism for their singing ( $r = -.286$ ;  $p < .000$ ). Regarding variables related to the perception of vocal abilities, "I find it easy to memorize" is the only one that does not have significant correlations with all the other variables studied. In the case of emotional perception variables, only "I feel confident when singing" correlates with the rest of the variables, taking into account that the variable "I prefer to sing in a group" is inversely correlated ( $r = -.358$ ;  $p < .000$ ).

In the analysis of correlations between variables from different categories, the data shows that the emotional perception variable "I feel good when singing" correlates very significantly with all the variables in the context category. Those whose 'family sings,' 'sing with their friends,' 'sing when they are alone,' and 'their parents taught them to sing' also feel secure when singing.

**Table 2.** Correlation between contextual variables and emotional perception variables when singing

| Spearman's rho<br>N=224       | My family<br>sings | We used<br>to sing<br>regularly<br>at school | I sing with<br>my friends | I sing<br>when I'm<br>alone | My<br>mother/fat<br>her taught<br>me to sing | They tell<br>me that I<br>sing<br>poorly |
|-------------------------------|--------------------|--|---------------------------|-----------------------------|--|--|
| I feel good when singing      | .327**             | .259**                                       | .371**                    | .378**                      | .288**                                       | -.226**                                  |
| I feel confident when singing | .21**              | .061   | .195**                    | .230**                      | .210**                                       | -.222**                                  |
| I prefer to sing in a group   | .069               | .150*  | .075**                    | .042                        | .061   | .025                                     |

\*\* The correlation is significant at the 0.01 level (two-tailed)

\* The correlation is significant at the 0.05 level (two-tailed)

The fact of singing at school is the one that correlates the least with the rest of the variables. On the contrary, having a family that sings and singing when alone are the items that have the greatest correlation with vocal and musical abilities. Furthermore, it is these people who perceive that all people can sing.

In the correlation of variables from the context categories and vocal abilities, again, those who are told that they sing poorly have no perception of: having musical abilities, singing well, singing in tune, singing without effort or singing with ease.

**Table 3.** Correlation between variables in the context category and vocal skills

| Spearman's rho<br>N=224                         | My<br>family<br>sings | We used<br>to sing<br>regularl<br>y at<br>school | I sing<br>with my<br>friends | I sing<br>when<br>I'm<br>alone | My<br>mother/f<br>ather<br>taught<br>me to<br>sing | They tell<br>me that<br>I sing<br>poorly |
|---|-----------------------|--|------------------------------|--------------------------------|--|--|
| I have musical skills                           | .252**                | .209**   | .234**                       | .319**                         | .28**2   | -.337**                                  |
| I sing well                                     | .338**                | .146*  | .216**                       | .254**                         | .324**   | -.485**                                  |
| Singing comes easily to me                      | .361**                | .164*  | .341**                       | .346**                         | .301**   | -.290**                                  |
| I have a beautiful voice                        | .302**                | .184**   | .154*                        | .249**                         | .299**   | -.414**                                  |
| I am expressive when singing                    | .253**                | .169*  | .160*                        | .277**                         | .182**   | -.202**                                  |
| I sing in tune                                  | .293**                | .176**   | .256**                       | .273**                         | .336**   | -.442**                                  |
| I sing without tension/effort                   | .227**                | .100   | .222**                       | .232**                         | .181**   | -.258**                                  |
| Singing in the written pitch comes easily to me | .173**                | .058   | .171*                        | .186**                         | .199**   | -.370**                                  |
| I find it easy to memorize songs                | .065                  | -.010  | .216**                       | .257**                         | .075   | -.058                                    |

\*\* The correlation is significant at the 0.01 level (two-tailed)

\* The correlation is significant at the 0.05 level (two-tailed)

The variables on emotional perception when singing “I feel good when singing” and “I feel safe when singing” correlate very significantly with all the variables of the self-concept category on vocal and musical abilities. On the other hand, the preference for singing in a group does not have any significant correlation with the self-concept variables of vocal abilities.

**Table 4.** Correlation between variables in the emotional perception while singing category and vocal skills

| Spearman's rho<br>N = 224                       | I feel good when<br>singing | I feel confident<br>when singing | I prefer singing<br>in a group |
|---|-----------------------------|----------------------------------|--------------------------------|
| I have musical skills                           | .306**                      | .205**                           | .109                           |
| I sing well                                     | .343**                      | .337**                           | -.023                          |
| Singing comes easily to me                      | .469**                      | .370**                           | .013                           |
| I have a beautiful voice                        | .344**                      | .372**                           | -.028                          |
| I am expressive when singing                    | .391**                      | .358**                           | .034                           |
| I sing in tune                                  | .367**                      | .348**                           | .043                           |
| I sing without tension/effort                   | .292**                      | .292**                           | -.012                          |
| Singing in the written pitch comes easily to me | .229**                      | .311**                           | .048                           |
| I find it easy to memorize songs                | .234**                      | .115                             | .078                           |

\*\* The correlation is significant at the 0.01 level (two-tailed)

\* The correlation is significant at the 0.05 level (two-tailed)

Focusing on the question related to “I will be a vocal model for children”, we observe how it correlates with all the variables of the self-concept category on musical and vocal abilities and with the following variables of emotional perception when singing: “I feel good when singing” and “I feel safe when singing.” Those who sing in their family and do not tell them that they sing badly are the ones who think that they are going to be a vocal model, they understand that “as they sing, the children will sing.”

Regarding the item “All people can sing”, those who feel good singing and who have vocal abilities consider that all people can sing. Regarding the context category, it is also observed that those whose parents were taught to sing have this perception ( $p < .048$ ).

When the perception of voice problems (VHI) and the rest of the variables of the studied categories are observed, we verify that only the context variables present significant correlation results: “They tell me that I sing poorly” ( $r = .172$ ;  $p < .010$ ) and, conversely, “My family sings” ( $r = -.172$ ;  $p < .010$ ). And the variables on self-concept of vocal and musical abilities



also correlate inversely: “I have musical skills” ( $r=-.164$ ;  $p<.014$ ), “Singing comes easily to me” ( $r=-.154$ ;  $p<.021$ ) and “I sing without effort” ( $r=-.162$ ;  $p<.015$ ).

### 3.4. 4th-year students’ opinion on their education and the use of the singing voice by the internship teachers in the classroom

Finally, the answers to the questions addressed only to fourth-year students show us that 90.3% of the participants consider that it is important to have music subjects in their degree, despite the fact that only 21.4% believe that it is necessary to sing well to be a kindergarten teacher. However, 86.6% see themselves singing in the kindergarten classroom.

Almost 75% of 4th grade students think that during the grade they have not obtained resources to sing and only 25% consider that throughout the grade their singing has improved. 59.8% think that the songs learned in the degree are interesting.

In relation to the observation of the teachers during the internship periods, the participants have reported that 38.5% of them do not sing daily with the children. And of those who sing, they consider that only 42.3% of them do so in a tuned and expressive way. Furthermore, 14.5% of the teachers were dysphonic. Likewise, 38.4% of the responses indicate that the teachers normally did not sing in the classroom and used recorded music, although these have motivated them to sing in 42.3%.

**Table 5.** Questions and percentage of responses from 4th-year students regarding their education and the use of singing by internship teachers in the classroom

|  | Disagree |      | Agree |      |
|--|----------|------|-------|------|
|  | 1        | 2    | 3     | 4    |
| It is important to have music subjects in the degree               | 1.9      | 7.8  | 30.1  | 60.2 |
| It is necessary to sing well to be a preschool teacher             | 29.1     | 49.5 | 17.5  | 3.9  |
| During the degree, they have taught me resources for singing       | 36.9     | 36.9 | 19.4  | 0    |
| Throughout the degree, I have improved my way of singing           | 39.8     | 34   | 21.4  | 4.9  |
| The songs learned during the degree are interesting                | 6.9      | 33.3 | 41.2  | 18.6 |
| I see myself singing in the preschool classroom                    | 1        | 12.6 | 32    | 54.4 |
| The practice teachers sang in the classroom daily                  | 16.3     | 22.1 | 34.6  | 26.9 |
| The practice teachers sang in tune and expressively                | 14.4     | 43.3 | 25    | 17.3 |
| The practice teachers usually did not sing and used recorded music | 22.1     | 39.4 | 19.2  | 19.2 |
| The practice teachers were hoarse                                  | 54.8     | 30.8 | 13.5  | 1    |
| The practice teachers motivated me to sing                         | 32.7     | 25   | 24    | 18.3 |

## 4. Discussion and Conclusions

The students in the Early Childhood Education degrees who participated in this research do not have a positive self-concept regarding their vocal abilities. Only about 30% of them believe they have a beautiful voice, find it easy to sing in the written pitch, and sing in tune effortlessly. As a result, two-thirds of the sample studied do not consider themselves good singers, which could lead future teachers to resist engaging in singing activities in the classroom, as Abril (2007) suggests. This observation aligns with the findings of 4th-year students during their teaching practicum, where they explained that, in 38.4% of cases, the mentor teachers used recorded music and did not sing regularly in the classroom. All these data correspond with the results of Swain and Bodkin-Allen (2014), who observed that most teachers do not feel adequately prepared to sing, consider themselves musically inept, and hold negative feelings toward singing.

It is also important to note the results of Heyning (2011), which show that those who feel untalented experience anxiety and may choose not to sing in the classroom. Consequently, this self-limiting belief may restrict the use of singing in the classroom, as Pascale (2005) asserts. Moreover, in line with West (Swain, & Bodkin-Allen, 2014), criticism of a person's singing voice is often interpreted as a personal attack because one's voice is closely tied to one's identity. It is also observed that those who believe they lack vocal skills and are told that they sing poorly are the least likely to see themselves as vocal models for children. In other words, they believe that their way of singing does not influence how children sing.

On the other hand, students with a positive self-concept regarding their vocal abilities also have a better emotional perception of singing and feel comfortable and secure while singing, as observed in the studies by Swain and Bodkin-Allen (2017). However, the fact that a high percentage of students (65.2%) prefer singing in a group rather than solo and sing more when they are alone than with friends might indicate that singing in front of peers arouses some aversion, as suggested in Oriola's (2022) study.

The results obtained do not show any differences between 1st and 4th-year students, indicating that Early Childhood Education degrees are not succeeding in making their students vocally competent. Likewise, the majority of 4th-year students believe that the program did not provide them with tools to improve their singing. One aspect that improves among 4th-year students is their awareness that they will be vocal models for their future students, although the percentage agreeing with this statement is still low (46.2%). Among these students, the perception that all individuals can sing also improves.

A notable pattern observed among 4th-year students can be summarized as: "I am not vocally competent, but it doesn't matter because I will not be a vocal model, and it is not necessary to sing well to be an Early Childhood Education teacher." This perception is also supported by the fact that, during their practicum, the students observed that nearly 60% of the teachers did not sing in tune or expressively. This raises the question of how much importance future teachers place on singing in the classroom. From this perspective, it would be interesting to review the curriculum of the Early Childhood Education degree and consider whether it gives sufficient emphasis to voice and musical expression.

In this study, it was observed that variables in the contextual category have a strong impact. Although correlation does not imply causation, the fact that some variables we asked about occur prior to others in the temporal sequence allows us to claim that they have a certain influence on the rest, even though we cannot assert that there are hidden variables justifying the results in another direction (Attorresi, *et al.*, 2009). In this sense, one of the most significant findings of this study is that students who come from homes where singing is a common activity tend to have a more positive self-concept regarding their vocal and musical abilities. Therefore, it can be inferred that normalizing singing in daily life has a significant influence on a person's identity as a singer, in line with the findings of Abril (2007) and Pascale (2013). It appears that informal education and positive early experiences (Pascale, 2013) may facilitate the development of vocal and musical skills. Thus, those who sing at home see themselves as vocal models and believe that singing well is important in order to be Early Childhood Education teachers. In Abril's (2007) research, music teachers and family members appeared to have the most significant influence on shaping beliefs about singing ability and singer identity. Consequently, Early Childhood Education teachers can either create positive or negative

experiences related to singing. This underscores the importance of equipping teachers not only with improved vocal skills but also with the ability to foster early experiences for their students.

Regarding vocal health, the vast majority of students do not perceive voice problems, but 12.9% already have vocal health issues before entering the job market, which, as Van Houtte (2011) asserts, will have an impact on their professional and personal lives. Considering the results, having a family that sings may serve as a protective factor against vocal problems. Having a voice problem adds an obstacle to singing in the classroom, making it more challenging for these teachers. It is unknown whether 4th-year students can discern the degree of dysphonia, only the presence or absence of it. Nevertheless, 14.5% of the students observe teachers-mentors who exhibit dysphonia in the classroom, findings consistent with previous studies on vocal prevalence in teachers (De Jong, *et al.*, 2006; Roy, *et al.*, 2004).

In conclusion, singing is a crucial musical activity. However, this study shows that students have a self-concept about singing that limits them. Those who come from families where singing is a part of their lives not only have a better self-concept but also understand that it is necessary for teachers to sing well in the classroom because they serve as vocal models for their students. In this regard, these findings align with Austin's (1990) perspective, which emphasizes that students' musical self-concept has a definitive influence on their behavior in the classroom and their motivation to engage in musical activities.

According to the results obtained in this research, the Early Childhood Education degrees studied do not provide their students with adequate resources to improve their vocal competence and self-concept. Furthermore, there is a lack of investment in the prevention and detection of voice problems in a group particularly vulnerable to these disorders. Although the sampled students do not perceive having voice problems, the literature warns of the high prevalence of these disorders, and the students themselves observe that many of their mentors have vocal issues. It is clear that a teacher with vocal problems will either not sing in the classroom or will do so damaging their voice even more, ultimately serving as a poor vocal model for young children. It should be remembered that children aged 3-6 years are in the midst of speech development, and it is essential for the vocal models they encounter to have healthy voices.

The predominant image of Early Childhood Education teachers described by students in this research is that of teachers who do not sing daily but use recorded music (Bainger, 2010), and when they do sing, they do so without expressiveness and with poor pitch. This model does not encourage students to feel the need for vocal competence, nor does it emphasize the importance of singing in the classroom. As Ehrlin and Wallerstedt (2014) assert, teachers who trust in their own competence are required for music and singing to have a significant place in daily work. Therefore, it is necessary to work on introducing changes in the curricular design of initial teacher education programs for Early Childhood Education to allow sufficient time for improving students' self-concept and vocal competence.

In future research, it would be interesting to continue this line of work with a larger and more balanced sample, involving more universities. Additionally, it would be advisable to analyze the different curricula of the Teacher Education programs involved in this research to study their impact in contrast to the results obtained. It would also be beneficial to collect objective data on vocal quality to compare them with perceptual data, as the results obtained

with the latter do not align with the prevalence rates of voice problems described in the literature.

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