

FALAR EM PÚBLICO: RELAÇÕES COM COMPETÊNCIA EM COMUNICAÇÃO, ANSIEDADE E EXPERIÊNCIAS DE ORATÓRIA DE DISCENTES

PUBLIC SPEAKING: RELATIONSHIP WITH COMPETENCY IN COMMUNICATION, ANXIETY AND ORATORY EXPERIENCES OF STUDENTS

HABLAR EN PÚBLICO: RELACIÓN CON LA COMPETENCIA EN COMUNICACIÓN, ANSIEDAD Y EXPERIENCIAS ORATORIAS DE ESTUDIANTES

Adriana Pereira da Silva Grilo¹, Alfredo Almeida Pina-Oliveira², Ana Cláudia Giesbrecht Puggina³

RESUMO

Objetivos: Correlacionar a competência em comunicação interpessoal e o traço de ansiedade dos discentes de graduação com a autoavaliação ao falar em público; associar as experiências acadêmicas de oratória e sentimentos percebidos nessas situações com a autoavaliação ao falar em público. **Método:** Estudo transversal quantitativo, realizado em março de 2016 a março de 2017, com discentes do curso de graduação em Enfermagem de duas Instituições de Ensino Superior privadas paulistas. Foram utilizados quatro instrumentos: instrumento de caracterização do participante da pesquisa, a subescala traço de inventário de Ansiedade, Escala de Competência em Comunicação Interpessoal e a Escala para Autoavaliação ao Falar em Público. **Resultados:** A amostra do estudo foi constituída de 613 discentes com média de idade de 25,53 ($\pm 7,93$). A maioria nunca participou de curso de teatro ou oratória (n=502; 81,89%), optou por apresentar os trabalhos acadêmicos (n=389; 63,46%), considera importante preparar-se com antecedência (n=347; 56,61%), preocupa-se em conhecer o perfil do público (n=376; 61,34%). A maioria declara que conseguiria manter a calma, em caso de branco ou bloqueio (n= 585; 95,43%); já sentiu algum embaraço durante uma apresentação (n=454; 74,06%). O sentimento predominante, em apresentações públicas, foi a ansiedade (n=288; 46,98%). Quanto maior a idade e a competência, em comunicação interpessoal, melhor se autoavalia; quanto maior a ansiedade, pior se autoavalia. **Conclusões:** Há correlações positivas significativas da idade e da competência em comunicação interpessoal com a autoavaliação positiva do falar em público. Encontrou-se correlação negativa do traço de ansiedade com a autoavaliação positiva ao se expor publicamente.

Descritores: Fala; Comunicação; Ansiedade; Relações Interpessoais; Estudantes; Enfermagem.

ABSTRACT

Objectives: To correlate the competence in interpersonal communication and the anxiety trait of undergraduate students with self-assessment in public speaking; to associate the academic oratory experiences and feelings perceived in these situations with the self-assessment when speaking in public. **Method:** Quantitative cross-sectional study conducted from March 2016 to March 2017 with undergraduate nursing students from two private higher education institutions. Four instruments were used: the research participants characterization instrument, the State-Trait Anxiety Inventory, the Interpersonal Communication Competence Scale and the Self Statements during Public Speaking Scale. **Results:** The study sample consisted of 613 students with a mean age of 25.53 (± 7.93). Most students have never participated in theater or oratory course (n = 502; 81.89%); chosen to present the academic works (n = 389; 63.46%), consider it important to prepare in advance (n = 347; 56.61%); and are concerned with knowing the profile of the public (n = 376; 61.34%). Most students reported that they would be able to remain calm in the event of a mental block (n = 585; 95.43%) and have already felt embarrassed during a presentation (n = 454; 74.06%). The predominant feeling in public presentations was anxiety (n = 288; 46.98%). The older the person and the competence in interpersonal communication, the better they evaluate themselves; the higher the anxiety, the worse they evaluate themselves. **Conclusions:** There are significant positive correlations of age and competence in interpersonal communication with the positive self-assessment of public speaking. A negative correlation of anxiety trait with positive self-assessment was found when exposed publicly.

Keywords: Speech; Communication; Anxiety; Interpersonal Relations; Students; Nursing.

RESUMEN

Objetivos: Correlacionar la competencia en comunicación interpersonal y el rasgo de ansiedad de los estudiantes de pregrado con autoevaluación en hablar en público; asociar las experiencias académicas de oratoria y los sentimientos percibidos en estas situaciones con la autoevaluación cuando se habla en público. **Método:** Estudio transversal cuantitativo realizado con estudiantes universitarios de enfermería de dos instituciones privadas de educación superior, la recolección de datos se realizó entre marzo de 2016 y marzo de 2017. Se utilizaron cuatro instrumentos: el instrumento de caracterización de participantes en la investigación, la subescala de rasgo del Inventario de Ansiedad, la Escala de Competencia de Comunicación Interpersonal y la Escala de Autoevaluación de Oratoria. **Resultados:** La muestra del estudio consistió en 613 estudiantes con una edad media de 25.53 (± 7.93). La mayoría nunca participó en un curso de teatro u oratoria (n = 502; 81.89%), eligió presentar los trabajos académicos (n = 389; 63.46%), considera importante prepararse con anticipación (n = 347; 56,61%) o se preocupa por conocer el perfil del público (n = 376; 61,34%). La mayoría informó que podrían mantener la calma en caso de un espacio en blanco o de bloqueo (n = 585; 95.43%); Alguna vez ha sentido un bloqueo durante una presentación (n = 454; 74.06%). El sentimiento predominante en las presentaciones públicas fue ansiedad (n = 288; 46.98%). Cuanto mayor es la persona y la competencia en comunicación interpersonal, mejor se evalúan a sí mismos; cuanto mayor es la ansiedad, peor se evalúan a sí mismos. **Conclusiones:** Existen correlaciones positivas significativas de edad y competencia en la comunicación interpersonal con la autoevaluación positiva de hablar en público. Se encontró una correlación negativa del rasgo de ansiedad con una autoevaluación positiva cuando se expuso públicamente.

Descriptores: Habla; Comunicación; Ansiedad; Relaciones Interpersonales; Estudiantes; Enfermería.

¹Enfermeira. Aluna de Doutorado do Programa de Pós-Graduação Stricto Sensu em Enfermagem da Universidade Universus Veritas, Guarulhos, SP. ²Enfermeiro. Doutor em Ciências pela Escola de Enfermagem da Universidade de São Paulo. Professor Doutor da Universidade Universus Veritas, Guarulhos, SP ³Enfermeira. Doutora em Enfermagem pela Escola de Enfermagem da Universidade de São Paulo. Professora Adjunta na Faculdade de Medicina de Jundiá, Jundiá, SP.

How to cite this article:

Grilo APS, Oliveira AAP, Puggina ACG. Public speaking: relationship with competency in communication, anxiety and student oratory experiences. Revista de Enfermagem do Centro-Oeste Mineiro. 2019;9:e3534. [Access _____]; Available in: _____. DOI: <http://dx.doi.org/10.19175/recom.v9i0.3534>

INTRODUCTION

Public speaking is to present a message, share it and influence others, being essential for promoting human interaction and understanding of the audience on information transmitted through words, actions and gestures. However, a good communicator requires preparation and training⁽¹⁾.

Public speaking correctly and without inhibitions involves being able to transmit, communicate and express oneself properly, and each audience greatly influences the way the speakers express themselves. For this reason, developing the sensitivity to understand the intentions of the listeners and to adapt the contents of the message to the interests of this target public requires oratory skills and experiences⁽²⁾.

Oratory is the art of speaking well in public eloquently. It is an important skill in communication and comprises a method of discourse established by a set of rules and techniques that allow for improving the personal qualities of those who want to speak publicly⁽¹⁾. The oratory experiences, in the university environment, are important, because they facilitate the recognition of one's own difficulties and prepare students to learn to face them positively, in order to improve their communicative skills⁽³⁾.

Communication skills have been demanded and appreciated in different areas of university education and, especially, when the professional activity is based on interpersonal relations, as is the case of Nursing⁽⁴⁾. In this sense, communication is a basic instrument of care and is relevant for the nursing assistance, and public speaking constitutes a situation that professionals and students still fear or are afraid of⁽⁵⁾.

Orality guides the process of teaching, learning and understanding of speech, since being able to communicate effectively is essential for academic and professional success⁽⁶⁾. Thus, developing communication skills becomes important to facilitate the expression of the orality.

Through public or interpersonal verbal and non-verbal expression, the human being manifests their own individuality. Revealing oneself can cause fear and anxiety and can adversely affect the subject. The inability to clearly speak what one wants, by nervousness,

fear, insecurity or shyness, can interfere in the personal and professional development⁽⁷⁻⁸⁾.

Speaking well in public involves dexterity, creativity, emotional balance in the face of public exposure, and a competent communicator is someone who manages to express self-control, in professional situations, meetings, interviews and group discussions⁽¹⁾.

The beginning of a public speaking is the most difficult moment of presentation and demands self-control skills and mastery of the situation. In this moment, adrenaline is released, and the individual seeks to find the best place to position or listen to the sound of their own voice⁽²⁾.

Self-control is often perceived by voice, once it represents an important indicator of affective state in communication, as well as facial expression and gestures, which are responsible for the non-verbal communication of emotions⁽⁹⁾. The emotional state directly affects the individual's verbal and non-verbal communication, especially when expressing in public⁽¹⁰⁾.

Public speaking is considered a psychosocial stressor associated with anxiety, fear, insecurity and the presence of negative thoughts that are triggered as a form of self-preservation before the exposure, in this scenario, perceived as threatening, interfering directly in the presentations⁽¹¹⁾.

The academic life presents many occurrences of presentations in public and, for this reason, the objectives of this study were: to correlate the competence in interpersonal communication and the trait of anxiety of students with the self-assessment to speak in public; and associate the academic experiences in public speaking with feelings perceived in these situations with the public speaking self-assessment.

METHOD

Quantitative cross-sectional study whose response variable was self-assessment, when speaking in public, and the predictor variables, the competence in interpersonal communication, the sociodemographic characteristics, the academic experience of public speaking, the feelings perceived by students in these situations and the trait of anxiety.

The sample size calculation was determined by the relative standard deviation

(± 5.90) and average (37.8) obtained in previous scientific report⁽¹²⁾. With the software Statistical Package for Social Sciences (SPSS), the coefficient of variation was calculated ($CV=SD/Average$; $CV=0.156$). The maximum error of the estimate was estimated by multiplying the CV and SD (0.156×5.90), being equal to 0.92. The significance level was 5%, and the minimum sample size estimated, for the application of this instrument, was 158 participants.

The study sample consisted of 613 undergraduate Nursing students from two private, for-profit Higher Education Institutions (HEI), located in the municipalities of Guarulhos (SP) - HEI 1 - and São Paulo (SP) - HEI 2; the participants were 211 students from HEI 1 and 402 from HEI 2.

The criteria of eligibility of students to participate in this research were: aged 18 years or more, be regularly enrolled from the first to the eighth semesters of the undergraduate nursing course, residing in the city of São Paulo and metropolitan region in which HEI 1 and HEI 2 are inserted.

After obtaining the formal consent of its leaders, the recruitment of participants was initiated at both HEIs. The professors were approached before the classes and, after authorization, the main researcher presented and explained the goals and methods of this research. Therefore, data collection occurred in the period from March 2016 to March of 2017, and two moments were selected to approach participants: between classes and after classes. At HEI 1, students from the morning and night periods were approached, whereas, at HEI 2, the participants were students from the morning, afternoon and night periods. Data collections occurred in the classroom, collectively and without refusals.

Four instruments were used: a questionnaire for characterization of the participant, the State-Trait Anxiety Inventory (STAI), the Interpersonal Communication Competence Scale (ICCS) and the Self Statements during Public Speaking (SSPS) Scale. The complementarity of these instruments was outlined in order to identify characteristics potentially related to traits of anxiety of participants, check traits of anxiety acquired in their life trajectories, evaluate their competence to communicate interpersonally and analyze possible influences, in the anxiety trait, deriving from public speaking. The recollection of these

instruments occurred on the same day of their application.

The questionnaire for the characterization of the participant was composed of 22 variables, being 11 questions about sociodemographic characteristics, such as age, sex, nationality, affective relationship, self-reported color, religion, current job, working area, family income, undergraduate semester and period, in addition to 11 questions about the academic experience related to public speaking.

The STAI is an instrument composed of two distinct self-reporting subscales to assess two distinct concepts of anxiety, the anxiety state (A-State) and the anxiety trait (A-Trait). This study used only the Trait subscale, which assesses the participants' feelings in most of cases. It is composed of 20 questions measured with Likert scale of 4 points (1- almost never; 2- sometimes; 3- often; 4- almost always). The total score of the scale ranged from 20 to 80: the higher the score, the greater the degree of anxiety. This subscale consisted of 10 items defined as unpleasant feelings of tension and apprehension, consciously perceived, by increased activity of the autonomic nervous system. The items 3, 4, 6, 7, 9, 12, 13, 14, 17 and 18 have reverse coding⁽¹³⁾.

The ICCS is a self-administered instrument, composed of 17 items and five areas of competence in interpersonal communication: self-revelation, assertiveness, management of interactions, availability and control of the environment. The total score of the scale ranged from 17 to 85: the higher the score, the greater the competence in interpersonal communication of the individual. In each affirmative, the participant circled the answer that best reflected his/her communication with others: (5) represents almost always, (4) generally, (3) sometimes, (2) rarely, (1) never. It presented two items with reverse coding (8 and 17) and the higher the score, the higher the skill in interpersonal communication⁽¹⁴⁾.

The SSPS is an instrument consisting of 10 statements measured with 6-point Likert scale (from 0 to 5 points), in which only the two extreme scores were mentioned: zero (0) represents totally disagree and five (5) totally agree with the statement. The items 1, 3, 5, 6, 9 (Factor 2) represent a positive self-assessment. The items 2, 4, 7, 8, 10 (Factor 1) represent a negative self-assessment and were recoded for obtaining the final score of the instrument. The maximum total score was 50 points, which was

the sum of the score of the items of the positive and negative subscales. It is important to emphasize that the score of the items in the negative subscale was reversed. The internal consistency showed a Cronbach's alpha of 0.90, for the total scale, 0.80 for the positive subscale and 0.78 for the negative subscale; the higher the score, the greater the negative self-assessment⁽¹¹⁾.

Data were analyzed using R Core Team 2016® statistical program (LPG, 2016, Vienna, Austria). Descriptive and inferential analyses were performed. For the comparison of quantitative variables with the scores of the instrument, the Spearman correlation test was used; for the association of categorical variables with the scores, the Kruskal-Wallis and the Mann-Whitney Wilcoxon tests were used. The level of significance adopted in the tests was 0.05. When the association test was significant, the p-values were analyzed in two-by-two comparisons by the Bonferroni criterion; the different groups were those with p-values smaller than the overall. The missing data in psychometric instruments were imputed using the mode.

The study development followed the recommendations of Resolution n.466/2012 and was approved by the Research Ethics Committee of the HEI under Opinion n. 1.349.877 and Presentation Certificate for Ethical Consideration (CAEE) n. 50610315.7.0000.5506. All participants signed the Informed Consent Form (ICF).

RESULTS

The study sample consisted of 613 students with an average age of 25.53 (±7.93). In the HEI 1, questionnaires from 211 (34.42%) students were collected and, in the HEI 2, from 402 (65.58%) students. The majority was female (n=490; 79.93%), born in São Paulo (n=450; 73.41%), working (n=415; 67.70%), without a

single partner (n=364; 59.38%), white (n=319; 52.04%), and studying in the morning period (n=340; 55.46%).

The highest frequency was Catholics (n=256; 41.76%), with an income of up to three minimum wages (n=140; 22.84%), working in the nursing area (n=206; 33.61%), attending the second (n=225; 36.70%) and third semesters of the undergraduate course (n=139; 22.68%) during the night (n=246, 40.13%).

Considering the academic experiences, the majority has never participated in theater or oratory courses (n=502; 81.89%), chosen to present the academic works (n=389; 63.46%), considers it important to prepare in advance (n=347; 56.61%), is concerned with knowing the public profile to feel more secure (n=376; 61.34%) and does not consider oneself creative, during the public speaking (n=349; 56.93%). There were greater frequencies of students who consider themselves shy (n=303; 49.43%), and rehearse the presentation to other people (n=269; 43.88%).

In relation to non-verbal feelings and signals, the majority reported managing to keep calm in case of mental block (n=585; 95.43%) and having already felt embarrassed during a presentation, almost unable to speak (n=454; 74.06%). It is noteworthy that the predominant feeling, in presentations in public, was anxiety (n=288; 46.98%), whose main sign was shaking hands (n=201; 32.79%).

Considering the mid-point and the total average score of the instruments used in this study, the students, in general, presented moderate to high competence in interpersonal communication, low to moderate anxiety trait and moderate ability to speak in public (Table 1).

Table 1 -Description of the total score of the instruments used in this study: SSPS, STAI-Trait and ICCS. São Paulo, 2018.

	N. of items	Score variation	Mid Point	Mean	Standard Deviation	Minimum	Median	Maximum
ICCS	17	17-85	51	61.84	8.10	36	62	84
STAI - Trait	20	20-80	50	42.21	9.08	21	41	70
SSPS	10	0-50	30	34.62	5.78	10	35	47

Source: Created by the authors. The items with reverse coding are already recoded in this table.

The descriptive analysis of the students' answers, based on these three instruments,

revealed that they seek to look at the friends' eyes, during a conversation, let friends know

them better, defend their rights, are happy, feel well, consider themselves steady; in relation to public speaking, they face a probable failure with

tranquility, because they believe that, even if they are make mistakes due to a difficult situation, they need to try (Table 2).

Table 2 -Description of students' answers inthe instruments used in this study: SSPS, STAI-Trait and ICCS. São Paulo, 2018.

Instruments	Mean	SD
ICCS		
14 I try to look other in the eye when talking to them.	4.26	0.96
11 I allow my friends see who I really am.	4.19	1.04
1 I stand up for my rights.	4.17	0.88
10 My friends really believe I care about them.	4.08	0.94
9 I let others know I understand what they say.	3.87	0.94
2 While talking to my friends, I realize what they are saying, and not saying.	3.81	1.02
16 Others think I understand them.	3.71	0.97
12 Others would describe me as kind, that is, caring.	3.7	1.16
13 I express well verbally.	3.64	1.08
15 When I feel strained, I face the person that did that to me.	3.56	1.26
7 I achieve my communication goals.	3.52	1.01
6 I tell people when I feel close to them.	3.37	1.22
3 I manage to persuade others regarding my opinion.	3.23	0.92
5 I take control of conversations by which I feel involved, negotiating themes about which we will talk.	3.23	1.11
17 It is hard to find the right words to express myself.	3.00	1.22
4 I reveal my feelings to others.	2.89	1.24
8 It is difficult for me to stand for my rights.	2.39	1.15
STAI – TRAIT		
10 I am happy.	3.28	0.77
1 I feel well.	3.02	0.89
19 I am a steady person.	2.84	0.87
16 I feel satisfied with myself.	2.77	0.89
13 I feel secure.	2.72	0.93
20 I get in a state of tension or turmoil as I think over my recent concerns and interests.	2.68	0.99
7 I am "calm, cool, and collected".	2.55	0.96
14 I avoid facing crises or problems.	2.37	1.05
11 I let things put me down easily.	2.31	0.97
9 I worry too much over something that really does not matter.	2.22	1.02
6 I feel rested.	2.12	0.89
18 I take disappointments so keenly that I cannot put them out of my mind.	2.11	1.05
2 I feel tired easily.	2.09	0.82
17 Some unimportant thought runs through my mind and bothers me.	2.04	0.99
8 I feel that difficulties are piling up so that I cannot overcome them.	1.91	0.86
12 I do not feel self-confident.	1.85	0.93
4 I wish I could be as happy as others seem to be.	1.83	0.97
5 I lose opportunities because I can make decisions easily.	1.78	0.86
3 I feel like crying.	1.71	0.83
15 I feel depressed.	1.60	0.82

“continues on next page”

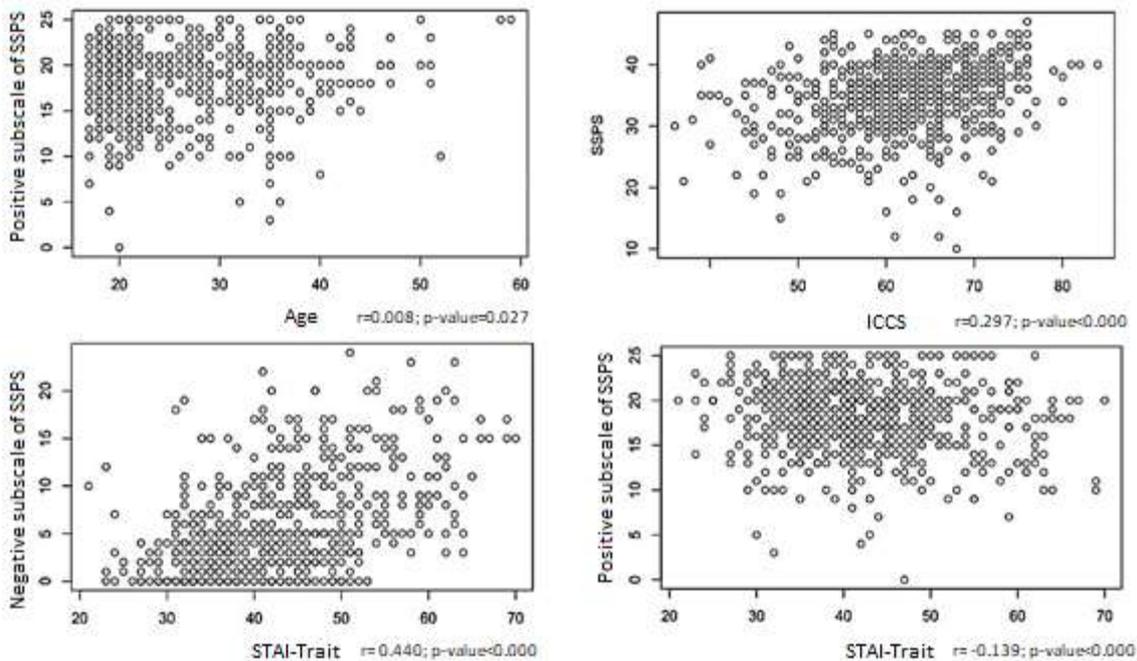
Instruments	SSPS	Mean	SD
5	Even if things do not go well, it is no catastrophe.	4.12	1.39
3	This is an awkward situation but I can handle it.	3.91	1.26
1	What do I have to lose its worth a try.	3.68	1.53
9	Instead of worrying I could concentrate on what I want to say.	3.52	1.46
6	I can handle everything.	2.92	1.46
7	What I say will probably sound stupid.	1.49	1.49
10	I feel awkward and dumb; they are bound to notice.	1.38	1.67
4	A failure in this situation would be more proof of my incapacity.	1.14	1.61
8	I will probably "bomb out" anyway.	1.03	1.46
2	I am a loser.	0.55	1.23

Source: Created by the authors.

As age increases, the notes of the positive subscale of the SSPS tend to increase. When the anxiety trait increases, the negative subscale of the self-assessment, when speaking in public, tends to be greater, and the positive subscale

tends to be smaller. The higher the competence in interpersonal communication, the better the self-assessment when speaking in public (Figure 1).

Figure 1 -Statistically significant correlations between age, ICCS and STAI-Trait with the SSPS scale.

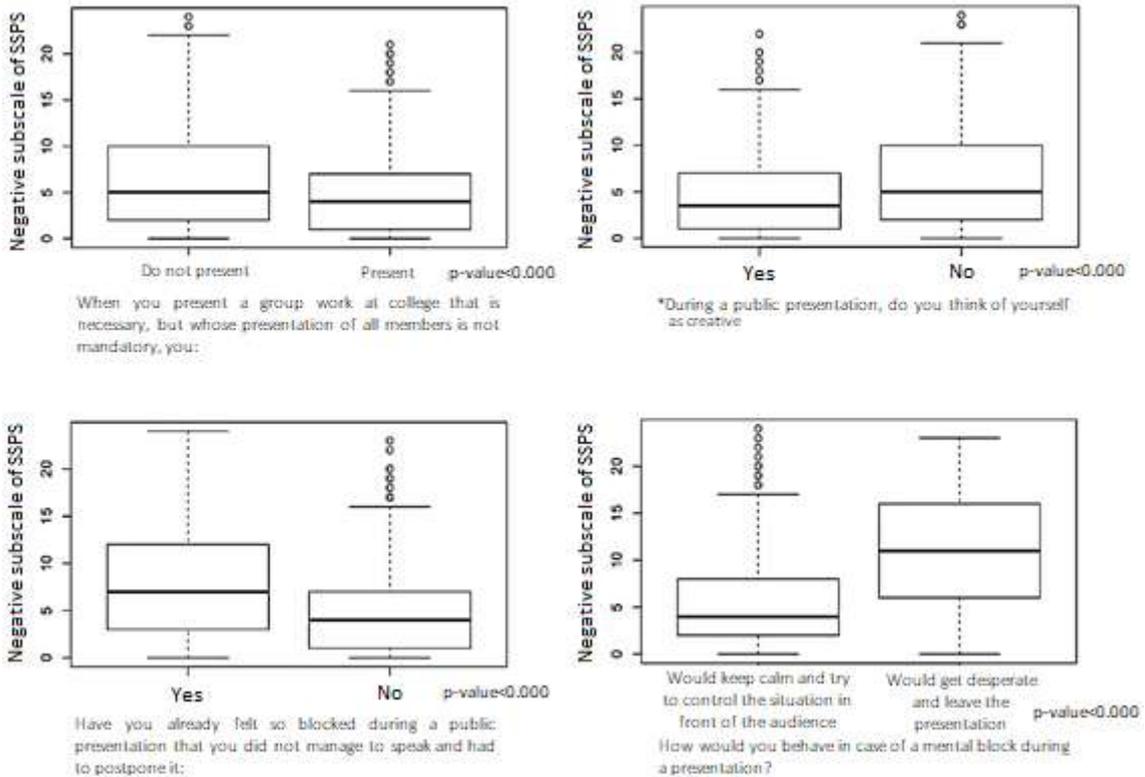


SSPS: Self-Statements during Public Speaking. ICCS:Interpersonal Communication Competence Scale. STAI-Trait: State-Trait Anxiety Inventory. r: Spearman Correlation ratio. p-value: level of significance. Spearman Correlation Test.

Those students who had not presented obligatory works with public presentation, who already felt blocked when speaking in public, who do not feel creative during an oratory and enter

into despair and would abandon the presentation, in case of mental block during a presentation, tend to have a higher note in the negative subscale of the SSPS (Figure 2).

Figure 2 -Statistically significant associations between variables with two categories with the SSPS scale.

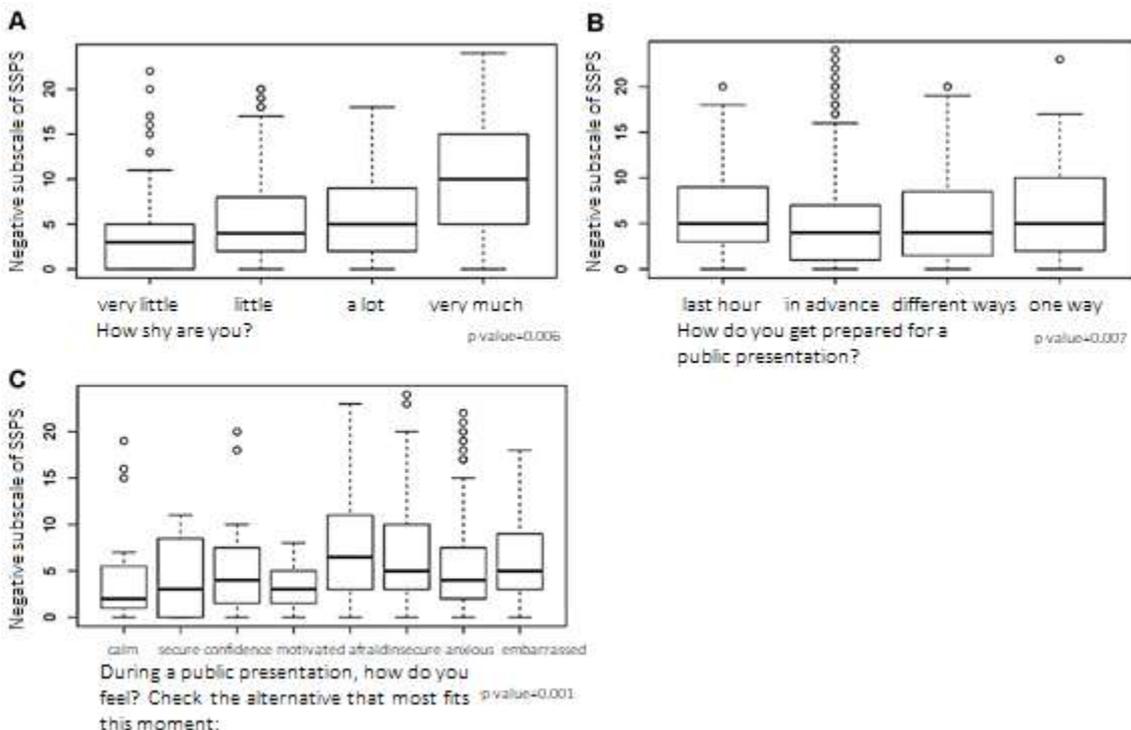


Kruskal-Wallis Test.

The more a person is considered timid, greater tends to be your note of negative subscale. Only there was no significant difference between those little and very shy and between those too and shy. Those who feel fear tend to have larger negative subscale notes that those

who feel anxiety. Those who prepare in advance tend to have smaller negative subscale notes that those who are preparing for the last time (Figure 3).

Figure 3 -Statistically significant associations between variables with three or more categories with the SSPS scale.



Kruskal-Wallis test. **A:** Bonferroni Test Result: very little versus a lot (p -value <0.000), very little versus very much (p -value <0.000), a little versus very much (p -value <0.000), a lot versus very much (p -value <0.000). **B:** Bonferroni Test Result: in advance versus last hour ($p=0.006$). **C:** Bonferroni Test Result: afraid versus anxiety (p -value <0.000).

DISCUSSION

The contributions of the present study relate to positive relationships of age with public speaking, because the older a person, the better their performance and competence in communicating publicly, as well as the better the interpersonal skills of an individual, the better their self-assessment and, consequently, more comfortable the person feels to speak publicly.

A Japanese study⁽¹⁵⁾ found that the fear of speaking in public tends to decrease with age, whose prevalence was associated with a 7.3% of Japanese adolescents, being higher among girls and associated with psychopathologies, such as: depression and anxiety, thoughts of suicide, deliberate self-injury, violence against objects and people and increased difficulties at school. These data reinforce the need not to minimize the importance of creating opportunities for overcoming fear to speak in public.

Another study on the prevalence of fear of speaking in public among students revealed 63.9% of this condition in the studied population and 89.3% of this plot would like their undergraduate program to include classes to improve public speaking. Furthermore, this fear is more prevalent among women, students who participate in few activities that involve talking with groups of people and those who have extreme perception of their voice, too high or low⁽¹⁶⁾.

This attention to the paralinguistic signs presents direct relationships with the ability in communication and indicates the need for training in order to raise awareness and reduce the frequency of fulfilled pauses, which occur during the public discourse ("uh", "um" or "er"), and the improper use of words that demonstrate nervousness ("like"), which can improve the communication of the individual and, consequently, their performance to speak in public⁽¹⁷⁻¹⁸⁾.

A before-after study, related to two models of courses on public speaking and their effects on the self-confidence, competence and apprehension, associated with public speaking, identified lower apprehension and increased feelings of confidence and competence in communication of undergraduate students, after the courses: one focused on knowledge of the

vocal mechanism and paralinguistic characteristics and another covering the general theory of communication and public speaking⁽¹⁹⁾.

The current study also reinforces the negative influence of anxiety when speaking in public, and corroborates similar results in the scientific literature⁽²⁰⁻²¹⁾. Researchers examined the reactivity of high-risk multisystem physiological stress in the context of public speaking, in university students. Saliva samples were tested for alpha-amylase, cortisol and interleukin-1 beta (IL-1 β). Self-reported anxiety of communication, social interaction, anxiety sensitivity to rejection and sex were evaluated as risk factors for greater reactivity to stress. The authors found that the alpha-amylase, salivary cortisol and IL-1 β changed significantly, after beginning the discourses. In addition, elevated levels of self-reported anxiety of communication and social interaction anxiety were independently associated with increased cortisol responses and IL-1 β and combined to increase the activity of the HPA axis and inflammatory cytokine. The authors concluded that the individuals with high fear of interaction and communication may present neuroendocrine and inflammatory responses, after exposure to social stressors, with unknown, and probably unhealthy, health consequences over time⁽²⁰⁾.

Stressful academic experiences can contribute to the onset of anxious and depressive disorders, impairing interpersonal relationships and the good performance of students at the university^(4,8,22,24). The presence of autonomic (tachycardia, facial flushing, shivering and sweating), behavioral (dodge, freezing and escape) and cognitive symptoms (negative evaluation and humiliation), during the academic presentations, are common and alarming⁽²⁴⁾.

Actually, anxiety is a natural reaction that encourages the human being to seek the goals. However, when this reaction is very intense, it may become dysfunctional and limiting, impairing the ability of adequacy and coping with everyday situations⁽²²⁾.

Anxiety when speaking in public can trigger negative feelings and directly affect the personal and academic life of students. Academic speech, in public presentations, can arouse fear and insecurity; complicating factors in these

situations are associated with the lack of skill in communication and absence of mastery of the subject, which predisposes to a negative self-assessment^(21,23-24).

The results of a study performed with nurses, master's students, showed that anxiety is the most frequent emotion in public presentations and that the possibility of discussion provides more positive factors, regarding public speaking, helping them overcome fear and control anxiety⁽²¹⁾. Another study conducted with nurses, also master's students, identified the anxiety as the most frequent emotion when speaking in public. Moreover, the authors highlighted that the planning, the mastery of content and speaking with clarity and objectivity were characteristics valued by the participants⁽⁵⁾.

Other relationships found in this study contribute to understanding the problem and constructing strategies to improve it. The students who would hardly volunteer to present works do not feel creative, have experienced situations of mental block, feel shy and afraid, are those who need aid, during graduation, to improve their skills in eloquence.

Characteristics of public speaking converging with other studies were: commitment and responsibility, cooperation and teamwork, ability to maintain good interpersonal relationships, communication skills, creativity and emotional self-control, and social skills are valued in the academic environment and contribute to the training of skills and qualification of future professionals⁽²⁵⁾.

The practice of alternating breathing, during 15 minutes in healthy young adults, who were already doing yoga, presented a potential anxiolytic effect in situations of acute stress, when compared to the control group that remained in a quiet room, before attending the simulation of public speech⁽²⁶⁾.

The preparation, training and the (self)knowledge are crucial to reduce anxiety and nervousness, during public speaking, in academic activities, manifested by shaky voice, panting and loss or reduction of the concentration. The lack of opportunities to develop oratory skills in students can lead to anxiety when speaking in public, and difficulties in interpersonal relationships in their future professional insertions⁽²⁷⁾.

However, the ability to administer failures in public speaking is an important factor, because individuals need to calmly deal with this situation

in order to enhance this ability⁽²⁸⁾. On the other hand, when one is young, failures in the process of public speaking have less negative effect to the image of the learning speaker, but, in professional life, can become barriers to professional growth, compromising positions hard won and stop professional trajectories in ascension⁽²⁾.

Faced with the need for training without exposure, researchers have studied different strategies^(27,29-30). An example is a study that aimed to reduce the excessive anxiety, in students, during oral exhibition in the classroom. For this reason, lecture and reading were employed, in addition to training in relaxation, breathing exercises, cognitive restructuring, social skills training with emphasis on public presentations, observing a considerable reduction in students' anxiety and an improved social-academic quality of life, even if the heart rate remains steady⁽²⁷⁾.

A Dutch study used a recorded audience, designed in actual size, and without soundtrack; the public was filmed in a classroom environment, guided to enter the room, occupy their places, look for the camera and behave in a neutral way. This strategy induced a moderate response to stress: the participants felt nervous, with increased heart rate, sweating in the hands, as well as an effect of anticipation and a substantial response of cortisol in 55% of the participants. Despite the stress response of students, this strategy can be positive because it does not represent a real audience and leave the participant more comfortable in training and in failure⁽²⁹⁾.

Other researchers have evaluated anxiety in students during public speaking, through a gradual exposure to 360° video recordings of a classroom, presenting three situations: empty classroom, with a small and a large audience. The levels of anxiety were measured before and after each session, during four weeks. There was a significant decrease in anxiety, after completing all training sessions, and the decrease was greater in participants with higher initial levels of anxiety⁽³⁰⁾.

Simulated situations may have a positive effect on the improvement of public speaking, even though the public discourse, in real situations, represents the most effective strategy to induce anxiety⁽³¹⁾. Thus, strategies that work real situations, at educational institutions, are suitable for developing students' communicative

skills. Therefore, reflecting and discussing the favorable or complicating factors in this process of learning skills since graduation can make the future professional's communication clear, effective and competent⁽³²⁻³³⁾.

The limitations of this study refer to the cross-sectional approach, which only allow for associations and does not establish causality; the sample collected at each HEI, which, according to the proposed associations, could have been higher; and the distribution of participants, which was not homogeneous in relation to the semesters of the undergraduate nursing course.

In conclusion, the present study provides strategic elements to induce institutional changes and teaching strategies employed by nursing professors in order to minimize the students' difficulties when performing academic activities related to public speaking and their self-assessment, in such oratory experiences, in the university environment and, therefore, contribute to the nurse's training.

CONCLUSION

There are positive correlations of age and competence in interpersonal communication with the positive self-assessment in public speaking. There was a negative correlation of anxiety trait with a positive self-assessment when exposing publicly.

In this study, there were significant associations of a negative self-assessment of public speaking with the situations: the student does not voluntarily present academic works, does not feel creative during a presentation, has already experienced a mental block, gets desperate in case of a mental block, is very shy, is afraid of this situation and does not prepare in advance.

REFERENCES

- 1-Lucas SE. A arte de falar em público. 11a edição. Porto Alegre: AMGH; 2014.
- 2-Polito R. Como falar corretamente e sem inibições. 111a ed. São Paulo: Saraiva; 2015.
- 3-Ferreira NG. O aperfeiçoamento da comunicação organizacional através da oratória [monografia]. Brasília: Centro Universitário de Brasília; 2014.
- 4-Bandeira M, Quaglia MAC. Habilidades sociais de estudantes universitários: Identificação de situações sociais significativas. *Interação Psicol.* 2005;9(1):45-55. DOI: 10.5380/psi.v9i1.3285

- 5-Faria MFG, Fernandes SG, Pirolo SM, Silva MJP. Public speaking: View from master's students in nursing. *RevEscEnfermUSP* 1998;32(1):59-66. DOI: 10.1590/s0080-62341998000100009
- 6-Ortiz JMS, Guerra NEB. Desarrollo de competencias comunicativas mediante la lectura, crítica, escritura creativa y expresión oral. *JournalEncuentros* 2015;1(13):117-41. DOI: 10.15665/re.v13i2.502
- 7-Fonseca JG, Pacini CA. Medo de falar em público em uma amostra da população: Prevalência, impacto no funcionamento pessoal e tratamento. *Psic Teor Pesqui.* 2005;21(2):237-42. DOI: 10.1590/S0102-37722005000200014
- 8-Carnegie D. Como falar em público e influenciar pessoas no mundo dos negócios. 8a ed. Rio de Janeiro: Record; 2010.
- 9-Ekman P. A linguagem das emoções. São Paulo: Leya; 2010.
- 10-Almeida AAF, Behlau M, Leite JR. Correlação entre ansiedade e performance comunicativa. *RevSocBrasFonoaudiol.* 2011;16 (4):384-89. DOI: 10.1590/S151680342011000400004
- 11-Osório FL, Crippa JAS, Loureiro SR. Escala para auto-avaliação ao falar em público (SSPS): Adaptação transcultural e consistência interna da versão brasileira. *RevPsiquiatr Clín.* 2008;35(6):207-11. DOI: 10.1590/S010160832008000600001
- 12-Lima GN, Kajiwara GA, Valadares MA, Grilo APS, Puggina AC. Relação entre a autoavaliação do falar em público e emoções que emergem durante visualização da sua própria performance. *Perspect Méd.* 2017; 28(3):38-9. DOI: 10.6006
- 13-Spielberger CD, Natalício L, Biaggio MA. Desenvolvimento da forma experimental em português do Inventário de Ansiedade Traço-Estado (IDATE). *ArqBrasPsicol Apl.* 1997[citado em 15 jan 2018];29(3):31-44. Available in: <http://bibliotecadigital.fgv.br/ojs/index.php/abpa/article/view/17827>
- 14-Puggina AC, Silva MJP. Interpersonal communication competence scale: Brazilian translation, validation and cultural adaptation. *Acta Paul Enferm.* 2014;27(2):108-14. DOI: 10.1590/1982-0194201400020
- 15-Furukawa TA, Watanabe N, Kinoshita Y, Kinoshita K, Sasaki T, Nishida A, et al. Public speaking fears and their correlates among 17,615 Japanese adolescents. *AsiaPacPsychiatry* 2014;6(1):99-104. DOI: 10.1111/j.1758-5872.2012.00184
- 16-Marinho AC F, Medeiros AM, Gama ACC, Teixeira LC. Fear of public speaking: Perception of

- college students and correlates. *J Voice* 2017;31(1):127.e7-e11. DOI: 10.1016/j.jvoice.2015.12.012
- 17-Spieler C, Miltenberger R. Using awareness training to decrease nervous habits during public speaking. *J Appl Behav Anal.* 2017;50(1):38-47. DOI: 10.1002/jaba.362
- 18-Mancuso C, Miltenberger RG. Using habit reversal to decrease filled pauses in public speaking. *J Appl Behav Anal.* 2016;49(1):188-92. DOI: 10.1002/jaba.267
- 19-Hancock AB, Stone MD, Brundage SB, Zeigler MT. Public speaking attitudes: does curriculum make a difference? *J Voice* 2010;24(3):302-7. DOI: 10.1016/j.jvoice.2008.09.007
- 20-Auer BJ, Calvi JL, Jordan NM, Schrader D, Byrd-Craven J. Communication and social interaction anxiety enhance interleukin-1 beta and cortisol reactivity during high-stakes public speaking. *Psychoneuroendocrinology* 2018;94:83-90. DOI: 10.1016/j.psyneuen.2018.05.011
- 21-Souza RASA. Aspectos da expressividade de universitários em situação de apresentação de seminários: Análise em pré e pós-intervenção fonoaudiológica [dissertação]. São Paulo: Pontifícia Universidade Católica; 2007.
- 22-Chaves ECL, Lunes DH, Moura CC, Carvalho LC, Silva AM, Carvalho EC. Anxiety and spirituality in university students: a cross-sectional study. *Rev Bras Enferm.* 2015;68(3):504-9. DOI: 10.1590/0034-7167.2015680318i
- 23-Marinho ACF, Medeiros AM, Gama ACC, Teixeira LC. Fear of public speaking: perception of college students and correlates. *J Voice* 2017;31(1):127-31. DOI: 10.1016/j.jvoice.2015.12.012
- 24-Figueiredo L郑, Barboza RV. Fobia social em estudantes universitários. *ConscientiaeSaúde* 2008;7(1):109-15. DOI: 10.5585/conssaude.v7i1.704
- 25-Souza DL, Zambalde AL. Desenvolvimento de competências e ambiente acadêmico: Um estudo em cursos de Administração de Minas Gerais, Brasil. *Rev Adm.* 2015;50(3):338-52. DOI: 10.5700/rausp1204
- 26-Kamath A, Urval RP, Shenoy AK. Effect of alternate nostril breathing exercise on experimentally induced anxiety in healthy volunteers using the simulated public speaking model: A randomized controlled pilot study. *Biomed Res Int.* 2017;2017:2450670. DOI: <https://doi.org/10.1155/2017/2450670>
- 27-Oliveira MA, Duarte ÂMM. Controle de respostas de ansiedade em universitários em situações de exposições orais. *Rev Bras Ter Comport Cogn.* 2004;6(2):183-99. DOI: 10.31505/rbtcc.v6i2.56
- 28-Bhana VM. Interpersonal skills development in generation y student nurses: A literature review. *Nurse Educ Today* 2014;34(12):1430-34. DOI: 10.1016/j.nedt.2014.05.002
- 29-Westenberg PM, Bokhorst CL, Miers AC, Sumter SR, Kallen VL, Van Pelt J, et al. A prepared speech in front of a pre-recorded audience: Subjective, physiological, and neuroendocrine responses to the Leiden Public Speaking Task. *Biol Psychol.* 2009;82(2):116-24. DOI: 10.1016/j.biopsycho.2009.06.005
- 30-Stupar-Rutenfrans S, Ketelaars LEH, Van Gisbergen MS. Beat the fear of public speaking: Mobile 360° video virtual reality exposure training in home environment reduces public speaking anxiety. *Cyberpsychol Behav Soc Netw.* 2017;20(10):624-33. DOI: 10.1089/cyber.2017.0174
- 31-Zuardi AW, Crippa JA, Hallak JE, Gorayeb R. Human experimental anxiety: Actual public speaking induces more intense physiological responses than simulated public speaking. *Braz J Psychiatry* 2013;35(3):248-53. DOI: 10.1590/1516-4446-2012-0930
- 32-Tejwani V, Ha D, Isada C. Public speaking anxiety in graduate medical education: A matter of interpersonal and communication skills? *J Grad Med Educ.* 2016;8(1):111. DOI: 10.4300/JGME-D-15-00500.1
- 33-Tarkowski R. Reflections: Improving medical students' presentation skills. *J Cancer Educ.* 2017;32:935-37. DOI: 10.1007/s13187-016-1005-6

Note: The research received no funding for its accomplishment. Article extracted from part of the dissertation "Public Speaking and Interpersonal Communication Competence of Nursing Students in the University Environment".

Received in: 16/07/2019
Approved in: 13/12/2019

Endereço de correspondência:

Alfredo Almeida Pina-Oliveira
 Teresa Cristina Square, 229 - Downtown.
 ZIP CODE: 07023-070 – Guarulhos/SP - Brazil
 E-mail: alfredo.almeida@prof.ung.br