# COLLEGE CHOIR: SELF-REPORTED SYMPTOMS VOCAL AND HANDICAP VOCAL IN SINGING

## Coro universitário: autopercepção de sintomas vocais e desvantagem vocal no canto

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## **ABSTRACT**

**Purpose:** to compare the voice handicap index with the propensity to dysphonia as perceived by the choristers of Universidade Federal de Sergipe. **Methods:** study of quantitative, cross-sectional, observational and descriptive approach, in which 32 singers participated. The participants answered the questionnaire Classical Singing Handicap Index, which analyzes the impact of alteration in the vocal sung voice in three subscales: disability, handicap and defect. Have also responded to the questionnaire Voice Symptom Scale that analyzes the propensity to dysphonia in three subscales: restraint, emotional and physical. **Results:** Classical Singing Handicap Index it was observed a higher rate in subscale Defect (28.75%) followed by Disability subscale (15.79%) and Handicap (12.27%). Already in Voice Symptom Scale, was seen a higher score on the Physical subscale (25.23%), followed by limitation subscale (19.74%) and Emotional (6.84%). In comparison between the two questionnaires used, there was a statistically significant correlation between all scores, except between the Physical and Disability. **Conclusion:** the choristers showed that propensity to dysphonia in this research also had vocal symptoms such as throat pain, throat clearing, hoarseness and cough.

**KEYWORDS:** Voice; Dysphonia; Singing

## INTRODUCTION

The choir is the most remote group work related to vocal sounds, binds deeply religious activities and cultural traditions of various ancient civilizations<sup>1-3</sup>. Among the various forms of singing, the choir requires its participants a few quirks as follows baton of conductor, the position according to the classification of voices, harmony among all choristers, among other things. For the choir reach harmony in the performance of music, it is necessary that the choristers have adequate vocal preparation that includes the vocal demands of this type of chant<sup>1</sup>.

Corals can exist in various places such as churches, schools, universities and companies. They are also found singers of various ages and

You can conceptualize and differentiate the singing voice of the spoken voice in many ways, as each has its own characteristics and peculiarities. The singing voice needs to constantly worked exercises and adaptations, among other characteristics control of voice quality, the change in the articulation of speech sounds, use of pauses and use of specific features such as vibrato<sup>1,4</sup>. The expressiveness in the corner is a valued factor, as it

Conflict of interest: non-existent

genders, which make the very diverse coral. The classification of voices is performed according to the vocal range and are divided into suits, being soprano and contralto to female voices and tenor and bass to male voices the soprano suit equivalent to more acute female voice, with vocal tessitura average of  ${\rm do}_3$  the  ${\rm do}_5$ ; already contralto, is the most serious female vocal classification in which the vocal range lies averaging  ${\rm fa}_2$  the  ${\rm fa}_4$ ; tenors choristers have the sharpest male voice and the average of his vocal range is  ${\rm do}_2$  the  ${\rm do}_4$ ; low have the lower voices in the men's standings with vocal tessitura average of  ${\rm fa}_1$  the  ${\rm fa}_3^{1-4}$ .

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requires the singer to express different emotions to the public, aesthetically involving the listener<sup>5,6</sup>.

In college corals you can find people of different ages, from young to old. In a survey that aimed to analyze the perception of voice and its alterations and vocal health care of 10 elderly participants, these choristers could observe problems related to vocal health and altered parameters, even if not reported complaints and being satisfied with the voive<sup>7</sup>. In another study of elderly singers, it was observed that of choral activities were effective for the improvement of vocal symptoms, as there was a gradual decrease in symptoms initially detected over activity in choral corner8.

Studies indicate that several factors influence the preservation of health vocal<sup>9-11</sup>. A study of amateur choristers revealed that they had hoarseness, were using tablets as a palliative for dysphonia and complained of difficulty to achieve high or low notes; we can hypothesize that these factors relate to the lack of guidance on the care of voice and practice of vocal technique, which shows that the lack of this can impair activity in singing<sup>9,10</sup>. A study brings some cases which show that the vocal warm-up techniques are used and encouraged the tests, however, no description given time duration as well as without a form agreed application for these techniques, so there is no security to see if the were active heating techniques. Regarding the cool-down techniques, most of the teachers do not encourage the use by not having the knowledge necessary to perform lo<sup>11</sup>.

The perception of the singer on her voice is an important factor to be studied in order to evaluate the vocal necessary adjustments to your vocal health and also to provide subsidies to the speech therapist in the most direct action on the vocal discomfort. Thus, Phonoaudiology is dedicated to formulate, implement and analyze protocols and voice assessment questionnaires directed to aspects of self-awareness, which makes them an effective tool to aid in the perception of the singer on her voice, but also enable analysis of the impact vocal production in your professional life. With these self-awareness tools, it is possible to know relevant aspects of vocal perception of choristers and still can have a broader view of the factors surrounding the singers.

The literature presents studies using oriented protocols for the self-perception of the singer. Among them, there is the Voice Handicap Index Protocol Corner Classic (CPIC) which was applied to classical singers to identify the fact that there is a vocal complaints disadvantage because the quality of life in relation to the use of singing voice. In this study it was found that singers with complaints and/

or vocal symptoms have a higher handicap ratio in the corner, with higher expression in default subscales and disability, without any relation to the classification vocal12.

In a similar survey, there was a difference in singing styles and the presence of voice complaints to influence the perception of voice handicap singers: protocols vocal Handicap Index in Corner Modern were used (MCID) and the vocal Handicap Index in Classic Chant Classic (CPIC), to compare popular singers and classic, with or without vocal complaints. As a result, the classical and popular singers mentioned highest rate in the subscale defect, followed by disability and handicap, and the classical singers with vocal complaints had greater voice handicap that popular singers also with complaints. This study concluded that the classical singer has greater insight into his voice and that voice alterations in this group of singers can cause greater voice handicap than in the group of popular singers<sup>13</sup>.

The University in which this study was conducted is an extension project entitled Coral of the University that promotes closer relations between the University and the community, which has a history of several changes in the course of its existence, for example, the insertion of scholarship students and volunteers who develop a repertoire with instruments to encourage the musical development of the participants, both in groups and individually. Thus, this research aims to compare the voice handicap index with the propensity to dysphonia as perceived by the choir of the University.

## METHODS

The research in question is in line with the resolution 466/12 of the National Commission on Ethics in Research/CONEP, and it was approved by the Ethics Committee for Research Involving Human Beings of the Universidade Federal de Sergipe (CEP/ UFS) with the CAAE number 2001413.6.0000.5546, without risks to the participants who freely agreed to participate in the study and signed the informed consent.

This study of cross-sectional and observational, descriptive and quantitative analysis approach with the participation of 32 singers in a university choir. We adopted as inclusion criteria subject regular participants in rehearsals and performances of CORUFS and Informed Consent (TCLE) duly signed. However, we excluded individuals who had some self vocal complaints referred from diseases not related to the use of singing voice and participation time in the lower coral for 5 months.

All participants who consented to participate in the study completed the IDCC protocol - Handicap Index in the Choir, made up of thirty (30) items divided into three subscales relating to disability, disadvantage and defect, respectively. This was adapted from the original protocol developed by the Speech Specialist Franco Fussi<sup>14</sup> and it is still in the validation process<sup>15</sup>.

The IDCC is culturally adapted to Portuguese from the original italian14 and analyzes the impact of vocal changing in singing voice. Originally it is answered by a four-point Likert scale, however, in adaptation to Portuguese it was added a point, where 0 is never 1-almost never, 2-sometimes 3-and often 4-always; the higher the score, the greater the severity of voice handicap. This protocol was created from the need to have a voice assessment sensitive to the perception of the vocal characteristics of choral singers<sup>13,14</sup>.

After the IDCC, the participants answered a protocol ESV - Symptoms Vocals Scale, which is considered a strong self-assessment tool for voice and vocal symptoms to show clinical responses to treatment in dysphonia. The ESV is composed of 30 questions, in which fifteen questions are about domain limitation (functionality), eight on emotional domain (psychological effect) and seven relate to the physical domain (organic symptoms) and it is answered by a Likert scale with five items, which are Never, Rarely, sometimes, often and Always; The more is obtained When the response item, the greater the propensity for the presence of dvsphonia<sup>16,17</sup>.

Finally, participants were asked to fill in a form with demographic data to make it possible to identify the singers profile and investigate a possible relationship among the data.

After collecting data, the results were tabulated in a database created in the Excel spreadsheet and subsequently transferred to SPSS version 19 (Statistical Package for Social Sciences) for statistical analysis. For quantitative variables it was tested adherence to the normal curve (Komolgorov-Smirnov test) and it has been proven free distribution; so, we used the non-parametric Spearman test to correlate the data, the variable variable. We assumed the significance level of 5% (p  $\leq$  0.05) to consider statistical significance of the data.

#### RESULTS

The data for the participants profiles, it appears that the collected sample (N=32), 34.38% (N=11) compose the suit of sopranos, 28.12% (N=9) the suit of altos, 18.75% (N=6) of the suit tenors and 18.75% (N=6) of the suit low, which can be seen in

Figure 1; it also notes a higher proportion of females 62.50% (N=20) compared to male 37.50% (N=12).

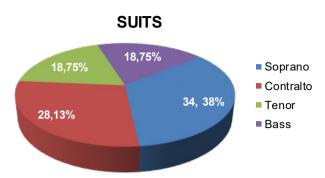


Figure 1 - Percentage of choristers divided by suit

As to age, 62.50% (N=20) aged between 20 and 30 years old, since 18.75% (N=6) between 31 and 40 years old, 9.38% (N=3) between 41 and 59 years old and 9.38% (N=3) is greater than 60. By asking participants choir singing time, the following responses were observed: 9.38% (N=3) of the choristers sing for less than one year; 21.88% (N=7) sing between 1 and 5 years, 12.50% (N=4) reported that their music between 5 and 10 years. and 56.25% (N=18) reported that the singers sing active for over 10 years. In addition to participating in the choir, there are singers who consider that voice professionals in other settings, as follows: 37.50% (N=12) are teachers, 31.25% (N=10) are students, 12.50% (N=4) are musicians, while the remaining 18.75% (N=6) did not consider that use their voice professionally in other environments.

The percentages referring to the index scores in accordance with the answer to the questionnaire from each suit IDCC are arranged in Figure 2. Thus, it can be seen that the highest score with respect to IDCC was defective in subscale, followed by subscale Disability and Handicap.

In figure 3 it was distributed the percentage alluding to the questionnaire ESV, being able to verify a higher score in the Physical subscale, followed by subscale Limitation and Emotional.

Looking at these issues from both instruments, it can be seen that there is a closeness in targeting these groups between disability and limitation, Disadvantage and Emotional, and Physical and Trouble; this fact is confirmed by the results displayed in figures 2 and 3 as well as in table 1 shows that the total number of answers by suit the subscales of the two questionnaires used because the highest rates are similar.

## Disadvantage Index Choral Singing- IDCC

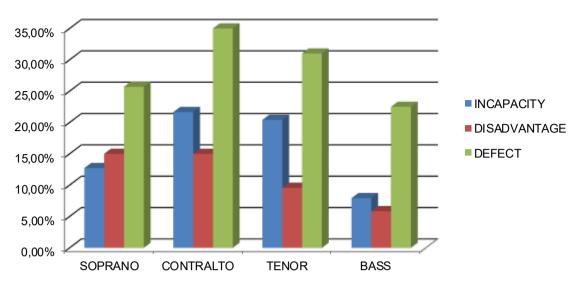


Figure 2 – Percentage of answers by suit and subscales the vocal Handicap Index

## Symptoms Scale Vocals - ESV

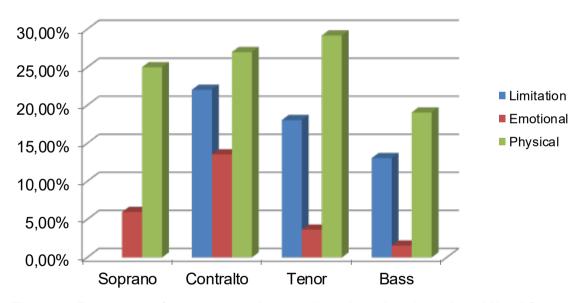


Figure 3 – Percentage of responses to the questionnaire subscales suit and Vocal Symptoms Scale

Table 1 - Percentage and total responses to the questionnaires suit and subscales vocal Handicap Index in Canto Classic and Vocal Symptoms Scale

		IDCC			ESV	
	Incapacity	Disadvantage	Defect	Limitation	Emotional	Physical
Soprano	12,73%	15%	25,69%	22,13%	5,97%	25%
Contralto	21,67%	15%	35,00%	22,04%	13,55%	26,99%
Tenor	20,42%	9,59%	31%	18,06%	3,65%	29,17%
Bass	7,92%	5,84%	22,50%	13,06%	1,56%	19,05%
Total	15,79%	12,27%	28,75%	19,64%	6,84%	25,23%

Considering this proximity between the issues of disability groups and Limitation, Disadvantage and Emotional, and Physical Defect and these were crossed in order to investigate possible relationships. Thus, the questionnaires divided into three subscales were correlated and considered p ≤ 0.05 for statistical significance between the data that has been highlighted in bold in the tables below. The questions were arranged in a summarized way and numbered according to the corresponding number on the questionnaire.

The correlation between the subscale Disability, the IDCC questionnaire with the subscale questionnaire limitation ESV note that several questions showed statistically significant correlation with each other and we highlight two issues of IDCC questionnaire ("7-I have to do periods of vocal rest longer between performances or productions" and "10- My vocal problem forces me to limit the social use of voice") who obtained a correlation of 60% of the questions of the subscale ESV limitation. Also notes that the issues "1- Do you have trouble calling people's attention?" and "9-Do you have trouble talking on the phone?" The ESV questionnaire, did not correlate with any of the issues of disability subscale of IDCC, as shown in Table 2.

The correlation between the subscale Handicap. the IDCC questionnaire, and the emotional subscale, referring to the ESV questionnaire is noteworthy that the issues "19-I avoid schedule future work commitments" and "20-I avoid talking to people" showed a statistically significant correlation with all other issues of emotional subscale, as shown in Table 3

Table 4 shows the cross between the subscale defect, which is part of IDCC and the Physical subscale ESV protocol. In analysis, it can be observed that the three questions "21-I have difficulty with breathing control because of my voice problem", "25-My vocal range reduced or changed" and "30-Worsening my vocal performance at times the day" did not obtain any significant correlation with the other issues related to Physical subscale.

In crossing the total of all subscales of the two protocols, there was a statistically significant correlation between all the scores, except between the Physical and Disability. It should be noted that there was no statistically significant correlation only between the subscale score Physical concerning the questionnaire ESV, with the score of subscale Disability concerning the questionnaire IDCC. This data can be best seen in Table 5.

Table 6 presented the results of the comparison of the total score of IDCC and ESV protocols, which showed a statistically significant correlation. This shows that the questionnaires observed the same aspects and were sensitive to aspects concerning the difficulties mentioned by the choristers.

Table 2 – Crossing the subscale Limitation x Disability

IDCC ESV	1 Vocal yeld	2 + time to heat	3 Tired voice	4 Vocal technique	5 Repertoryo	6 Assay Time	7 Longest vocal resting	8 Pianissimo	9 Remedy for voice	10 Social use of voice
1 Difficulty to call attention	0,739	0,144	0,526	0,223	0,186	0,483	0,556	0,531	0,630	0,360
2 Difficulty to sing	0,423	0,048*	0,100	0,027*	0,002*	0,008*	0,076	0,466	0,253	0,007*
4 Hoarsely	0,139	0,228	0,001*	0,699	0,156	0,055	0,015*	0,001*	0,183	0,034*
Difficulty to be heard in group	0,149	0,154	0,048*	0,152	0,198	0,357	0,019*	0,126	0,429	0,131
Lose the voice	0,944	0,017*	0,478	0,586	0,040*	0,971	0,494	0,361	0,851	0,030*
o Weak/low voice 9	0,568	0,279	0,639	0,224	0,016*	0,475	0,155	0,404	0,942	0,026*
Difficulty to speak on the phone 14	0,449	0,750	0,581	0,247	0,274	0,916	0,218	0,148	0,380	0,552
Tired to talk	0,012*	0,416	0,180	0,040*	0,170	0,474	0,009*	0,134	0,534	0,195
Difficulty in noise	0,056	0,970	0,787	0,034*	0,013*	0,741	0,049*	0,185	0,154	0,160
Difficulty to speak loud 20	0,610	0,202	0,565	0,014*	0,004*	0,631	0,028*	0,099	0,283	0,049*
Voice changes throughout the day	0,045*	0,337	0,004*	0,199	0,007*	0,082	0,002*	0,014*	0,008*	0,002*
Other people ask what's in the voice	0,115	0,685	0,083	0,134	0,127	0,582	0,106	0,093	0,185	0,046*
Voice seems to be hoarse	0,090	0,218	0,015*	0,900	0,610	0,102	0,019*	0,018*	0,282	0,030*
25 Strength to speak	0,092	0,646	0,447	0,036	0,043*	0,390	0,017*	0,020*	0,086	0,060
27 Voice breaks	0,091	0,096	0,010*	0,388	0,260	0,193	0,036*	0,001*	0,004*	0,008*

<sup>\*</sup> Statistically significant results for the Spearman correlation test (p <0.05)

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Table 3 – Crossing the subscale Disadvantage x Emotional

IDCC ESV	10 Depressed	13 Constrained	15 Stressed	18 Voice problem bothers 3rd	21 Voice irritates 3rd	28 Incompetent	29 Voice Shame	30 Lonely
11 Ansiety	0,258	0,081	0,344	0,412	0,138	0,500	0,318	0,135
12 Others will not understand 13	0,748	0,692	0,316	0,217	0,005*	0,008*	0,451	0,884
Other people criticize the voice	0,034*	0,014*	0,024*	0,343	0,030*	0,094	0,036*	0,039*
Nervous because of the voice	0,219	0,042*	0,034*	0,204	0,014*	0,146	0,043*	0,052
15 Worried when repeats a vocalize 16	0,051	0,011*	0,002*	0,162	0,008*	0,003*	0,001*	0,000*
Voice problem hinders career	0,256	0,870	0,008*	0,064	0,080	0,103	0,135	0,154
Other have noted problems in the voice	0,227	0,862	0,002*	0,053	0,011*	0,018*	0,111	0,129
Cancel appointments because of the voice	0,098	0,062	0,011*	0,072	0,110	0,189	0,036*	0,043*
19 Do not schedule professional commitments	0,000*	0,000*	0,000*	0,000*	0,000*	0,002*	0,000*	0,001*
20 Avoid to talk	0,001*	0,004*	0,001*	0,004*	0,000*	0,000*	0,000*	0,000*

<sup>\*</sup> Statistically significant results for the Spearman correlation test (p <0.05)

Table 4 - Crossing the subscale Defect x Physical

	3	7	11	12	19	22	26
IDCC	Throat in pain?	Cough or throat clearing	Something stopped throat	Lump on neck	Secretion in the throat	Stuffy nose	Throat infections
21 Respiratory control	0,468	0,266	0,056	0,858	0,768	0,099	0,065
22 V Varied vocal yield	0,113	0,398	0,004*	0,339	0,044*	0,064	0,062
23 Husky singing voice	0,529	0,209	0,262	0,574	0,037*	0,034*	0,918
24 Sustain notes	0,019*	0,630	0,075	0,375	0,666	0,131	0,195
25 Vocal Extension	0,426	0,173	0,729	0,770	0,830	0,410	0,624
26 Ressonance Balance	0,277	0,521	0,019*	0,043*	0,028	0,017*	0,039*
27 Singing difficulty	0,255	0,809	0,089	0,011*	0,102	0,000*	0,101
28 Vocal quality get sworse	0,181	0,889	0,020*	0,207	0,363	0,012*	0,048*
29 Voice tired after presentation	0,733	0,711	0,009*	0,256	0,171	0,510	0,175
30 Vocal yield worsening	0,881	0,876	0,481	0,653	0,629	0,966	0,740

<sup>\*</sup> Statistically significant results for the Spearman correlation test (p <0.05)

Table 5 - Crossing all subscales

	INCAPACITY	DISADVANTAGE	DEFECT
LIMITATION	0,001*	0,005*	0,000*
<b>EMOTIONAL</b>	0,001*	0,003*	0,000*
PHYSICAL	0,121	0,033*	0,002*

<sup>\*</sup> Statistically significant results for the Spearman correlation test (p <0.05)

Table 6 – Crossing of IDCC total result x ISV total result

	IDCC Total
ESV total	0,000*

 $<sup>^{\</sup>star}$  Statistically significant results for the Spearman correlation test (p <0.05)

## DISCUSSION

We chose to use this research, the questionnaire ESV, which was validated recently<sup>16</sup> and the questionnaire IDCC, which was unable to be validated in Brazil since its original Italian version has not been validated, but it is the only protocol aimed to classical singing Speech available in Brazilian Portuguese language. These were selected for this research by the fact that evaluate aspects that are related primarily to vocal health. There is research using the IDCC, but there are few published studies<sup>12-14</sup>.

In this study the largest number of participants are female, which is the most common sex in many of the choirs, as can also be seen in previous studies 10,18,19.

It should be considered that several singers may have other vocal activity beyond the choir, which brings the importance of the singer is conscious and reflect on this activity, regardless of whether it is harmful or not to vocal health. This perception. along with the speech therapy and listen to the perception of the subject on his own voice is something relevant to be considered, since the speech guidance can promote the reduction of possible speech trauma and provide vocal longevity <sup>20</sup>. The experience in choral singing time can also influence self-perception on the voice21, since this knowledge helps the therapist to understand the complaints brought, which will subsidize the therapy and provide better advice to the patient.

As for CORUFS is perceived the need for a speech therapist and a teacher of vocal technique to perform a vocal improvement work with the choir, which could contribute to reducing the occurrence of vocal problems, focusing on heating techniques and cooling downs, as well as techniques for improving the coordination, breathing and other points in which is seen a greater difficulty by the choristers. The benefit provided by speech therapy has been proven in other studies<sup>22-24</sup> in which the singer himself reported improvement in his voice. Speech pathologists, singing teachers but also the choristers themselves perceive positive changes in vocal aspects, as in vocal range, breath and voice projection, after being held these interventions<sup>21-24</sup>.

It can be seen that the highest score, with respect to CPIC, was in Defect subscale, followed by the Disability and Handicap; these data are equivalent to the findings of other similar studies 12,17,18,25, in which the defect and disability subscales had higher scores than the subscale Handicap for all singers. Several factors such as lack of vocal technique, inexperience in the corner, high vocal demand and the end use of the voice were reported by the authors as the justification of the largest subscale index defect.

By observing the data collected through the ESV protocol, we note that the highest score was presented in Physical subscale, which covers issues related to the habit of clearing his throat, feeling secretion, pain and sore throat. In another study it was found that singers had a higher rate of vocal symptoms such as throat clearing/secretion, hoarseness and cough with secretions, dry throat and mouth, associated with influenza, heavy use of voice, allergies, respiratory infection, which, consequently, interfered in the voices of these subjects<sup>19</sup>. Similarly it was found in another study in which participants also reported the presence of vocal symptoms such as dry throat, effort and vocal fatique, sore throat, associated with respiratory allergy as one of the health problems that interfere with more voice26.

The propensity to dysphonia by these choristers can not be related only to the activity in the choir, but also be influenced by the heavy use of voice in other spaces or health problems like allergy symptoms, as also observed in a study that showed the relationship between dysphonia and complains of allergic and/or digestive<sup>27</sup>. A propensity to dysphonia can be caused by lack of vocal preparation and not follow a teacher of vocal techniques and a speech pathologist, which could contribute to reducing the occurrence of vocal problems, taking into account the importance of these activities in benefit of choristers9.

According to the significance found in the subscales Handicap (IDCC) and Emotional (ESV), the presence or tendency to dysphonia may interfere negatively in the life of a professional voice to affect the property of communication, even though it was just identified in these questionnaires. Voice professionals who report vocal complaints have greater emotional commitment and vocal when compared to others who do not have vocal complaints, which may suggest the existence of a possible intervention of the emotional aspect so there is the change triggering vocal disorders<sup>28</sup>.

Considering the significance of physical subscales (ESV) and Trouble (IDCC), one must have an attention with regard to health, vocal habits and behaviors presented by the singers, since many factors such as lack of guidance on vocal hygiene, pain or discomfort after singing, allergies and breathing problems, hoarseness, use of alcohol in rehearsals and performances, throat clearing. among others, may be crucial in the prevention of dysphonia and avoid changes that may preclude the exercise of activity29.

According to the results found in the correlation between the subscales Disability (IDCC) and limitation (ESV), complaints related to voice as a limitation on the vocal range, shortness of breath at the end of musical phrases, sensation of something in the throat, deafness, fault voice, throat clearing constant, among others, may be related to the bad vocal habits that singers have, like, talk too much, eating ice cream usually in excess, speak up and shout often, among others<sup>30</sup>. These factors may be associated with lack of vocal technique as well as the lack of information about how these habits are harmful to voice production and may lead to the development of laryngeal and disphony a changes9.

The vocal warm-up was seen as a benefit to the choristers and these practices are common in CORUFS in all tests as well as before the presentations. This effect was also observed in a recent survey, through which all the singers realized significant changes in vibrato, quality and vocal projection and thus highlight the importance of heat voice<sup>31</sup>. But the slowdown is not a practice among the choristers CORUFS.

Singing is a practice which requires appropriate muscular activity that requires careful preparation and this can be accomplished in several ways. It is believed that, to the corner, there is a rule that the act of singing or not to impair the voice, however it can be used in a professional manner or not, but it is extremely important that care is taken with relation to vocal habits in order to maintain the health of the vocal tract.

#### CONCLUSION

When the comparison of the total score of IDCC and ESV protocols were performed, there was a statistically significant correlation between them, which shows that the questionnaires assessing vocal aspects that are possibly linked.

Note that the choristers have propensity to dysphonia and this can be best viewed in the

individual responses but also when comparing the questionnaires used, which showed significant correlation and a considerable score on all items. It can also be verified the constant presence of vocal symptoms such as sore throat, throat clearing, hoarseness and cough, which may be related to inadequate vocal habits or even by heating and cooling downs ineffective according to the uniqueness of the choir.

This research was conducted to compare the IDCC and ESV questionnaires, taking into account the sensitivity of both the evaluation of the choir as well as the vocal self-assessment to check the tendency to dysphonia. It is believed that this study in CORUFS, formed by a population that has not been through any of scientific research process, will be of value both for the information of participants choristers, and to encourage other corals to investigate their practices, because the questionnaires perception help a greater reflection of themselves choristers of the difficulties that may present with regard to their voice and singing.

The results may help in achieving an interventional study, focusing on mentoring and vocal preparation with choristers, specifying the points on which there was a higher rate of vocal disadvantages and/or habits that interfere in vocal production.

## **RESUMO**

Objetivo: comparar o índice de desvantagem vocal com a propensão à disfonia segundo a percepção dos cantores da Universidade Federal de Sergipe. Métodos: estudo de abordagem quantitativa, transversal, observacional e descritiva, no qual participaram 32 coralistas. Os participantes responderam ao questionário Índice de Desvantagem Vocal no Canto Clássico, que analisa o impacto da alteração vocal na voz cantada em três subescalas: incapacidade, desvantagem e defeito. Também responderam ao questionário Escala de Sintomas Vocais que analisa a propensão à disfonia em três subescalas: limitação, emocional e físico. Resultados: no Índice de Desvantagem Vocal no Canto Clássico observou-se um maior índice na subescala Defeito (28,75%), seguido da subescala Incapacidade (15,79%) e Desvantagem (12,27%). Já no Escala de Sintomas Vocais, foi visto um maior escore Físico (25,23%), seguido da subescala Limitação (19,74%) e Emocional (6,84%). Em comparação entre os dois questionários utilizados, foi verificada correlação estatisticamente significante entre todos os escores, exceto entre o Físico e Incapacidade. Foram comparados os escores totais dos questionários e houve correlação estatisticamente significante entre eles, o que mostra que os questionários avaliam aspectos vocais que estão, possivelmente, interligados. Conclusão: os coralistas que apresentaram propensão à disfonia nesta pesquisa também apresentaram sintomas vocais como dor na garganta, pigarro, rouquidão e tosse.

**DESCRITORES:** Voz; Disfonia; Canto

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