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University students' misconceptions about stuttering

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Abstract

Aim: University life plays a significant role in shaping individuals' social and personal development and may be influenced by peers' misconceptions about stuttering. This study aimed to investigate university students' misconceptions regarding stuttering.
Materials and Methods: A total of 269 university students (196 females, 73 males) participated in the study and completed the Misconceptions About Stuttering Questionnaire (MSQ).
Results: The majority of participants believed that stuttering is caused by fear (96.3%), stress (94.8%), and psychological trauma (92.2%). More than half of the participants considered stuttering to be a disease (53.9%) and believed it is caused by imitation (53.2%). Additionally, 74.3% reported that taking a deep breath before speaking improves fluency, and 98.9% believed that reading aloud increases fluency. While 74% of participants correctly identified the profession specializing in stuttering, significant differences in MSQ scores were observed based on knowledge level ($p = .041$).
Conclusion: Insufficient and inaccurate knowledge about stuttering may contribute to persistent misconceptions and potentially negative attitudes. Educational seminars on stuttering for university students may serve as an effective strategy to improve awareness and understanding of this speech disorder.

Keywords: Misconceptions, stuttering, university students.

Üniversite öğrencilerinin kekemelikle ilgili yanlış algılarının incelenmesi

Öz

Amaç: Üniversite hayatı, bireyin karakterini önemli ölçüde etkiler. Bu dönemde akranların kekemelikle ilgili yanlış algıları kekemeliği olan bireyi etkileyebilir.
Gereç ve Yöntem: Bu çalışma, karma bir tasarım kullanarak üniversite öğrencilerinin kekemelikle ilgili yanlış algılarını araştırmaktadır. Toplam 269 öğrenci (196 kadın, 73 erkek) Kekemelikle İlgili Yanlış Algılar Anketi'ni (KYA) doldurmuştur.
Bulgular: Katılımcıların çoğu kekemeliğin nedeninin korku (96,3%), stres (94,8%) ve psikolojik travma (92,2%) olduğunu düşünmektedir. Yarısından fazlası kekemeliğin bir hastalık olduğunu (53,9%) ve taklitten kaynaklandığını (53,2%) düşünmektedir. Ayrıca, %74,3'ü konuşmadan önce derin nefes almanın akıcılığı artırdığına ve %98,9'u yüksek sesle okumanın akıcılığı artırdığına inanmaktadır. %74'ü kekemelik konusunda uzmanlaşmış mesleği doğru bir şekilde tanımlamış olup, bilgi farklılıkları KYA puanlarını etkilemektedir ($p = .041 < .05$).
Sonuç: Doğru bilginin eksikliği, yanlış anlamalara ve olumsuz tutumlara yol açabilir. Üniversite öğrencilerine kekemelik konusunda seminerler düzenlenmesi, bu konuşma bozukluğuna ilişkin anlayışlarını geliştirmek için etkili bir yol olarak önerilmektedir.

Anahtar Kelimeler: Kekemelik, üniversite, üniversite öğrencileri.

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Introduction

According to the American Speech-Language-Hearing Association (ASHA), stuttering is defined as a speech disorder characterized by disruptions in fluency, rate, or rhythm of speech and is classified as a fluency disorder. Stuttering may be accompanied by secondary behaviors, including avoidance behaviors and stereotypical movements such as head nodding, eye blinking, or limb movements. Core stuttering behaviors include blocks, sound prolongations, sound or syllable repetitions, insertions, and self-corrections (1).

The lifetime incidence of stuttering in the general population is reported to be approximately 5%, while the persistence rate ranges between 0.5% and 1%. In Turkey, a study conducted in 1996 reported that stuttering accounted for 19% of speech and language disorders; however, subsequent research found a lower prevalence rate of 4.38% (2). Another study conducted in 2013 estimated the prevalence of stuttering in Turkey to be approximately 1%, corresponding to nearly 700,000 individuals (3). These findings indicate that stuttering affects a substantial portion of the population.

Beyond prevalence, societal attitudes toward stuttering play a critical role in the experiences of individuals who stutter. Dorsey and Guenther (4) reported that attitudes toward people who stutter are generally negative. Such attitudes may contribute to psychosocial challenges and reduced quality of life among individuals who stutter. Negative perceptions and behaviors are influenced by multiple factors, including social context and individual beliefs (5). Importantly, the level of public knowledge about stuttering is closely associated with the social participation and quality of life of individuals who stutter (6).

Previous research has examined public knowledge and misconceptions about stuttering across different cultural contexts. In Japan, nearly half of the participants were found to hold incorrect beliefs about stuttering, despite having encountered individuals who stutter, and women demonstrated higher knowledge levels than men (7). In contrast, a study conducted in Korea reported no gender differences, with both males and females exhibiting limited knowledge about stuttering (8). Studies from Brazil have similarly shown that although stuttering is generally recognized as a speech disorder, misconceptions persist regarding its age of onset, prevalence, and gender distribution (6,9).

Studies conducted in Egypt and Pakistan have further demonstrated limited knowledge about stuttering among parents and families, particularly regarding its causes, prognosis, and treatment (10,11). In the United States, university students have also been reported to possess insufficient knowledge about stuttering, frequently attributing it to nervousness and emotional factors (12).

In line with these findings, the present study aimed to investigate misconceptions about stuttering among university students in Turkey. Given that university settings bring together individuals from diverse cultural and socioeconomic backgrounds, understanding students' knowledge and beliefs about stuttering is essential for identifying misconceptions and informing educational initiatives.

Materials and methods

Statement of ethical approval

Ethical approval for this study was obtained from the Istinye University Ethics Committee on November 22, 2022 (Protocol No. 2022/07; Approval No. 22-127).

Research design

This study employed a mixed-methods design. Quantitative data were analyzed by comparing participants' responses according to sociodemographic variables.

Participants

A total of 269 undergraduate students aged between 18 and 35 years participated in the study. Descriptive information regarding the participants is presented in Table 1, while Table 2 provides information about the faculties in which the students were enrolled.

Table 1. Sociodemographic information table

	Group	n	%
Gender	Female	196	72,9
	Male	73	27,1
Presence of stuttering	Yes	13	4,8
	No	256	95,2
Do you know someone who stutters?	Yes	105	39,0
	No	164	61,0

Table 2. Faculty names and distribution		
Faculty Name	**n**	**%**
Faculty of Medicine	32	11,89
Faculty of Dentistry	30	11,15
Faculty of Pharmacy	29	10,78
Faculty of Fine Arts, Design and Architecture	26	9,66
Faculty of Economics, Administrative and Social Sciences	28	10,40
Faculty of Communication	26	9,66
Faculty of Humanities and Social Sciences	26	9,66
Faculty of Engineering and Natural Sciences	33	12,26
Faculty of Health Sciences	39	14,49

Data collection tools

MSQ preparation process

The Misconceptions About Stuttering Questionnaire (MSQ) was developed specifically for this study to assess university students' awareness and misconceptions regarding stuttering. Initially, a comprehensive review of the literature was conducted to identify common misconceptions and key themes related to stuttering. Based on this review, an initial pool of items was generated

To establish content validity, the draft version of the questionnaire was reviewed by a panel of experts in speech-language pathology and communication disorders. Based on expert feedback, revisions were made to improve item wording, clarity, and relevance.

A pilot study was subsequently conducted with a small sample of university students (n = 20) to assess the comprehensibility and usability of the questionnaire. Following the pilot study, minor modifications were made to enhance item clarity and response options.

The final version of the MSQ consists of 12 items with "yes," "no," and "don't know" response options. The questionnaire was designed to evaluate the accuracy of participants' knowledge and misconceptions about stuttering. This systematic development process supports the appropriateness of the MSQ for use with the target population.

Misconceptions About Stuttering Questionnaire (MSQ)

The MSQ was developed by the researchers based on a review of the relevant literature (1). The questionnaire consists of 12 items designed to assess university students' level of awareness regarding stuttering. Each item includes three response options: "yes," "no," and "don't know."

For all items, the response "no" was considered the correct answer. Each correct response was scored as 1 point, whereas incorrect responses were scored as 0 points. Responses of "don't know" were also treated as incorrect and scored as 0 points. Higher total scores indicate greater accuracy in knowledge about stuttering.

Data analysis

Data were analyzed using SPSS version 27. Descriptive statistics, including frequency distributions, were calculated for sociodemographic variables. Group differences in MSQ scores were examined using independent samples t-tests for variables with two groups that met parametric assumptions. For variables with two groups that did not meet parametric assumptions, the Mann–Whitney U test was applied.

Because the sample size within the class-level variable was insufficient for parametric testing, the Kruskal–Wallis H test was used. All statistical analyses were conducted at a significance level of $p < .05$. Normality test results are presented in Table 3. As the skewness and kurtosis values of the MSQ total score fell within the acceptable range (–2 to +2), parametric tests were deemed appropriate for relevant analyses.

Table 3. Normality analysis							
Variable	**n**	**μ**	**SS**	**Kolmogorov Smirnov (p)**	**Skewness**	**Kurtosis**	**Cronbach's Alpha**
MSQ score	269	5,16	2,032	,000	,208	,860	,661
***p<,05**							

Results

Participants' responses to the MSQ items are presented in Table 4. Items for which more than 50% of participants provided correct responses are underlined in the table. Overall, analysis of the responses indicated that participants answered only 5 of the 12 items correctly. For the remaining items, the majority of participants provided incorrect responses.

Specifically, most participants correctly identified that stuttering is not associated with intelligence, is not limited to childhood, is not treated with medication, and is not a habit.

Table 4. MSQ scores of the participants

	False		True	
	n	%	n	%
1-Fear causes stuttering.	259	96,3	10	3,7
2-Stuttering is a disease.	145	53,9	124	46,1
3-People who stutter are not intelligent.	15	5,6	254	94,4
4-People who stutter are nervous.	56	20,8	213	79,2
5-Stuttering can be imitated.	143	53,2	126	46,8
6-A person who stutters is trained by giving directives such as "Take a deep breath before speaking", "Think about what you are going to say first, then speak".	200	74,3	69	25,7
7-Reading books aloud is a method applied to stuttering.	266	98,9	3	1,1
8-Stress causes stuttering.	255	94,8	14	5,2
9-Stuttering occurs because of psychological trauma.	248	92,2	21	7,8
10-Stuttering is seen only in children.	18	6,7	251	93,3
11-Stuttering is treated with medication.	103	38,3	166	61,7
12-Stuttering is a habit.	133	49,4	136	50,6

Table 5 presents the results of the independent samples t-test analyses conducted for sociodemographic variables. The MSQ total score did not differ significantly according to gender ($p = .087 > .05$), faculty ($p = .262 > .05$), or having prior acquaintance with someone who stutters ($p = .439 > .05$).

However, a statistically significant difference was observed in MSQ scores based on participants' knowledge of the professional group responsible for providing stuttering therapy ($p = .041 < .05$). Participants who correctly identified speech and language therapists as the professionals providing therapy for stuttering demonstrated significantly higher mean MSQ scores ($M = 5.30$, $SD = 2.10$) compared to those who selected other professions ($M = 4.72$, $SD = 1.78$).

Table 5. T-test analysis of the MSQ scores according to sociodemographic variables

Variable	Group	n	μ	SS	t	Sd	p
Gender	Female	196	5,28	1,971	1,719	267	,087
	Male	73	4,80	2,164			
Faculty	Faculties Related with Health	130	5,30	2,194	1,123	267	,262
	Other	139	5,02	1,866			
Knowing someone with stuttering	Yes	105	5,27	1,908	,774	267	,439
	No	164	5,07	2,110			
The professional group that provides therapy for stuttering	Speech and Language Therapy	199	5,30	2,098	2,058	267	,041*
	Other	70	4,72	1,776			

*p < ,05

Table 6 presents the results of the Mann–Whitney U analysis examining differences in MSQ scores according to stuttering status. The analysis revealed no statistically significant difference in MSQ scores between groups based on stuttering status ($p = .859 > .05$).

Table 6. MSQ scores according to presence of stuttering

Variable	Group	n	Ort.	SS	z	Sd	*p*
Presence of stuttering	Yes	13	5,08	1,115	-,178	267	,859
	No	256	5,16	2,069			
*p<,05							

Table 7 presents the results of the thematic analysis of participants' responses to the question, "What is stuttering?"

Table 7. Thematic analysis of the "What is stuttering?" responds

Group	n	%
It is a speech difficulty.	74	27,5
It is a speech disorder.	61	22,67
Repetition of sounds, syllables and words in speech.	36	13,38
Interruption of speech.	30	11,15
Fluency disorder.	24	8,92
Stutters in a speech.	18	6,69
Stuttering is a disease.	13	4,83
It is the swallowing of sounds, syllables and words during speech.	10	3,71
I don't know.	3	1,11

Discussion

This study aimed to examine university students' knowledge and misconceptions about stuttering and to compare knowledge levels according to gender, age, faculty, stuttering status, familiarity with individuals who stutter, and awareness of professional groups involved in stuttering intervention.

Consistent with previous research, misconceptions regarding the causes of stuttering were highly prevalent among participants. In the study conducted by Saman and Uysal-Aydın (13), 77.5% of participants believed that stuttering is caused by fear, while Shollenbarger et al. (12) reported that participants commonly attributed stuttering to nervousness. Similarly, in the present study, a large proportion of participants identified fear (96.3%), stress (94.8%), and psychological trauma (92.2%) as causes of stuttering. Although emotional and psychological factors may influence stuttering severity or variability, they are not considered primary or sole causes of the disorder (14).

A substantial proportion of participants (74.3%) believed that providing advice such as "take a deep breath before speaking" or "think about what you want to say first, then speak" would improve fluency. Comparable findings were reported by Saman and Uysal-Aydın (13), where nearly half of the participants believed that instructions such as "slow down" or "relax while talking" could reduce stuttering. However, stuttering intervention should be individualized and delivered by trained professionals (15). Environmental factors and external reactions may influence stuttering severity, and well-intentioned but inappropriate interventions can negatively affect individuals' psychological well-being and contribute to increased disfluency (16–18).

Negative societal attitudes toward individuals who stutter have been widely documented. Dorsey and Guenther (2020) reported that negative attitudes are common and are associated with psychosocial difficulties and reduced quality of life (19). In the present study, more than half of the participants (53.9%) perceived stuttering as a disease, and the majority (92.2%) considered it to be of psychological origin. Such perceptions may shape social behaviors toward individuals who stutter and adversely affect their participation in daily life. In Turkey, psychological disorders are often stigmatized, which may lead individuals to avoid seeking therapy or professional support to prevent social labeling (20). Consequently, conceptualizing stuttering primarily as a psychological disorder may reinforce stigma, limit social participation, and perpetuate misconceptions.

Cross-cultural comparisons further highlight variability in public knowledge about stuttering. Iimura et al. (7) reported that nearly half of participants in Japan held incorrect beliefs about stuttering, with women demonstrating higher knowledge levels than men. In contrast, the present study found no significant differences in stuttering knowledge based on gender.

This finding is consistent with results reported by Chon (8), who found no gender-related differences in stuttering knowledge in Korea, with overall knowledge levels remaining limited.

Finally, nearly all participants in the present study (98.9%) believed that reading aloud is an effective method for stuttering intervention. However, Prins and Ingham (21) noted that there is limited empirical evidence supporting the use of reading or reading aloud as a primary therapeutic approach for stuttering. This finding further underscores the persistence of misconceptions regarding evidence-based stuttering intervention techniques.

Limitations

Several limitations of this study should be acknowledged. First, the study sample consisted solely of university students, which may limit the generalizability of the findings to other segments of the population. Future studies including participants from different age groups and educational backgrounds would provide a more comprehensive understanding of public misconceptions about stuttering.

Second, data were collected using a self-report questionnaire, which may be subject to response bias and may not fully capture participants' actual knowledge or attitudes. Additionally, although the MSQ was developed systematically and reviewed by experts, further studies examining its psychometric properties in larger samples would strengthen its use as an assessment tool.

Finally, the cross-sectional design of the study does not allow for causal interpretations or examination of changes in knowledge over time. Longitudinal studies and intervention-based research are needed to evaluate the effectiveness of educational programs aimed at reducing misconceptions about stuttering.

Conclusion

Within the scope of this study, the findings indicate that the majority of university students hold misconceptions about stuttering across several domains. Insufficient and inaccurate knowledge may influence attitudes toward individuals who stutter and contribute to the persistence of negative perceptions.

Organizing educational seminars and awareness activities on stuttering for university students may help improve understanding of the condition. Increasing knowledge about stuttering has the potential to promote more positive societal attitudes toward individuals who stutter and to facilitate access to appropriate professionals for stuttering intervention. Therefore, public awareness initiatives aimed at addressing and correcting misconceptions about stuttering are considered beneficial.

Conflict of interest

The authors report there are no competing interests to declare.

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References

1. American Speech-Language-Hearing Association. Definitions of communication disorders and variations. Rockville, MD: ASHA; 1993.
2. İbiloğlu AO. Kekemelik. Psikiyatride Güncel Yaklaşımlar. 2011;3(4):704-72.
3. Maviş I, St Louis KO, Özdemir S, Toğram B. Attitudes of Turkish speech and language therapists toward stuttering. J Fluency Disord. 2013;38(2):157-70.
4. Dorsey M, Guenther RK. Attitudes of professors and students toward college students who stutter. J Fluency Disord. 2000;25:77–83.
5. Daniels DE, Panico J, Sudholt J. Perceptions of university instructors toward students who stutter: A quantitative and qualitative approach. J Commun Disord. 2011;44(6):631–9.
6. Pereira MB, Rossi JP, Borsel JV. Public awareness and knowledge of stuttering in Rio de Janeiro. J Fluency Disord. 2008;33(1):24–31.
7. Iimura D, Yada Y, Imaizumi K, Takeuchi T, Miyawaki M, Borsel JV. Public awareness and knowledge of stuttering in Japan. J Commun Disord. 2018;72:136-45.
8. Chon H. Beliefs and knowledge of the public about people who stutter: Age and sex comparisons. Commun Sci Disord. 2016;21(3):538-51.
9. Fonseca NTM, Nunes RTDA. Knowledge about stuttering in the city of Salvador. Rev CEFAC. 2013;15(4):884-94.
10. Safwat RF, Sheikhany A. Parental attitudes and knowledge of stuttering. Egypt J Otolaryngol. 2014;30(2):151-6.
11. Shakeel R, Saqulain G, Maryam Shakeel NB. Parental attitudes and knowledge about their child's stuttering: In Pakistan. Pak Pediatr J. 2021;45(2):200-6.
12. Shollenbarger A, Terry N, Akbari C. An investigation of college students' knowledge of stuttering. Perspect ASHA Spec Interest Groups. 2017;2(4):66-77.
13. Saman FD, Uysal-Aydın A. Sınıf öğretmenlerinin kekemelik hakkındaki tutumları. Dil Konuşma ve Yutma Araştırmaları Dergisi. 2022;5(1):62-78.
14. Manning W, Beck JG. The role of psychological processes in estimates of stuttering severity. J Fluency Disord. 2013;38(4):356-67.
15. Sønsterud H, Halvorsen MS, Feragen KB, Kirmess M, Ward D. What works for whom? Multidimensional individualized stuttering therapy (MIST). J Commun Disord. 2020;88:106052.
16. Williams DE. A point of view about 'stuttering'. J Speech Hear Disord. 1957;22(3):390-7.
17. Tichenor SE, Yaruss JS. Stuttering as defined by adults who stutter. J Speech Lang Hear Res. 2019;62(12):4356-69.

18. Boyle MP. Assessment of stigma associated with stuttering: Development and evaluation of the self-stigma of stuttering scale (4S). J Fluency Disord. 2013;38(2):171-87.
19. Koçak AN, Cangi ME. Emotional reactions of people who stutter in difficult communication situations: a preliminary study. Clin Arch Commun Disord. 2022;7(3):112-24.
20. Çam O, Bilge A. Türkiye'de ruhsal hastalığa/hastaya yönelik inanç, tutum ve damgalama süreci: Sistematik derleme. Psikiyatri Hemşireliği Dergisi. 2013;4(2):91-101.
21. Prins D, Ingham RJ. Evidence-based treatment and stuttering—historical perspective. J Speech Lang Hear Res. 2009;52(1):254–63.