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Artigo Original

Anna Carolina Ferreira Marinho[1]
Adriane Mesquita de Medeiros[1]
Júlia Janssen Pantuza[1]
Letícia Caldas Teixeira[1]

Self-perception of shyness and its relation to aspects of public speaking

Autopercepção de timidez e sua relação com aspectos da fala em público

Keywords

Voice
Speech Therapy
Shyness
Non-Verbal Communication
Fear

ABSTRACT

Purpose: To determine the prevalence of shyness in university students and to analyze among the sociodemographic and public communication factors, those that are most related to their presence. **Method:** A cross-sectional analytical study was carried out with 1124 university students aged between 17 and 63 years old. It was used a questionnaire with questions related to sociodemographic characteristics; frequency of participation in public speaking activities; self-report of fear of speaking; self-perception of non-verbal aspects of oral communication: tone of voice, speed of speech, voice intensity, vocal projection, eye contact with the audience during the speech, use hands in public presentations; self-assessment of public speaking (Scale for Self-Assessment in Public Speaking) and self-perception of shyness (Revised Shyness Scale). The analysis of factors associated with shyness and with the other variables was performed by Pearson's chi-square test and univariate and multivariate logistic regression. The level of significance adopted was 5%. **Results:** The majority of the university population self-reported traces of shyness and fear of speaking in public. There was an association of shyness with the age of 17 to 30 years, fear of speaking in public, little participation in public speaking activities, negative self-perception of speech and with non-verbal communication aspects. **Conclusion:** Shyness is prevalent in young university students, who participate in few public speaking activities, who are afraid to speak in public, self-report speaking at low intensity and who are unable to use their hands naturally during public presentations.

Descritores

Voz
Fonoaudiologia
Timidez
Comunicação Não Verbal
Medo

RESUMO

Objetivo: Determinar a prevalência da timidez em estudantes universitários e analisar dentre os fatores sociodemográficos e da comunicação em público, aqueles que mais se relacionam com sua presença. **Método:** estudo transversal analítico realizado com 1124 universitários com idade entre 17 e 63 anos. Utilizou-se um questionário com perguntas referentes às características sociodemográficas; frequência de participação em atividades de fala em público, autorrelato do medo de falar, autopercepção dos aspectos não verbais da comunicação oral: tom de voz, velocidade de fala, intensidade de voz, projeção vocal, contato visual com a plateia durante o discurso, uso das mãos nas apresentações em público; autoavaliação da fala em público (Escala para Auto Avaliação ao Falar em Público) e autopercepção da timidez (Escala Revisada de Timidez). A análise dos fatores associados à timidez com as demais variáveis foi realizada por meio do teste Qui-quadrado de Pearson e regressão logística uni e multivariada. O nível de significância adotado foi de 5%. **Resultados:** a maioria da população universitária autorreferiu traços de timidez e medo de falar em público. Houve associação da timidez com a idade de 17 a 30 anos, medo de falar em público, pouca participação em atividades de fala em público, autopercepção negativa da fala e com aspectos não verbais da comunicação. **Conclusão:** A timidez é prevalente em estudantes universitários jovens, que participam de poucas atividades de fala em público, que apresentam medo de falar em público, autorrelatam falar em intensidade baixa e apresentam inabilidade de usar as mãos com naturalidade durante apresentações em público.

Correspondence address:
Anna Carolina Ferreira Marinho.
Av. Professor Alfredo Balena, 190, sala 251, Santa Efigênia,
Belo Horizonte (MG), Brasil.
CEP: 30.130-100
E-mail: anna.marinho9@gmail.com

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[1] Universidade Federal de Minas Gerais – UFMG – Belo Horizonte (MG), Brasil.

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INTRODUCTION

Shyness is considered a common trait of the human personality[1-4], manifested by somatic, cognitive and behavioral symptoms[2-5]. Its prevalence in the world population is 70%[1,2] and is not considered a pathology[1,2,5].

People who are shy when speak in public often have somatic symptoms, such as facial flushing, tremors, palpitations and dry mouth1,4. Cognitive symptoms that relate to the anticipation of negative evaluation by the other in social situations and present behaviors of inhibition, withdrawal and avoidance of social situations, including public speaking[1,4,5,6].

A survey of 399 Chinese university students, aged between 18 and 30 years, analyzed the relationship between shyness, social support and self-esteem. It was found that shy university students have a more negative self-assessment of themselves than non-shy ones[6]. Another study concluded that shy students participate less in activities in public, are less likely to voluntary contributions and feel more inhibited than non-shy students[7].

During public speaking, the non-verbal aspects observed by the voice, speech rate, gestures or facial expressions directly influence the speech[8,9] and provide meaning to what is said[9-12]. On the other hand, research shows that shyness reduces the expressiveness of public speech[13]. Shy individuals generally present altered non-verbal aspects of communication, such as lack of voice projection, reduced voice volume, accelerated speech speed, lack of eye contact with the interlocutor, use restrained, withdrawn gestures and tense posture[5,13,14].

Accordingly, we believe that exploring the influence of this trait of human personality on the self-perception of communication in public will broaden knowledge and underpin systematic research on shyness and public speaking. And by means of scientific evidence, it will indicate which aspects related to oral communication and expressiveness need to be subsidized in speech therapy services.

Therefore, the objectives of this study were to determine the prevalence of shyness in university students and to analyze among the sociodemographic and public communication factors, those that are most related to their presence.

METHOD

An analytical cross-sectional study approved by the Research Ethics Committee (CEP), under the number 1,619,724 / 2016. 1124 undergraduate students from a Brazilian higher education institution participated.

Research instruments

A self-administered questionnaire developed by the researchers and consisting of three parts was used. The first contained questions regarding the sociodemographic characteristics age, sex, reference to being stutterers or not, university graduation course, area of concentration of the course, a question about frequency of participation in public speaking activities (little or much) and about the self-report of the presence of fear of public speaking (no, yes). There were also questions regarding non-verbal aspects of public speaking, such as the self-perception of the voice tone (suitable for sex and age, low or high), speech rate (adequate, fast or slow), voice intensity (adequate, strong or weak), eye contact with the audience (never / almost never, always / often) and use of hands in public presentations (you do not know where to put your hands or use your hands naturally during the speech).

The second part consisted of the self-applicable protocol "Scale for Self-Assessment when Speaking in Public-SSPS"[15], based on cognitive theories that assume that social anxiety is the result of a negative perception of oneself and others in relation to oneself. The protocol consists of ten questions and two subscales, one with a positive self-assessment (items 1, 3, 5, 6 and 9) and the other with a negative self-assessment (items 2,4, 7, 8 and 10), answered on a scale of zero (totally disagree) to five (totally agree) points. The maximum total score is 50 points, obtained by the sum of the ten items of the protocol, and the negative subscale score must be inverted.16 In the present study, the median, with value of 32 points, was used as a cut-off point to identify positive or negative self-assessment of public speaking, university students who scored below the median were classified with negative self-assessment and those who obtained am a score equal to or greater than 32 points, with positive self-assessment when speaking in public.

The third part consisted of the Revised Shyness Scale[17], a protocol with thirteen questions about communicative behaviors related to everyday situations, answered on a scale from one (strongly disagree) to five (totally agree). The maximum score is 65 points and the minimum is 13 points. To measure the "shyness" variable, the 34 cutoff point proposed by the instrument was used. Participants who scored below score 34 were classified as not shy and those who obtained a score equal to or greater than 34 points were considered shy.

Research procedures

The questionnaire and the Free and Informed Consent Form (ICF) were sent online to the students only once, using the *SurveyMonkey* tool. Data collection lasted two months. The inclusion criterion was to be a graduate student (of any ethnicity, sex and age) enrolled at the higher education institution. Students who self-reported stuttering, those who incompletely filled out the assessment instruments, students in the speech therapy, psychology and graduate students were excluded from the research. A pilot study was previously applied to ten individuals to observe the understanding of the instrument. The time to complete the questionnaire ranged from 5 to 15 minutes and all questions were considered applicable.

Data analysis

The information obtained in the data collection was allocated in a digital database and analyzed later. The response variable was shyness and explanatory variables, sex, age, fear of speaking in public, frequency and self-perception of public speech and self-perception of non-verbal aspects of oral communication, such as tone of voice, speech speed, voice intensity, vocal projection, eye contact with the audience during the speech and use of hands in public presentations. A descriptive analysis of the studied variables was performed. The analysis of the factors

associated with shyness with the other variables was performed initially using Pearson's chi-square test and univariate logistic regression. Then, the variables with a statistically significant association ($p \leq 0.020$) were included in the multivariate logistic regression model. Variables with $p \leq 0.05$ remained in the final multivariate model. In this analysis, the magnitude of association of each variable, independently, with the response variable, was measured by the Odds ratio with the 95% confidence interval. The level of significance adopted was 5% for all tests. Statistical Package for the Social Sciences (SPSS), version 20, and Intercooled, Stata Coorporation, Texas, United States (STATA, version 12.0) were used.

RESULTS

Table 1 shows the frequency of sociodemographic variables, the result of self-assessment of public speaking, self-perception of shyness and fear of speaking in public. The sample consisted of a majority of female university students, aged between 21 and 25 years, enrolled in the Human Sciences teaching area, attending the third period of graduation, with positive self-perception to speak in public, self-report of shyness and fear of public speaking.

Table 1. Sociodemographic characteristics, public self-assessment of speech, shyness and fear of self-reported public speaking (n=1124)

Variables	N	%
Gender		
Female	726	64.6
Male	398	35.4
Age group		
17-20 years	297	26.4
21-25 years	484	43.1
26-30 years	180	16.0
31-63 years	163	14.5
Area of concentration of the course		
Human sciences	399	35.5
Health area	376	33.5
Exact sciences	299	26.6
Arts	50	4.4
Graduation period		
1st-3rd period	356	31.7
4th-6th period	314	27.9
7th-9th period	290	25.8
10th-12th period	164	14.6
Self-assessment when speaking (SSPS)		
Negative	528	47.0
Positive	596	53.0
Shyness		
No	333	29.7
Yes	791	70.3
Fear of speaking		
No	330	29.4
Yes	794	70.6

N=number of cases, %=frequency

Table 2 shows that there were an association in the univariate analysis of the group of students who self-reported shy with age, self-perception of fear of speaking in public, frequency and self-assessment of public speaking. Shyness was also associated with non-verbal aspects of oral communication: intensity of voice, speed of speech, eye contact with the audience and use of hands during presentations. In this analysis, shyness was associated with the 17 to 30 age group, self-reported fear of public speaking, little participation in public speaking activities, negative self-assessment of speech, weak voice intensity, accelerated speech speed, lack of eye contact with the audience and use of hands during oral presentations. The group of shy students didn't show difference from non-shy students in terms of sex and tone of voice.

Table 2. Univariate association of shyness with sociodemographic variables, fear of speaking, frequency and self-assessment of speech, aspects of oral communication in public (n=1124)

		Shyness		
Shyness		**p-valor**	**OR**	**IC (95%)**
Gender	Male	0.215		1.0
	Female		1.18	0.90-1.54
Age Group	17-20 years			1.0
	21-25 years	0.0013	0.93	0.67-1.28
	26-30 years		1.14	0.75-1.75
	31-63 years		0.58	0.38-1.40
Fear of speaking	No			1.0
	Yes	0.001	8.72	6.51-11.69
Public Speaking Frequency	Little			1.0
	Much	<0.001	0.35	0.26-0.46
Self-assesment when speaking (SSPS)	Negative			1.0
	Positive	0.001	0.63	0.49-0.82
Voice tone	Adequate	0.162		1.0
	High		1.00	0.64-1.58
	Low		0.059	0.99-2.15
Speed of speech	Adequate			1.0
	Fast	0.003	2.39	1.34- 4.03
	Slow		1.26	0.96-1.65

Table 2. Continuation...

Shyness				
Shyness		**p-valor**	**OR**	**IC (95%)**
Vocal intensity	Adequate			1.0
	Weak	<0.001	2.88	2.01-4.15
	Strong		0.87	0.60-1.13
Use of hands	Dont uses naturally			1.0
	Uses naturally	<0.001	0.24	0.19-0.32
Visual contact	Never/almost never			1.0
	Always/ frequently	<0.001	0.31	0.22-0.41

Pearson´s chi-squared test, p-valor ≤0.020, OR= Odds ratio, IC= confidence interval

In the final multivariable model (Table 3), it was found that the variables age, fear of public speaking, frequency of participation in public speaking activities, vocal intensity and use of hands in the presentations were maintained with statistical significance. The chance of perceiving yourself as shy is reduced among people aged 30 to 63 years, when participating in many public speaking activities and having the ability to use their hands naturally in oral presentations. In contrast, self-reporting fear of public speaking and weak voice intensity increase the chance of perceiving yourself as shy.

Table 3. Multivariate analysis of the association between shyness and the variables: age, fear of public speaking, public speaking frequency, voice intensity, hand use (n =1124)

Shyness				
Variable		**p-valor**	**OR**	**IC (95%)**
Age Group	17-20 years			1.0
	21-25 years	0.463	0.87	0.60-1.26
	26-30 years	0.680	0.90	0.55-1.46
	31-63 years	0.007	0.52	0.33-0.84
Fear of speaking	No			1.0
	Yes	<0.001	5.77	4.17-8.00
Public Speaking Frequency	Little			1.0
	Much	0.014	0.68	0.49-0.92
Vocal intensity	Adequate			1.0
	Weak	<0.001	2.06	1.37-3.08
	Strong	0.935	1.02	0.71-1.45
Use of hands	Dont uses naturally		0.52	1.0
	Uses naturally	<0.001		0.37-0.71

p-valor ≤0.050, OR= Odds ratio, IC= confidence interval

DISCUSSION

The present study, with a probabilistic sample, allowed to identify the self-perception of the characteristics of public communication in university students and brought important elements to be considered by public speaking consultants, mainly of people who consider themselves shy, a common trait of human personality which is found in the population, with no prevalence between genders[3,4,18].

As for self-assessment of public speaking, shy people perceived themselves more negatively. Shy people tend to have negative perceptions about themselves and often believe that the interlocutors will make a negative assessment of them4, especially in unknown social situations[7].

As for the self-perception of non-verbal aspects of communication, rapid speech speed and lack of eye contact were associated with shyness. When speaking in public, the acceleration of speech speed demonstrates anxiety and nervousness and a desire to get rid of the situation[19,20]. Studies affirm the existence of a relationship between people with low self-esteem, shy, anxious, introverted, who look away from the interlocutor and who speak fast during public speaking[7,13,19].

In the final multivariate model, we observed that the association between shyness and the variables age, fear of public speaking, frequency of participation in public speech activities, vocal intensity and use of hands during oral presentations was maintained.

In our study, students over the age of 30 were less likely to be shy. The data reinforces the extent to which the accumulation of public speaking experiences has a positive impact on the way people self-perceive their communication[21].

As for fear of public speaking, students who self-reported fear of public speaking were approximately seven times more likely to be shy when compared to students who did not self-report fear of public speaking. Shyness and social anxiety share somatic, cognitive and behavioral symptoms[1,14]. The fear of speaking is a prevalent fear in the world population1. Shy people include themselves here. However, due to their personality and social withdrawal characteristics, they are prone to be afraid to speak in public1. Often, fear is compounded by the negative evaluation of their communication, judgment of the other and self-focus on somatic symptoms when speaking in public[14,15,22].

Regarding the association of shyness with the frequency of participation in oral communication activities, the data indicate that university students who participate in many oral communication activities are less shy. Shy people have difficulties in interpersonal skills and are less involved in social situations[23], for example, speaking in public[5,14], as they constantly avoid the activity of being exposed[7,13,17] and, in this way, the shy person ends up withdrawing and moving away social relations.

To this end, communicative advisories can reinforce therapeutic strategies of public speaking that promote the participation of the timid in social and oral communication activities. We suggest activities such as speaking impromptu, speech games that favor the expression of thought, like a conversation starter on a topic, psychodramas, interpretation of poems, preferably initiated between the subject and the speech therapist and,

later, in groups. In addition to these suggestions, we reinforced advice aimed at self-confidence, built in co-participation with the subject in order to create positive coping strategies for social situations that favor a better communicative performance[20,21].

As for the self-perception of non-verbal aspects of communication in public, there was an association of shyness with self-perception of weak voice intensity and not knowing how to use hands naturally, which can make communication ineffective[11,13]. A reduced loudness, with a lack of volume in the voice, suggests the judgment of shyness and insecurity[11,20.24]. Speech therapy with masking techniques is an alternative to train the ability to speak more intensely, as well as the Artur Lessac Madison method that improves resonance and vocal projection, which consequently would assist in increasing vocal intensity for public speaking. A survey of 54 students investigated Lessac's Y-Buzz method and the sustained productions of the usual vowel / i / of Brazilian Portuguese before and after training and concluded that the method produces the perception of a more resonant voice[25].

Hands and the use of illustrative or regulating gestures are important elements for the effectiveness of communication. They follow verbal communication[26-28]. Bad speakers, when speaking in public, keep their hands below the waist line, as a communicative barrier, often using adaptive and decontextualized gestures that convey nervousness, insecurity and shyness in relation to themselves and the situation of public speaking[13,27]. The restricted use of gestures indicates that progress should also be made in the work of body expressiveness to speak well in public[10,27] and research has already shown the benefits of body work in communicative performance[10,12,28].

When speaking in public, people often do not recognize the resources that can benefit their communication[29]. Mastering the content of the speech, knowing the non-verbal aspects of communication, such as vocal quality and body language, contribute for the individual to have an efficient communication[10,29]. People who participated in public speaking training showed less shyness compared to those who did not undergo any type of oral communication training in public13,30. Positive self-confidence strategies develop expressiveness and self-knowledge[9,12,21,28].

A limitation of the study is that the cross-sectional design does not allow the analysis of the causal relationship between the variables studied. Therefore, further longitudinal studies are needed to monitor the subjects over time. We encourage new research to go ahead and consider, in addition to the participants' self-perception, objective assessments of the communicative profile, carried out by professional voice or communication professionals, in order to further enrich scientific knowledge on the subject.

CONCLUSION

Shyness is prevalent in young university students who participate in few public speaking activities, are afraid to speak in public, self-report speaking at low intensity and have an inability to use their hands naturally during public presentations. Shyness in university students influences the performance of speech in public. Communicative advisors that develop public speaking practices at universities will contribute both to the quality of the professional future and to the lives of these people.

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Authors' contributions

ACFM participated in the idealization of the study, data collection, analysis, interpretation of data and writing of the article; AMM participated as a co-supervisor in the idealization, study, analysis, interpretation of data and writing of the article; JJP participated in the collection, interpretation of data and writing of the article; LCT participated as a supervisor in the idealization, study, analysis, interpretation of data and writing of the article.