






Self-perception of speech rate among university students: impact on interpersonal communication and self-concept

Autopercepção da velocidade de fala de universitários: impacto na comunicação interpessoal e autoimagem

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ABSTRACT

Purpose: to investigate the self-perception of speech rate among university students and analyze its possible psychosocial impacts, considering how these individuals assess their own fluency and how it may affect aspects of interpersonal communication and self-esteem. **Methods:** this is a cross-sectional and descriptive study conducted with a sample of 117 students from a public university. Self-report questionnaire was used to collect data on the perception of personal speech rate, as well as on feelings and behaviors associated with this characteristic, such as communication anxiety, self-image, and impact in social situations. **Results:** the findings indicated that a significant portion of participants reported an altered self-perception of their speech rate, which is associated with relevant psychosocial consequences. Individuals who perceived themselves as speaking very fast or very slow reported greater difficulty in social interactions, insecurity when speaking in public, and increased sensitivity to external judgments. Nevertheless, the data suggest a diversity of individual experiences, mediated by subjective and contextual factors. **Conclusion:** the results contribute to the understanding of self-perception of speech rate as a complex and multifactorial phenomenon, with implications for individuals' communicative and emotional well-being. However, the lack of statistical significance in certain variables indicates that fast speech is not necessarily associated, in a generalized manner, with impairments in areas such as professional life, self-esteem, or social isolation. These findings highlight the importance of an individualized approach when analyzing the effects of speech rate, considering interindividual variability in communicative experiences.

Keywords: Speech-language pathology; Speech; Speech perception; Self concept

RESUMO

Objetivo: investigar a autopercepção da velocidade de fala entre universitários e analisar seus possíveis impactos psicossociais, considerando como esses indivíduos avaliam sua própria fluência e de que forma isso pode interferir em aspectos de comunicação interpessoal e autoestima. **Métodos:** trata-se de uma pesquisa transversal e descritiva, conduzida com uma amostra composta por 117 estudantes de uma universidade pública. Foi utilizado questionário de autorrelato para coletar dados sobre a percepção da própria velocidade de fala, bem como sobre sentimentos e comportamentos associados a essa característica, como ansiedade comunicativa, autoimagem e impacto em situações sociais. **Resultados:** os achados indicaram que uma parcela significativa dos participantes apresentou autopercepção alterada em relação à sua velocidade de fala, o que se associa a consequências psicossociais relevantes. Indivíduos que se perceberam como muito rápidos ou muito lentos relataram maior dificuldade em interações sociais, insegurança ao falar em público e maior sensibilidade a julgamentos externos. Ainda assim, os dados sugerem uma diversidade de experiências individuais, mediadas por fatores subjetivos e contextuais. **Conclusão:** os resultados contribuem para o entendimento da autopercepção da velocidade de fala como um fenômeno complexo e multifatorial, com implicações para a saúde comunicativa e emocional dos indivíduos. Contudo, a ausência de significância estatística em determinadas variáveis indica que a fala acelerada não está necessariamente associada, de forma generalizada, a prejuízos em domínios como vida profissional, autoestima ou isolamento social. Esses achados reforçam a importância de uma abordagem individualizada na análise dos efeitos da velocidade de fala, considerando a variabilidade interindividual na experiência comunicativa.

Palavras-chave: Fonoaudiologia; Comunicação; Fala; Percepção de fala; Autoimagem

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INTRODUCTION

There is consensus in the literature that speech rate constitutes a fundamental variable for speech fluency and individual communicative competence, particularly with regard to the efficient delivery of the message. Empirical evidence supports the notion that speech rate is one of the outcomes of neural activation during spontaneous speech, indicating that maintaining a constant syllabic sequencing may facilitate the establishment of rhythm, thereby promoting a more natural communicative flow⁽¹⁾.

Several studies suggest that factors such as age and cognitive-linguistic load — that is, the level of complexity involved in speech formulation — significantly affect speech rate. In this context, it is observed that the development of speech rate accompanies the progressive acquisition of communicative skills, being influenced both by improvements in speech motor control and by the efficiency of the linguistic processes involved in formulation^(2,3). However, there is still a lack of robust evidence in the literature that comprehensively explains how different cognitive and linguistic demands across various tasks directly affect speech rate⁽⁴⁾.

The role of speech rate has been widely investigated in the field of fluency disorders, particularly in developmental stuttering. Studies have shown that interventions promoting rhythmic or slowed speech result in a reduction of typical stuttering disruptions⁽¹⁾. Conversely, the disorder known as tachyphemia (or cluttering) is characterized primarily by an accelerated and/or irregular speech rate. In addition to this central diagnostic feature, additional symptoms include an increase in common disfluencies, syllable omissions, irregular pauses, and variations in syllabic stress⁽⁵⁻⁷⁾.

The current challenge lies in understanding the extent to which an increased speech rate, in the absence of associated clinical complaints, compromises quality of life, particularly in young individuals. It is widely recognized that a satisfying life is related not only to physical and mental health, but also to full participation in social, educational, and professional contexts⁽⁸⁻¹¹⁾. Authors⁽¹²⁾ argue that, in conversational contexts, enhanced rhythm and speech rate skills favor clearer, more effective, and more harmonious communication.

Therefore, the present investigation was grounded in this theoretical framework to deepen the understanding of speech rate. Building on a previous study⁽¹¹⁾, this research aimed to investigate the self-perception of speech rate among university students and to analyze its possible psychosocial impacts, considering how these individuals evaluate their own fluency and how this may interfere with aspects of interpersonal communication and self-esteem.

METHODS

The study design was structured based on the protocol of the American Association for Public Opinion Research (AAPOR). The study conception (questionnaire and its applicability in the online format) was approved by the Research Ethics Committee of the University of São Paulo School of Medicine – CEP/FMUSP, Opinion Report No. 6.529.522.

Participants

Participants of the research were students from the University of São Paulo, across all academic units, enrolled in Undergraduate or Graduate (stricto sensu) programs, aged 18 years or older, distributed according to self-reported biological sex, who voluntarily agreed to participate in the study by signing the Informed Consent Form (ICF).

Procedure

Participants completed a questionnaire (Appendix 1) made available through the Google Forms platform, consisting of three sections: questions on individual perception of speech rate; questions addressing the stereotype of speaking fast (considered a cognitive component related to the identification of identical characteristics); and questions on prejudice (automatic negative attitudes directed toward individuals whose speech deviates from the “ideal” speech rate standard—whether faster or slower. This type of prejudice may be associated with judgments regarding competence, intelligence, reliability, or emotional control, based solely on speech rate). The study was conducted in three phases: Phase I – Development and evaluation of the research questionnaire; Phase II – Dissemination of the questionnaire (Appendix 1) among students who had signed the Informed Consent Form; Phase III – Data analyses.

Phases I and II – Development, Evaluation, and Dissemination of the Research Questionnaire

The questionnaire (Appendix 1) was developed considering the literature presented in the introduction. The questions addressed participants’ perceptions of speech rate in the following areas: thoughts, feelings, and behaviors affecting quality of life; self-esteem (self-perception, competence, self-worth); social anxiety and fear of negative evaluation by others.

The first version of the questionnaire underwent internal validation by independent judges—speech-language pathologists with expertise in the area — who were not involved in the study design and worked independently. These professionals assessed the items regarding semantic clarity, thematic relevance, and coherence with the study objectives. Based on their suggestions, revisions were made to the wording and organization of the questions. The revised version was then applied in a pilot sample of four volunteer participants to verify the instrument’s consistency. The inter-rater agreement index, measured by the Kappa coefficient, ranged from 0.61 to 0.80, which is interpreted as an almost perfect agreement.

The validated questionnaire was structured on the Google Forms platform. The study was disseminated through the University of São Paulo’s social media channels, targeting the university community. The target population comprised students regularly enrolled in Undergraduate and Graduate (stricto sensu) programs, regardless of their field of study. The main recruitment strategy consisted of sharing the link to the form via WhatsApp groups of university students. In addition, posters containing a QR Code were placed in strategic locations across the University

City campus, such as bus stops and bulletin boards of several institutes, facilitating direct access to the instrument.

Upon accessing the link or scanning the QR Code, participants were directed to the form, which included the Informed Consent Form (ICF) in its opening sections. Agreement with the ICF was mandatory to proceed with participation. The first questions collected basic identification data (name, institutional e-mail, program, age, and gender), and all subsequent questions were treated confidentially. Data collection began on April 30, 2024, with the last response recorded on June 27, 2024. The form remained open until July 10, 2024, totaling approximately two and a half months of data collection.

After providing consent, participants gained access to the questions. The first question was dichotomous: “Do I speak faster than other people?” – YES or NO. Based on the responses, two groups were defined: G1, participants who did not perceive themselves as speaking fast (NO), and G2, participants who perceived themselves as speaking fast (YES).

The questionnaire (Appendix 1) consisted of 25 closed-ended Likert-type questions, organized into three thematic blocks: (1) Self-perception of speech rate – addressing comparisons with the perceived standard in others and recognition of difficulties related to accelerated speech rhythm; (2) Psychosocial impacts – addressing possible impairments in social interaction, academic/professional life, self-esteem, confidence, and quality of life, as well as symptoms such as anxiety, embarrassment, and avoidance of communicative situations; (3) Stigma-related dimensions – addressing perceptions of social judgment, experiences of bullying, exclusion, and attempts to modify speech to avoid criticism or rejection.

Participants were instructed to select, from four options, the response that best reflected their opinion. The Likert scale options were: *agree, probably yes, probably no, disagree*. Skipping or leaving questions unanswered was not permitted. The estimated time for completing the questionnaire ranged from three to ten minutes.

Phase III – Data analysis

Data analysis was performed based on participant distribution, as illustrated in the flowchart (Figure 1). Students from 42 academic programs at the University of São Paulo participated, representing Health Sciences, Engineering, Humanities, Exact Sciences, among others.

Considering age range, the majority of participants were between 18 and 24 years old (81.2%), followed by 16.2% between 25 and 29 years old, and 2.6% above 30 years old. Distribution by self-reported biological sex indicated that 65.8% were female and 34.2% were male. For the purposes of this study, no comparisons were made regarding participants’ academic program, age, or biological sex (the latter here considered as a multidimensional sociocultural construct encompassing identity and behaviors). Since there are no scientific studies addressing self-perception of speech rate in the typical population, the questionnaire responses were analyzed without demographic reference.

RESULTS

Table 1 presents the results for the first question of the questionnaire, which offered a dichotomous response option (yes or no). Among the 117 participants, 81.1% answered “yes,” indicating that they speak faster than other people, whereas 18.9% answered “no.” This difference was statistically significant.

The comparison between Groups G1 and G2 revealed statistically significant differences across several variables related to self-perception of speech rate and its psychosocial impacts (Table 2). Participants in G2 were more likely to acknowledge that their speech rate differed from that of most people ($p < 0.001$) and more frequently reported that speaking fast interfered

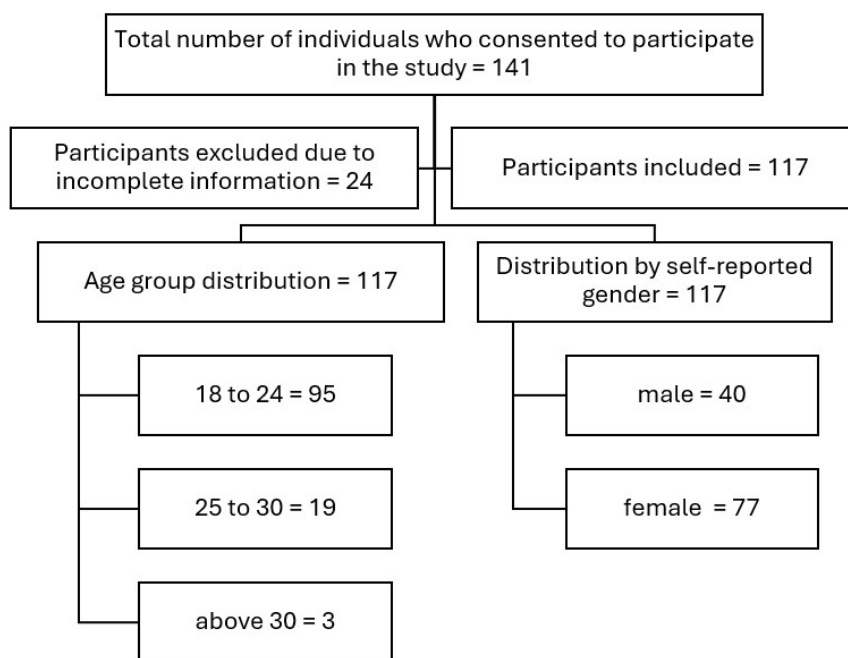


Figure 1. Flowchart – participant distribution

Table 1. Results of the first question of the questionnaire

	Respostas		p-value
	Yes (n%)	No (n%)	
I speak faster than other people	95 (81.1)	22 (18.9)	<0.001*

*Significant difference according to Pearson's Chi-square test

Subtitle: < = less than; n = number of participants; % = percentage

Table 2. Questionnaire items showing significant differences between Groups G1 and G2

Question	Answer	G1	G2	p-value
My speech rate is different from that of other people	Strongly disagree	3 (13.6%)	0 (0%)	<0.001*
	Disagree	13 (59.1%)	1 (1.1%)	
	Agree	5 (22.7%)	44 (46.3%)	
	Strongly agree	1 (4.5%)	50 (52.6%)	
Speaking fast interferes with my daily life	Strongly disagree	8 (36.4%)	3 (3.2%)	<0.001*
	Disagree	10 (45.5%)	17 (17.9%)	
	Agree	3 (13.6%)	37 (38.9%)	
	Strongly agree	1 (4.5%)	38 (40%)	
Speaking fast affects my social interactions	Strongly disagree	10 (45.5%)	2 (2.1%)	<0.001*
	Disagree	8 (36.4%)	26 (27.4%)	
	Agree	3 (13.6%)	41 (43.2%)	
	Strongly agree	1 (4.5%)	26 (27.4%)	
Speaking fast impacts my interpersonal relationships	Strongly disagree	10 (45.5%)	7 (7.4%)	<0.001*
	Disagree	9 (40.9%)	38 (40%)	
	Agree	2 (9.1%)	31 (32.6%)	
	Strongly agree	1 (4.5%)	19 (20%)	
People ask me to repeat what I have already said	Strongly disagree	8 (36.4%)	3 (3.2%)	<0.001*
	Disagree	6 (27.3%)	2 (2.1%)	
	Agree	6 (27.3%)	15 (15.8%)	
	Strongly agree	2 (9.1%)	75 (78.9%)	
I believe that speaking fast contributes negatively to my quality of life	Strongly disagree	7 (31.8%)	8 (8.4%)	<0.001*
	Disagree	10 (45.5%)	37 (38.9%)	
	Agree	3 (13.6%)	34 (35.8%)	
	Strongly agree	2 (9.1%)	16 (95%)	
I feel lost because I speak faster than people expect	Strongly disagree	13 (59.1%)	20 (21.1%)	<0.001*
	Disagree	9 (40.9%)	23 (24.2%)	
	Agree	0 (0%)	32 (33.7%)	
	Strongly agree	0 (0%)	20 (21.1%)	
Speaking fast affects my confidence	Strongly disagree	12 (54.5%)	17 (17.9%)	0.003*
	Disagree	5 (22.7%)	24 (25.3%)	
	Agree	3 (13.6%)	31 (32.6%)	
	Strongly agree	2 (9.1%)	23 (24.2%)	
People have many opinions about my speech rate	Strongly disagree	15 (68.2%)	11 (11.6%)	<0.001*
	Disagree	7 (31.8%)	35 (36.8%)	
	Agree	0 (0%)	25 (26.3%)	
	Strongly agree	0 (0%)	24 (25.3%)	
I have tried to control my speech rate to adapt and avoid being judged	Strongly disagree	7 (31.8%)	7 (7.4%)	0.004*
	Disagree	3 (13.6%)	6 (6.3%)	
	Agree	5 (22.7%)	20 (21.1%)	
	Strongly agree	7 (31.8%)	62 (65.3%)	
I have experienced symptoms of anxiety because I speak fast	Strongly disagree	2 (9.1%)	2 (2.1%)	<0.001*
	Disagree	18 (81.8%)	37 (38.9%)	
	Agree	0 (0%)	18 (18.9%)	
	Strongly agree	2 (9.1%)	38 (40%)	
I have lived through episodes of social embarrassment because I speak fast	Strongly disagree	12 (54.5%)	17 (17.9%)	<0.001*
	Disagree	6 (27.3%)	15 (15.8%)	
	Agree	2 (9.1%)	30 (31.6%)	
	Strongly agree	2 (9.1%)	33 (34.7%)	

*Significant difference according to Pearson's Chi-square test

Subtitle: G1 = Group 1; G2 = Group 2; < = less than; % = percentage

Table 2. Continued...

Question	Answer	G1	G2	p-value
My past experiences regarding my speech rate have caused me some trauma	Strongly disagree	19 (86.4%)	37 (38.9%)	0.001*
	Disagree	3 (13.6%)	21 (22.1%)	
	Agree	0 (0%)	25 (26.3%)	
	Strongly agree	0 (0%)	12 (12.6%)	
Social anxiety from speaking fast affects my ability to express myself authentically	Strongly disagree	9 (40.9%)	22 (23.2%)	<0.001*
	Disagree	6 (27.3%)	16 (16.8%)	
	Agree	6 (27.3%)	29 (30.5%)	
	Strongly agree	1 (4.5%)	28 (29.5%)	
Speaking fast is one of the main problems in my life	Strongly disagree	21 (95.5%)	52 (54.7%)	0.005*
	Disagree	1 (4.5%)	30 (31.6%)	
	Agree	0 (0%)	9 (9.5%)	
	Strongly agree	0 (0%)	4 (.2%)	

*Significant difference according to Pearson's Chi-square test

Subtitle: G1 = Group 1; G2 = Group 2; < = less than; % = percentage

with their daily lives ($p < 0.001$) and negatively affected their social interactions ($p < 0.001$) and interpersonal relationships ($p < 0.001$). In addition, they more frequently reported being asked to repeat what they had said ($p < 0.001$), that speaking fast impaired their quality of life ($p < 0.001$), and that they felt disoriented for speaking faster than expected ($p < 0.001$).

G2 also showed a higher prevalence of negative experiences such as loss of confidence ($p = 0.003$), attempts to control speech to avoid judgment ($p = 0.004$), symptoms of anxiety ($p < 0.001$), social embarrassment ($p < 0.001$), perception of being judged by others ($p < 0.001$), and the feeling that speaking fast constituted one of the main problems in their lives ($p = 0.005$). These findings point to a significant association between the self-perception of speaking fast and negative emotional experiences, such as social anxiety, communicative insecurity, and perceived impact on quality of life.

In contrast, some variables did not show statistically significant differences between the groups (Table 3), such as avoiding social interactions, feeling more comfortable with friends and family, or avoiding voice messages and phone calls. This suggests that, although the perception of speaking fast is associated with psychosocial discomfort in public and professional contexts, it does not always translate into generalized social isolation or systematic impairment of self-esteem.

Other variables, although showing a statistical trend, did not reach robust significance, such as fatigue from repeating what was said ($p = 0.098$) and fear of being negatively evaluated when speaking in public ($p = 0.413$). This may reflect individual variability in how the effects of speech rate manifest.

DISCUSSION

The results of this study are consistent with the existing literature, demonstrating that speech rate is a relevant factor in communicative perception and the quality of social interaction⁽¹²⁾. Individuals who reported an accelerated speech rate expressed concerns about the intelligibility of their communication, which aligns with studies indicating that excessively rapid speech may compromise message clarity and interpersonal interaction^(1,4).

The influence of cognitive-linguistic factors on speech rate was also evidenced, suggesting that cognitive load directly affects the rate of verbal production, as reported in previous

research⁽²⁾. Furthermore, the data collected reinforce the notion that structured rhythmic patterns may facilitate better communicative dynamics, mitigating the negative effects of fast speech rate on intelligibility⁽¹⁾.

Another relevant aspect was the association between speech rate and social perception. Participants who reported speaking rapidly also indicated being perceived as anxious or impatient, a finding consistent with previous studies on communicative stereotypes and their impact on interpersonal interaction^(9,13).

The association between fast speech and difficulties in social interactions may be related to what authors⁽¹⁾ describe as the “rhythmic effect” in stuttering, whereby dysregulation of neural circuits responsible for rhythm perception and production undermines communicative fluency. Although the present study did not specifically address individuals with fluency disorders such as stuttering or cluttering, similar social repercussions — such as the need to repeat information, experiences of embarrassment, and attempts to adjust speech patterns — suggest that speech rate, in itself, can represent a significant factor in everyday life.

The findings also indicated that fast speakers may experience a cycle of insecurity and self-censorship, aspects frequently reported in studies on self-image and quality of life in individuals with fluency disorders^(8,13). This perception of inadequacy can compromise communicative authenticity, leading individuals to engage in less spontaneous interactions⁽¹²⁾.

On the other hand, the absence of statistical significance in items investigating abandonment of personal goals, self-esteem, and prejudice highlights the complexity of the phenomenon. It is believed that this result may be related to adaptive mechanisms developed over time, such as compensatory strategies and redefinitions of communicative identity⁽⁷⁾. This is consistent with what authors⁽⁹⁾ highlighted in their systematic review: lifestyle factors and social perception shape how individual characteristics are experienced and internalized.

The situational influence of speech rate also deserves emphasis. As suggested by a previous study⁽⁴⁾, speech rate may differentially impact the acoustic and linguistic processing of speech depending on the context and the complexity of the communicative task. Thus, the environment in which communication occurs may moderate the effects of speech rate, which could explain why this characteristic does not appear detrimental in academic or professional contexts, as observed in the present findings.

Table 3. Questionnaire items showing no significant differences between Groups G1 and G2

Question	Answer	G1	G2	p-value
Repeating what I have already said makes me feel tired	Strongly disagree	5 (22.7%)	8 (8.4%)	0.098
	Disagree	4 (18.2%)	8 (8.4%)	
	Agree	4 (18.2%)	22 (23.2%)	
	Strongly agree	9 (40.9%)	57 (60%)	
I prefer not to speak and to isolate myself in social interaction situations	Strongly disagree	7 (31.8%)	34 (35.8%)	0.778
	Disagree	8 (36.4%)	27 (28.4%)	
	Agree	3 (13.6%)	20 (21.1%)	
	Strongly agree	4 (18.2%)	14 (14.7%)	
I have already given up doing something of interest because I speak too fast	Strongly disagree	17 (77.3%)	35 (36.8%)	0.007
	Disagree	3 (13.6%)	28 (29.5%)	
	Agree	1 (4.5%)	15 (15.8%)	
	Strongly agree	1 (4.5%)	17 (17.9%)	
Speaking fast affects my self-esteem	Strongly disagree	14 (63.6%)	26 (27.4%)	0.008
	Disagree	5 (22.7%)	25 (26.3%)	
	Agree	1 (4.5%)	24 (25.3%)	
	Strongly agree	2 (9.1%)	20 (21.1%)	
With friends and family I feel more comfortable speaking	Strongly disagree	1 (4.5%)	6 (6.3%)	0.691
	Disagree	3 (13.6%)	10 (10.5%)	
	Agree	2 (9.1%)	18 (18.9%)	
	Strongly agree	16 (72.7%)	61 (64.2%)	
Speaking fast has already caused me to lose important opportunities	Strongly disagree	16 (72.7%)	39 (41.1%)	0.035
	Disagree	6 (27.3%)	39 (41.1%)	
	Agree	0 (0%)	13 (13.7%)	
	Strongly agree	0 (0%)	4 (4.2%)	
Speaking fast has already hindered my career or academic life	Strongly disagree	15 (68.2%)	30 (31.6%)	0.011
	Disagree	5 (22.7%)	30 (31.6%)	
	Agree	1 (4.5%)	22 (23.2%)	
	Strongly agree	1 (4.5%)	13 (13.7%)	
I have experienced prejudice or bullying because I speak too fast	Strongly disagree	18 (81.8%)	44 (46.3%)	0.029
	Disagree	2 (9.1%)	23 (24.2%)	
	Agree	1 (4.5%)	14 (14.7%)	
	Strongly agree	1 (4.5%)	14 (14.7%)	
I avoid sending voice messages or making phone calls because I speak too fast	Strongly disagree	18 (81.8%)	55 (57.9%)	0.058
	Disagree	4 (18.2%)	15 (15.8%)	
	Agree	0 (0%)	11 (11.6%)	
	Strongly agree	0 (0%)	14 (14.7%)	
When I speak in public, I am afraid of being negatively judged	Strongly disagree	5 (22.7%)	14 (14.7%)	0.413
	Disagree	3 (13.6%)	9 (9.5%)	
	Agree	7 (31.8%)	23 (24.2%)	
	Strongly agree	7 (31.8%)	49 (51.6%)	

Subtitle: G1 = Group 1; G2 = Group 2; < = less than; % = percentage

The implications of these results are broad. Understanding speech rate as a communicative characteristic with potential psychological and social impact underscores the need for more personalized approaches in speech-language assessment and intervention. Future studies should consider not only quantitative measures but also qualitative and perceptual assessments — both from the speaker and from interlocutors — to clarify how these variables affect individual experience and interactional dynamics^(3,6).

Finally, this study contributes to the expansion of the debate on communicative markers that, even in individuals without clinical speech disorders, may exert significant influence on mental health, self-esteem, and social integration. The articulation between linguistic and emotional variables proves essential to comprehending human communication in its full complexity.

Despite the relevant contributions of this research to the understanding of self-perceived speech rate and its psychosocial impacts, some limitations must be acknowledged. First, this was a cross-sectional and descriptive study, which precludes the establishment of causal relationships between the phenomena investigated. Moreover, the sample, composed exclusively of students from a public university, limits the generalizability of the findings to other populations, particularly considering sociocultural and educational variables that may influence both self-perception and the effects of speech rate. Finally, an inherent limitation of self-report questionnaires must be highlighted, as they are subject to factors such as social desirability bias and subjective interpretation of questions.

Additionally, the final number of participants (n=117) represented approximately one-fifth of the initially projected

sample (n=500). Beyond the reduced sample size, an unequal distribution was observed between the groups compared (G1 and G2), with a predominance of participants in G1. This discrepancy may have introduced representativeness bias, thereby compromising the robustness of group comparisons.

CONCLUSION

This study aimed to investigate the self-perception of speech rate among university students and to analyze its potential psychosocial impacts, considering how individuals evaluate their own fluency and how this may interfere with aspects of interpersonal communication and self-esteem. The findings suggest that speech rate may be associated with relevant social and emotional challenges, particularly social anxiety and the subjective perception of quality of life. However, the absence of statistical significance in certain variables indicates that accelerated speech is not necessarily associated, in a generalized manner, with impairments in domains such as professional life, self-esteem, or social isolation. These results underscore the importance of an individualized approach in analyzing the effects of speech rate, taking into account interindividual variability in communicative experience.

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APPENDIX 1. Questionnaire

	Strongly Agree	Agree	Disagree	Strongly Disagree
My speech rate is different from that of other people				
Speaking fast interferes with my daily life				
Speaking fast affects my social interactions				
Speaking fast impacts my interpersonal relationships				
People ask me to repeat what I have already said				
Repeating what I have already said makes me feel tired				
I prefer not to speak and to isolate myself in social interaction situations				
I believe that speaking fast contributes negatively to my quality of life				
I feel lost because I speak faster than people expect				
I have already given up doing something of interest because I speak too fast				
Speaking fast affects my self-esteem				
Speaking fast affects my confidence				
With friends and family I feel more comfortable speaking				
Speaking fast has already caused me to lose important opportunities				
Speaking fast has already hindered my career or academic life				
I have experienced prejudice or bullying because I speak too fast				
I avoid sending voice messages or making phone calls because I speak too fast				
People have many opinions about my speech rate				
When I speak in public, I am afraid of being negatively judged				
I have tried to control my speech rate to adapt and avoid being judged				
I have experienced symptoms of anxiety because I speak fast				
I have lived through episodes of social embarrassment because I speak fast				
My past experiences regarding my speech rate have caused me some trauma				
Social anxiety from speaking fast affects my ability to express myself authentically				
Speaking fast is one of the main problems in my life				