Fear of Public Speaking: Perception of College Students and Correlates

Anna Carolina Ferreira Marinho, Adriane Mesquita de Medeiros, Ana Cristina Côrtes Gama, and Letícia Caldas Teixeira, *Belo Horizonte, Minas Gerais, Brazil*

Summary: Objectives. The aims of the study were to determine the prevalence of fear of public speaking among college students and to assess its association with sociodemographic variables and those related to the voice and oral communication.

Methods. A cross-sectional descriptive and analytic study was conducted with 1135 undergraduates aged 17–58 years. The assessment instruments were (1) a questionnaire addressing the variables sex, age, field of undergraduate study, voice, and frequency of exposure to public speaking, and (2) the Self-statements During Public Speaking Scale (SSPS), which includes variables implicated in specific domains of public speaking. A descriptive analysis was performed of the variables as well as uni- and multivariate logistic regressions to examine their association with fear of public speaking. The level of significance was set at 5%.

Results. In all, 63.9% of the college students reported fear of public speaking. As many as 89.3% of the students would like their undergraduate program to include classes to improve public speaking. Being female, having infrequent participation as speakers in groups, and perceiving their voice as high-pitched or too soft increase the odds of exhibiting fear of public speaking compared with students without those features.

Conclusion. A great number of undergraduates report fear of public speaking. This fear is more prevalent among women, students who participate in few activities involving speaking to groups of people, and those who have a self-perception of their voice as high-pitched or too soft.

Key Words: Speech-language pathology–Voice–Students–Speech–Fear.

INTRODUCTION

Public speaking is an act specific to oral communication that combines physiological, linguistic, psychological, and cultural factors.[1] Public-speaking competence is one of the determinants of professional success,[2] a strategic skill to gain a competitive edge, credibility, and a positive reputation.[3]

Thus, the communication exceeds the function of conveying information. The voice, the rhythm, and the expressiveness of the speech are valued when it comes to persuading the people.[4,5]

However, one of the barriers to the communication process is fear of public speaking—a type of anxiety prevalent in the general Brazilian population[6] as well as in other countries.[7–13]

Fear of speaking leads to communication impairments with an impact on the individual's personal, social, and emotional life.[5,14] The causes include lack of speaking practice, insufficient command of the topic, and/or a negative self-image.[12,13]

Among the sciences that study the subject, speech-language pathology assists individuals in building their communication skills and controlling their public-speaking anxiety.[5,8,13,15] However, if the fear of speaking becomes uncontrollable, psychological or psychiatric treatment is warranted.[4,10,16]

Focusing on how college students cope with their fear of speaking reveals that the context is even more challenging. Every year, millions of students are admitted to university. Their entry is marked by new challenges and the promise of a profession. Throughout their preparation years, undergraduates will be tackling tasks demanding intellectual achievement as well as public-speaking skills. In view of this, we wonder how students are facing this situation and how they are being prepared for the coming challenge of being judged by their competence distinguished based on their skills— including that of communicating proficiently.

We believe that an investigation of fear of public speaking among college students will raise the interest of the academic community in the importance of building public-speaking skills and assist in planning and enhancing programs and/or speech-language pathology consulting initiatives to that end.[15]

Accordingly, the aims of the present research study were to determine the prevalence of fear of public speaking among college students and to assess its association with sociodemographic variables and those related to the voice and oral communication.

METHODS

The present work, a cross-sectional descriptive and analytic study, was approved by the Research Ethics Committee under Technical Opinion No. 860.425.

In all, 1135 undergraduate students of an institution of higher education responded to a questionnaire concerning fear of public speaking. Of these, 765 were women and 360 men, with a majority of females (67.4%). Ages ranged from 17 to 58 years (mean, 23.2 years). The study was composed of 70 undergraduate programs of the university, with 34.3% of the college students enrolled in health sciences programs, 35.3% in humanities, 26.4% in exact sciences, and 4% in fine arts.

Accepted for publication December 21, 2015.

From the Department Speech-language Pathology and Audiology, Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Minas Gerais, Brazil

Address correspondence and reprint requests to Anna Carolina Ferreira Marinho, Department Speech-language Pathology and Audiology, Universidade Federal de Minas Gerais (UFMG), Av. Professor Alfredo Balena, 190, Belo Horizonte, MG 30130-100, Brazil. E-mail: anna.marinho9@gmail.com; lcaldas4@gmail.com

Journal of Voice, Vol. 31, No. 1, pp. 127.e7–127.e11

0892-1997

http://dx.doi.org/10.1016/j.jvoice.2015.12.012

Assessment instrument

The research questionnaire was a dedicated self-report instrument developed by the investigators. It consists of two parts. The first comprises 12 questions concerning the student's age, sex, presence/absence of stuttering, field of undergraduate study, self-perception of voice, influence of voice on fear of public speaking, participation in activities requiring public speaking, and level of interest in speech-language training for speaking in public. All those questions elicited "yes" or "no" answers. For the item addressing the student's self-perception of the voice, they should select how they rated their voices among the following choices: adequate, hoarse, high-pitched, soft, deep, or nasal. The self-rated voice was considered positive when the participants regarded it as adequate, and negative when another description was chosen. The terms used were easily identified by the general public. The second part consisted of the Self-statements During Public Speaking Scale (SSPS),[12] a self-report measure adapted for Brazilian Portuguese.[11] This protocol relies on the cognitive theories postulating that social anxiety is the result of one's negative perception of oneself and of others regarding one. The scale includes 10 questions and 2 subscales: one of positive self-statements (items 1, 3, 5, 6, and 9) and the other of negative self-statements (items 2, 4, 7, 8, and 10) based on a scale of 0 (totally disagree) to 5 (totally agree) points. The maximum total score is 50 points, obtained by the summation of the 10 items of the measure, considering that the scoring of the negative subscale should be reversed as proposed by the Brazilian group.[12] Thus, the closer a score is to 50, the greater the positive evaluation and the less negative; conversely, the lower the total score, the more negative the student self-rates in the public-speaking situation. According to the mean data of the validation study,[11] the values obtained for college students were 22 for the total score, 17.32 for the positive scale, and 5.08 for the negative scale.

The questionnaire and the informed consent form were sent online, only once, to the students on the undergraduate campus of the university using the *SurveyMonkey* software. The data were gathered during 4 months. The inclusion criteria were: to be an undergraduate student enrolled in the institution of higher education in the field of arts, exact sciences, humanities, or health, regardless of ethnicity, sex, or age. Students were excluded from the study if they self-reported stuttering or failed to complete the assessment measures. A pilot study was previously administered to 10 volunteers to verify the correct understanding of the instrument. All the questions were deemed applicable because the volunteers had no difficulty answering the questionnaire. The participants spent 5 minutes on average to answer the questions.

Data analysis

The data were stored on a digital database and were subsequently analyzed. The response variable was fear of public speaking and the explanatory variables were sex, age, field of undergraduate study, influence of voice on fear of speaking, self-perception of voice, and participation in activities involving speaking to an audience. The statistical analysis was done based on the description of the self-perceived voice features and the interest in speech-language lessons for public-speaking improvement. The analysis of variance test was used to compare the scores of the protocol SSPS in relation to the students' sex. The analysis of the correlates of fear of public speaking considering other variables was done using Pearson chi-squared test. The variables with statistically significant associations ($P \leq 0.05$) were included in the multivariate logistic regression model. The magnitude of association for each variable taken separately with the response variable was assessed through odds ratios. The variables that sustained an association were retained in the final model. The level of statistical significance was set at 5% across tests. The Statistical Package for the Social Sciences, version 20, and the STATA, version 12.0 (Intercooled, Stata Corporation, Texas, USA) software were used for the analyses.

RESULTS

As many as 63.9% of the undergraduates reported fear of public speaking. Table 1 shows a statistically significant association between the fear of public speaking to the variables: female gender, negative vocal self-perception, no influence of voice in fear and little participation in public-speaking activities. The groups with and without fear of public speaking did not differ in age and field of study.

Regarding the association between sex and SSPS scores, it was found that women had more negative self-statements than men (Table 2).

The descriptive analysis of the students' perception of their own voice and of their interest in the inclusion of speech-language training in the curriculum is shown in Table 3. Negative self-perceptions of the voice were more frequent for high-pitched and soft voice features (Table 3). Of the college students, 89.3% would like their undergraduate program to include classes for improvement of their public-speaking skills.

All the variables revealing an association in the bivariate analysis were retained in the final multivariate model (Table 4). Being a female and perceiving that the voice influenced public-speaking fear nearly doubled the likelihood of reporting fear of public speaking when compared with being a male and not acknowledging the influence of the voice, respectively. Negative self-perceptions of the voice increased by 53% the odds of a student reporting public speaking fear compared to those who perceived their voice as adequate. As expected, the association of fear of speaking in public with scarce participation in activities of public speaking was strong.

DISCUSSION

A great number of college students reported fear of public speaking. In the corporate world, oral communication is a critical tool for professional survival. Large companies value it and welcome job applicants who, among other skills, are capable of speaking competently in public.[4,17] Public speaking is considered an anxiety-generating factor that leads to fear and has a negative impact on personal and academic achievement.[6,16,18,19]

In the United States population, speaking in public is considered one of the most fear-generating activities.[7–9] This is no different among Brazilians: a study showed that fear of public speaking afflicted 32% of the population of the largest Brazilian capital.[6] In the present study, the majority of the sample

TABLE 1.
Association of Fear of Public Speaking with the Variables Sex, Age, Field of Study, Influence of Voice, Self-perception of Voice, and Participation in Activities Involving Public Speaking (n = 1135)

	Fear of Public Speaking				
	No		Yes		
Variables	n	%	n	%	*P* Value
Sex					
Male	171	41.6	199	27.5	
Female	240	58.4	525	72.5	<0.001*
Age (years)					
17–21	176	42.8	331	45.7	
22–26	168	40.9	283	39.1	
27–31	32	7.8	61	8.4	0.255
32–58	35	8.5	49	6.8	
Field of study					
Health	243	44.4	142	34.0	
Exact sciences	188	29.6	114	26.7	0.702
Humanities	261	23.2	139	35.2	
Arts	32	2.8	14	4.1	
Influence of voice on fear of speaking					
No	327	79.6	464	64.1	
Yes	84	20.4	260	35.9	<0.001*
Self-perception of voice					
Positive	191	46.5	227	31.3	
Negative	220	53.5	497	68.7	0.001*
Participation in activities of public speaking					
Frequent	159	38.7	110	15.2	<0.001
Rare	252	61.3	614	84.8	

* *P* value ≤ 0.05; Pearson chi-squared test.

(63.9%) experienced fear of public speaking—a greater percentage than that found in the aforementioned study.

Percentually, fear of speaking to an audience was more prevalent among females, as noted in other studies.[6,20] Some studies note that fear of public speaking is independent of sex, ethnicity, and age; yet in some cases, it has been more associated with females.[20–22] There was no significant association of the variables age and field of undergraduate study with public-speaking fear. We believe that fear of speaking afflicts individuals regardless of their age or profession. According to the literature, accumulated experience and enhanced ability to deal with public-speaking situations can minimize negative impacts on communication.[13]

Current studies on voice have increasingly encouraged taking into account the subjects' self-rating of their voice.[23–28] In our study, we found that most students do not relate their voice quality to fear of public speaking; nevertheless, the data analysis showed an association between students with negative self-perceptions of their voice and public-speaking fear. The predominant negative terms used by the undergraduates to refer to their self-perceived voice were: high-pitched and soft. The literature indicates that limited loudness—ie, lack of voice volume—suggests insecurity, fear, and introversion when speaking.[29,30] If the voice is too high, this could imply that the speaker is childish or frail,[30] in addition to somewhat immature psychologically, which could contribute to an impression of naïvety produced on

TABLE 2.
Comparison of the Variable Sex with the Scores of the "Self-statement During Public Speaking Scale"

	Total Score		Positive Score		Negative Score	
Variables	Female	Male	Female	Male	Female	Male
Mean	26.18	25.96	16.27	17.20	9.92	8.76
Minimum	1	6	0	5	0	0
Maximum	49	47	25	25	25	26
SD	7.38	7.16	4.75	4.06	6.72	6.39
P value	0.646		0.001*		0.006*	

* *P* < 0.05; analysis of variance.
Abbreviation: SD, standard deviation.

TABLE 3.
Characterization of the Self-perception of Voice and Interest in Speech-language Training in the Curriculum (N = 1135)

	N	%
Self-perception of voice		
Positive		
Adequate	418	36.8
Negative		
Hoarse voice	27	2.4
High-pitched voice	340	30.0
Soft voice	210	18.5
Deep voice	56	4.9
Nasal voice	84	7.4
Interest in speech-language training		
Yes	1014	89.3
No	121	10.7

Notes: N: number of cases; %: frequency.

the listener with regard to the speaker.[30] Recent studies have indicated that a low-pitched voice is charismatic, that is, a more widely accepted voice compared with a high voice when it comes to influencing and persuading the listener.[31,32]

In regard to the association of participation in activities of public speaking with the presence of speaking anxiety, the data suggest that college students who take part in many oral presentation activities exhibited significantly less fear than those reluctant to speak to an audience. The literature confirms that lack of experience accounts for increased fear of speaking, which is inherent to an unknown situation.[4,6,10,32,33]

TABLE 4.
Multivariate Analysis of the Association Between Fear of Public Speaking and the Variables Sex, Influence of Voice, Self-perception of Voice, and Participation in Activities Involving Public Speaking

	Fear of Public Speaking	
Variable	OR	95% CI
Sex		
Male		1.0
Female	1.95	1.49–2.56
Influence of voice on fear of speaking		
No		1.0
Yes	1.93	1.39–2.65
Self-perception of voice		
Positive		1.0
Negative	1.53	1.16–2.02
Participation in public-speaking activities		
Frequent		1.0
Rare	3.41	2.56–4.53

Note: Logistic regression.
Abbreviations: 95% CI, 95% confidence interval; OR, odds ratio.

A difference was found between sexes in the SSPS scores. Women had a higher mean negative score, whereas men scored better on the positive self-statements. This indicates that public speaking is a more challenging situation for women, presumably because they perceive more negative elements in their communication.[34]

Regarding the students' interest in public-speaking training (Table 3), it was found that 89.3% of them would appreciate such an addition to their curriculum. A study shows that after a basic communication course, college students displayed a significant reduction in their anxiety when speaking to an audience, as well as improved communication competence by the end of the course, thereby becoming more confident and less anxious in their overall communication.[35]

In light of the above data, we emphasize that universities should acknowledge the importance of public speaking during the graduation of students. Public speaking is a topic of social and scientific relevance, and further studies are warranted, which should focus on fear of public speaking with other populations.

CONCLUSION

Fear of public speaking is a prevalent subtype of anxiety among college students. It occurs more frequently in women, in students who rarely participate in activities involving speaking to audiences, and in those who have a negative self-perception of their voice and characterize it as high-pitched or soft. Most college students appreciate and are interested in having classes for public speaking in their university curriculum.

REFERENCES

1. Blikstein I. *Como falar em público: Técnicas de comunicação para apresentações*. 1ª ed. São Paulo: Ática; 2010:10–57.
2. Martins MTMC, Fortes WG. A expressividade da comunicação oral e sua influência no meio corporativo. *Rev Commun*. 2008;8:139–148.
3. Marquezin DMSS, Viola IG, Moura ACA, et al. Expressividade da fala de executivos: análise de aspectos perceptivos e acústicos da dinâmica vocal. *Codas*. 2015;27:160–169.
4. Lucas SE. *A Arte de Falar em Público*. Rio de Janeiro: LTC Editora S.A; 2003:Falando em Público:1–21.
5. Behlau M, Feijó D, Madazio M, et al. Voz profissional: aspectos gerais e atuação fonoaudiológica. In: Behlau M, ed. *Voz: O Livro do Especialista*. Rio de Janeiro: Revinter; 2005:v.2:288–343.
6. D'El Rey GJF, Pacini CA. *Medo de Falar ao Público em uma Amostra de População: Prevalência, Impacto no Funcionamento Pessoal e Tratamento*. Psicologia: Teoria e Pesquisa; 2005:21(2):237–242 .
7. Bodie GD. 2010. A racing heart, rattling knees, and ruminative thoughts: defining, explaining, and treating public speaking anxiety.
8. Breakey LK. Fear of public speaking—the role of the SLP. *Semin Speech Lang*. 2005;26:107–117.
9. McCroskey J. *An Introduction to Rhetorical Communication*. 4th ed. Englewood Cliffs, NJ: Prentice-Hall; 1982.
10. Botella C, Baños RM, Perpiñá C. *Fobia social: avances em la psicopatología, la evaluación y el tratamiento psicológico del transtorno de ansiedad social*. Barcelona: Paidós; 2003.
11. Osório FI, Crippa JA, Loureiro SR. Escala para auto avaliação ao falar em público (SSPS): Adaptação transcultural e consistência interna da versão brasileira. *Ver Psiq Clin*. 2008;35:207–211.
12. Hofmann SG, DiBartolo PM. An instrument to assess self-statements durin public speaking: scale development and preliminary psychometric properties. *Behav Ther*. 2000;31:499–515.
13. Goberman AM, Hughes S, Haydock T. Acoustic characteristics of public speaking: anxiety and practice effects. *Speech Comun*. 2011;53:867–876.

14. McCroskey J, McCroskey L. Self-report as an approach to measuring communication competence. *Commun Rep*. 1988;5:108–113.
15. Hancock AB, Stone MD, Brundage SB, et al. Public speaking attitudes: does curriculum make a difference? *J Voice*. 2010;24:302–307.
16. Osório FL, Crippa JA, Loureiro SR. Instrumentos de avaliação do transtorno de ansiedade social. *Rev Psiq Clin*. 2005;32:73–83.
17. Mercatelli C. Expressividade e Relações Públicas. In: Kyrillos LR, ed. *Expressividade: Da teoria à prática*. Rio de Janeiro: Revinter; 2005:238–254.
18. Kessler RC, Stein MB, Berglund P. Social phobia subtypes in the national comorbidity survey. *Am J Psychiatry*. 1998;155:613–619.
19. D'El Rey GJF. Fobial Social: Mais do que uma simples timidez. *Arq Cienc Saúde Unipar*. 2001;5:273–276.
20. Stein MB, Walker JR, Forde DR. Public-speaking fears in a community sample. *Arch Gen Psychiatry*. 1996;53:169–174.
21. Geer JH. The development of a scale to measure fear. *Behav Res Ther*. 1965;3:416–424.
22. Furmark T, Tillfors M, Everez P, et al. Social phobia in the general population: prevalence and sociodemographic profile. *Soc Psychiatry Psychiatr Epidemiol*. 1999;34:416–424.
23. Spina AL, Maunsell R, Sandalo K, et al. Correlação da qualidade de vida e voz com atividade profissional. *Braz J Otorhinolaryngol*. 2009;75:275–279.
24. Padovani MMP. Medidas perceptivo-auditivas e acústicas de voz e fala e auto avaliação da comunicação das disartrias. *Rev Soc Bras Fonoaudiol*. 2011;16:375–379.
25. Hanschmann H, Lohmann A, Berger R. Comparison of subjectives assessment of voice disorders and objective voice measurement. *Folia Phoniatr Logop*. 2011;63:83–87.
26. Costa CB, Costa LHC, Oliveira G, et al. Efeitos imediatos do exercício defonação no canudo. *Braz J Otorhinolaryngol*. 2011;77:461.
27. Eadie TL, Kapsner M, Rosenzweig J, et al. The role of experience on judgments of dysphonia. *J Voice*. 2010;24:564–573.
28. Holmberg EB, Oates J, Dacakis G, et al. Phonetograms, aerodynamic measurements, self-evaluations, and auditory perceptual ratings of male-to-female transsexual voice. *J Voice*. 2010;24:511–522.
29. Santos AAL, Pereira EC, Marcolino J, et al. Autopercepção e qualidade vocal de estudantes de jornalismo. *Rev CEFAC*. 2014;16:566–572.
30. Behlau M, Madazio G, Feijó D, et al. Avaliação de Voz. In: Behlau M, ed. *Voz—O Livro do Especialista I*. Rio de Janeiro: Revinter; 2001:85–245.
31. D'Errico F, Signorello R, Poggi I. Le dimensioni del carisma. Italy: IX Convegno Annuale dell' Associazione Italiana di Scienze Cognitive; 2012:245–252.
32. Klostad C, Anderson R, Peters S. Sounds like a winner: voice pitch influences perception of leadership capacity in both men and women. *Proc Biol Sci*. 2012;279:2698–2704.
33. Polito R. *Vença o Medo de Falar em Público*. São Paulo: Saraiva; 2005:Entenda Melhor o Mecanismo do Medo:26–30.
34. Ugulino ACN. Auto avaliação do comportamento comunicativo ao falar em público nas diferentes categorias profissionais [tese]. São Paulo: Universidade Federal de São Paulo; 2014.
35. Rubin RB, Rubim AM, Jordan FF. Effects of instruction on communication apprehension and communication competence. *Commun Educ*. 1997;46:104–114.