



DETERMINATION OF THE AWARENESS OF FINAL-YEAR NURSING DEPARTMENT STUDENTS TOWARD SPEECH AND LANGUAGE THERAPISTS

HEMŞİRELİK BÖLÜMÜ SON SINIF ÖĞRENCİLERİNİN DİL VE KONUŞMA TERAPİSTLERİNE YÖNELİK FARKINDALIKLARININ BELİRLENMESİ

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ABSTRACT

Introduction: Speech and language therapy is an emerging field in our country's healthcare system, with speech and language therapists collaborating with various disciplines, including the nursing department. This study aims to assess the awareness of final-year nursing students regarding speech and language therapists. The study is descriptive in nature.

Method: This is a cross-sectional study conducted with senior students from the Nursing Department of the Faculty of Health Sciences at Kastamonu University (N=109). Data were collected using a questionnaire designed to measure awareness of speech and language therapy. Descriptive statistics, the chi-square test, and Fisher's exact chi-square test were employed for data analysis, with a significance level of $p < 0.05$.

Results: In the study, it was found that 85.3% of the participants had knowledge about speech and language therapy, and 66.7% had obtained this information from social media. Additionally, 63.3% of the nursing students stated that speech and language therapists hold a bachelor's degree. Moreover, 98.2% reported that speech and language therapists work with school-aged children, 87.2% with preschool children, 78.0% with adolescents, and 61.1% with adults. Furthermore, 100% stated that speech and language therapists work with speech disorders, 96.3% with stuttering, 78.0% with autism, 76.1% with cleft lip and palate, and 73.4% with voice disorders.

Conclusion: The study revealed insufficient awareness among nursing students regarding speech and language disorders and their areas of practice. To improve awareness, it is recommended to integrate interprofessional courses into the nursing curriculum, organize case presentations with healthcare teams, and hold seminars.

Keywords: Speech, Language therapy, Nursing students, Awareness

ÖZET

Giriş: Dil ve konuşma terapisi, ülkemizin sağlık sistemi içinde gelişen bir alan olup, dil ve konuşma terapistleri hemşirelik bölümü de dahil olmak üzere çeşitli disiplinlerle işbirliği yapmaktadır. Bu çalışma, son sınıf hemşirelik öğrencilerinin dil ve konuşma terapistlerine yönelik farkındalıklarını değerlendirmeyi amaçlamaktadır.

Yöntem: Çalışma, tanımlayıcı nitelikte olup, kesitsel çalışmadır. Bu çalışma, Kastamonu Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik Bölümü son sınıf öğrencileriyle yapılmıştır (N=109). Veriler, dil ve konuşma terapisi hakkında farkındalığı ölçmek amacıyla tasarlanmış bir anketle toplanmıştır. Verilerin değerlendirilmesinde, tanımlayıcı istatistikler, ki-kare testi ve Fisher'in kesin ki-kare testi kullanılmıştır ve $p < 0,05$ değeri istatistiksel olarak anlamlı kabul edilmiştir.

Bulgular: Çalışmada katılımcıların %85,3'ünün dil ve konuşma terapisi hakkında bilgi sahibi olduğu, %66,7'sinin bu bilgiyi sosyal medyadan edindiği bulunmuştur. Hemşirelik öğrencilerinin %63,3'ü dil ve konuşma terapistlerinin lisans diplomasına sahip olduğunu belirtmiştir. Ayrıca, %98,2'si dil ve konuşma terapistlerinin okul çağındaki çocuklarla, %87,2'si okul öncesi çocuklarla, %78,0'i ergenlerle ve %61,1'i yetişkinlerle çalıştığını belirtmiştir. Ek olarak, %100'ü dil ve konuşma terapistlerinin konuşma bozukluklarıyla, %96,3'ü kekemelikle, %78,0'i otizmle, %76,1'i dudak-damak yarığıyla ve %73,4'ü ses bozukluklarıyla çalıştığını bildirmiştir.

Sonuç: Çalışma, hemşirelik öğrencilerinin dil ve konuşma bozuklukları ve bu alandaki çalışma alanları konusunda yeterli farkındalığa sahip olmadığını ortaya koymuştur. Farkındalığın artırılması için, hemşirelik müfredatına interdisipliner derslerin eklenmesi, sağlık ekibi üyeleriyle vaka sunumlarının düzenlenmesi ve seminerler organize edilmesi önerilmektedir.

Anahtar Kelimeler: Konuşma, Dil terapisi, Hemşirelik öğrencileri, Farkındalık

INTRODUCTION

The foundation of human relationships is communication, involving the mutual sharing of emotions, thoughts, and views through various symbols. As social beings, it is

essential for us to connect and understand each other. Communication problems can lead to restrictions in relationships at the family, societal, national, and global levels. Speech and language therapists working in all areas

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Submission Date: 19.02.2025 **Acceptance Date:** 05.06.2025

Cite as: Sariyer MN, Karaahmetoglu D, Ulas Karaahmetoglu G. Determination of The Awareness Of Final-Year Nursing Department Students Toward Speech And Language Therapists. Eskisehir Med J. 2025; 6(2): 84-91. doi: 10.48176/esmj.2025.187

of communication assess and provide therapy for language, speech, voice, and swallowing functions across all age groups. Additionally, Speech and Language Therapists (SLT) are responsible for the lifelong prevention, differential diagnosis, and investigation of communication disorders (1-4).

SLT is a relatively recent field in comparison to established disciplines such as medicine and education, and it is only recently that it has gained worldwide recognition. Research conducted in the late 20th century reported that the public's knowledge of the speech and language therapy profession was limited or insufficient (5-7). In the 21st century, although awareness of the profession remained limited, there was an increase in public knowledge (8-9). In Türkiye, the development of speech and language therapy began in the early 2000s. SLT were officially recognised as healthcare professionals in the country on 6 April 2011 (10,11).

The growing recognition of SLT as a professional field is seen as a key reason for the limited understanding of its roles and responsibilities. Research has shown that insufficient awareness of this field impedes the early detection of communication disorders and delays access to timely interventions (12,2). Additionally, individuals with speech and language disorders often seek help from a range of other professionals due to a lack of knowledge about the specific expertise of speech and language therapists. This lack of awareness disrupts the timely diagnosis, assessment, and intervention of these disorders. As a result, individuals could face missed opportunities in both their academic and social development due to untreated communication issues (13).

SLT engage in collaborative relationships with a wide range of professional groups as part of the early intervention process for speech and language disorders. The World Health Organization emphasizes the importance of multidisciplinary collaboration in improving the coordination of healthcare services, achieving positive outcomes related to diseases, and ensuring patient safety. A study on this topic highlights that collaboration between speech and language therapists and nurses positively contributes to patient outcomes and stresses the need for ongoing collaboration (14,15). Furthermore, it has been noted that the inclusion of speech and language therapists in multidisciplinary teams positively impacts both the workload of staff and hospital costs (13,14). Consequently, it is imperative for professionals working within multidisciplinary teams to possess a comprehensive understanding of SLT. A crucial aspect of this awareness is the promotion of SLT to nursing students prior to their entry into the profession. However, there is a need for further research in this area, particularly in the context of nursing students, within our country.

The aim of this study is to determine the knowledge levels and awareness of final year nursing students towards SLTs'.

METHODS

The Research Type

This descriptive study was conducted in Kastamonu between November 25, 2024 and February 26, 2024.

Participants

The participants of the study consist of final-year nursing students from Kastamonu University the Faculty of Health Sciences Nursing Department. No sampling method was used in the study. Students who accepted to participate in the study and were attending classes during the data collection period were included. The study was conducted with a total of 109 students (N=109, M=2.85) who voluntarily agreed to participate. The entire population had been reached. The inclusion criteria of the study were as follows: being a final-year nursing student, having a good level of proficiency in reading, writing, and understanding Turkish, being between the ages of 22 and 25, and providing both verbal and written consent to participate in the study after being informed about it. The exclusion criteria was not agreeing to participate in the study.

Data Collection Tools

The data for the research were collected using a three-part questionnaire. The first and third sections were prepared by the researchers. While preparing the questions, the researchers' theoretical and practical experiences were applied. The second section consists of questions prepared by Duru et al. (13). The first section consists of 6 questions, such as gender, age, parents' education level, family type, and place of residence. The second section consists of 17 questions aimed at determining awareness of language and speech disorders. The third section consists of 12 questions aimed at determining awareness of the working areas of speech and language therapists. Permission for the use of the questions has been obtained from the author via email. The data was collected through face-to-face interviews using a survey form. It took approximately 15 minutes for each participant to complete the survey form.

Data Analysis

The data obtained in the study were analysed using IBM SPSS for windows V 22.0 software. Number and percentage were used as descriptive statistical methods in the evaluation of the data. In the analysis of quantitative data, descriptive statistics were analysed using the Chi-square test and Fisher's exact Chi-square test (χ^2). The Chi-square (χ^2) test is a non-parametric test; therefore, the data are not expected to follow a normal distribution. The main assumption of the test is that the variables are categorical in

nature and that the expected frequencies in each cell are at an appropriate level (preferably 5 or above). In this context, the assumption of normal distribution is not applicable for the Chi-square analysis used in our study; therefore, no distribution analysis was performed.

Ethical Procedure

Permission for the implementation of the research was obtained from the university's clinical research ethics committee (dated 20/11/2024, decision number 2024-KAEK-119). Additionally, written consent was obtained via email from the author of the questionnaire for the use of the questions, as well as from the institution where the study was conducted. Participants were informed about the purpose of the study, the confidentiality of their responses, and their rights. Informed consent was acquired, and only voluntary participants were included in the study.

RESULTS

Distribution of Participants' Descriptive Characteristics

A majority of the participants 63.3% fall within the 22-23 age range. Additionally, 65.1% of the participants are female, 39.4% have mothers with only an elementary school education level, and 28.4% have fathers with high school education level. Furthermore, 76.1% of the participants belong to nuclear family structures, and 58.7% reside in urban areas (Table 1).

Table 1. Distribution of Participants' Descriptive Characteristics

Variables	Number	%
Age		
20-21	28	25.7
22-23	69	63.3
24 years above	12	11.0
Gender		
Female	71	65.1
Male	38	34.9
Educational Status of Mother's		
Literate	14	12.8
Elementary School	43	39.4
Secondary School	15	13.8
High School	21	19.3
Undergraduate	16	14.7
Educational Status of Father's		
Literate	9	8.3
Elementary School	27	24.8
Secondary School	23	21.1
High School	31	28.4
Undergraduate	19	17.4
Family Type		
Large Family	17	15.6
Nuclear Family	83	76.1
Broken Family	9	8.3
Place of Residence for The Longest Period		
City	64	58.7
Country	29	26.6
Village	16	14.7

The Awareness of the Participants towards Speech and Language Therapy

85.3% of the participants reported having knowledge of SLT, while 14.7% stated that they did not have any information about it. It was found that 14% of the participants obtained information about Speech and Language Therapy from books, magazines, or articles, 19.4% from television, 66.7% from social media, and 31% from other sources. Among those who were familiar with SLT 74.3% stated that their relatives did not receive speech and language therapy. Of those whose relatives did receive therapy, 58.3% received treatment for stuttering, while 50 % received therapy for Childhood Language Disorders (CLD).

Nursing Students' Awareness of the Work Groups of Speech and Language Therapists and opinions on Speech and Language Therapy Education Periods

98.2% of the participants stated that SLPs work with school-age children, 87.2% with preschool children, 78.0% with adolescents and 61.1% with adults. According to the participants, 63.3% believe that SLPs hold a bachelor's degree, 21.1% believe they hold an associate's degree, and 15.6% believe they hold master's or postgraduate degree.

Nursing Students' Views on the Professions Working Groups of Speech and Language Therapists and fields that SLTs' practice

89.9% of the participants stated that SLPs work with child development specialists, 86.2% with special education teachers/specialists, 85.3% with psychologists and 80.7% with teachers. 100.0% of the participants reported working with speech disorders, 96.3% with stuttering, 78.0% with autism, 76.1% with cleft lip/palate, and 73.4% with voice disorders.

The Awareness of Final Year Nursing Students Towards Speech and Language Disorders

The answers to the questions regarding whether they are evaluated by the SLT in the survey are detailed below. 78.9% of the participants marked "yes" for speech sound disorder, and 50.5% marked "yes" dyslexia. 46.8% of the participants marked the no option for Question 10 / delayed speech. 62.4% of the participants marked "yes" for speech disorder, 44.0% for hearing impairment, and 83.5% for stuttering. Only 32.1% of the participants marked "yes" for attention deficit. 58.7% of the participants marked the option for speech disorder (Table 2).

The comparison of nursing final year students' opinions regarding speech and language disorders is presented in Table 3. Only 1.8% of the participants marked the "disagree" option for the aphasia questions. All participants marked one of the "agree" options for the question about developmental language disorders. Only 3.7% of the participants marked

the "disagree" option for the question on voice disorders .Only 8.3% of the participants marked the "completely agree" option for the swallowing disorders question.

Table 2. Distribution of Responses to Awareness Questions Regarding Speech and Language Disorders Worked by SLTs

	Yes		Not Sure		No	
	n	%	n	%	n	%
Question 8 - Speech sound disorder	86	78.9	14	12.8	9	8.3
Question 9 – Dyslexia	55	50.5	34	31.2	20	18.3
Question 10 - Speech delay	30	27.5	28	25.7	51	46.8
Question 11 - Voice disorder	68	62.4	23	21.1	18	16.5
Question 12 - Hearing loss	48	44.0	35	32.1	26	23.9
Question 13 – Stuttering	91	83.5	13	11.9	5	4.6
Question 14 - Attention deficit disorder	35	32.1	37	33.9	37	33.9
Question 15 - Language disorder	64	58.7	31	28.4	14	12.8

The comparison of nursing final year students' opinions regarding speech and language disorders is presented in Table 4. A statistically significant difference was found in some questions related to awareness of speech and language therapy (SLT) across demographic characteristics ($p<0.05$). Women had more knowledge about SLT (65.1%), especially those with undergraduate education (14.7%), and reported more involvement in stuttering therapy and working with individuals with dementia.

Table 3. Distribution of Responses to Awareness Questions Regarding SLT's Areas of Work

	Completely Agree		Agree		Partially Agree		Disagree	
	n	%	n	%	n	%	n	%
Question 1 - Aphasia	29	26.6	52	47.7	26	23.9	2	1.8
Question 2 - Developmental language disorders	52	47.7	54	49.5	3	2.8	0	0.0
Question 3 - X-linked language disorders	33	30.3	64	58.7	11	10.1	1	0.9
Question 4 - Stuttering	56	51.4	51	46.8	1	0.9	1	0.9
Question 5 - Cluttering	50	45.9	50	45.9	8	7.3	1	0.9
Question 6 - Speech sound disorder	40	36.7	53	48.6	12	11.0	4	3.7
Question 7 - Speech sound disorder due to cleft lip and palate	34	31.2	43	39.4	27	24.8	5	4.6
Question 8 - Speech sound disorder due to hearing loss	26	23.9	42	38.5	26	23.9	15	13.8
Question 9 - Dysarthria	20	18.3	50	45.9	33	30.3	6	5.5
Question 10 - Apraxia	22	20.2	43	39.4	35	32.1	9	8.3
Question 11 - Voice disorder	33	30.3	55	50.5	17	15.6	4	3.7
Question 12 - Swallowing Disorders	9	8.3	21	19.3	41	37.6	38	34.9

Individuals in the 22-23 age group reported more experience working with adults and language disorders in SLT (28.4%) and were more likely to say SLT does not work with dentists (73.9%). Those whose mothers were primary school graduates were more likely to hear about SLT from social media (66.7%) or people around them and believed SLT works with speech sound disorders, language disorders, and cleft lip and palate (31.2%). People with high school graduate fathers were more likely to say SLT works with language disorders and does not work with muscle diseases (27.5%). Those from nuclear families heard more about SLT through social media (72%), while those living in the province for longer periods were more aware that SLT does not work with dentists, but works with child development specialists and does not work with people who had their throat/vocal cords removed (39.6%).

The comparison of nursing final year students' opinions regarding speech and language disorders is presented in Table 5. The difference between demographic characteristics and the areas of work of the SLT was found to be statistically significant in some questions ($p<0.05$). It was found that women marked the "I agree" option more for aphasia (47.7%), those with a nuclear family marked the "I completely agree" (51.4%) option more for stuttering, and those who have lived in the province the longest marked the "I completely agree" (30.3%) option more for X-linked language disorders. It was found that those who are knowledgeable about SLT marked the option "completely agree" (8.3%) more frequently for swallowing disorders.

DISCUSSION

This The study was completed with 109 participants. In our study, 85.3% of the students indicated that they were knowledgeable about SLT. In the study by Oğuz and Aytar, 61.9% of medical faculty students stated that they were aware of the SLT profession (11). It was found that 83% of health sciences faculty students were aware of the SLT profession (14). However, contrary to our findings, Hsiao and colleagues found that students from the nutrition and dietetics, nursing, and SLT departments had insufficient knowledge about each other's clinical roles (15). In Croker et al.'s (16) study, it was also found that SLT and nutrition and dietetics students had insufficient knowledge about each other's fields of work. It can be said that the reason for this difference is due to the studies being conducted in different countries. In Oğuz's (17) study, which was conducted by providing education related to the SLT profession, it was found that psychology department students had some knowledge about SLT before the training, but this knowledge was not sufficient for team collaboration. It was noted that their level of knowledge increased after the training and that they became more proficient in SLT terminology. Similarly, Saldert et al. evaluated the level of knowledge, awareness, and attitudes

Table 4. The Distribution of Chi-Square Results Between Gender and Responses to Language and Speech Disorder Questions

	X²	n	Sd	p
Gender				
Information Status About SLT	13.304	109	1	0.000
Education Duration	12.511	109	2	0.002
Question 13 - Stuttering	13.475	109	2	0.001
Dementia	9.566	109	1	0.003
Age				
SLT Works for Adults	6.376	109	2	0.041
Question 15 - Language disorder	11.523	109	4	0.021
SLT Works with Dentists	7.185	109	2	0.028
Educational Status of Mother's				
Hearing From Social Media About SLT	22.527	93	4	0.000
Hearing From People Around About SLT	10.611	93	4	0.031
Status of Being a Relative of a Therapy Patient	11.383	93	4	0.023
Question 15 - Language disorder	16.715	109	8	0.033
SLT Works with Cleft Palate Related Speech Sound Disorders	9.794	109	4	0.044
Educational Status of Father's				
Question 15 - Language disorder	19.893	109	8	0.011
SLT Works with Muscle Disease	13.531	109	4	0.009
Type of Family				
Hearing From Social Media About SLT	6.466	93	2	0.039
Place of Residence for The Longest Period				
SLT Works with Dentists	9.447	109	2	0.009
SLT Works with a Child Development Specialist	9.262	109	2	0.010
SLT Works with people who have had their throat/vocal cords removed	7.271	109	2	0.026

X² = Ki-kare testi, Sd = Standard deviation, p < 0,05

before and after the training and found a statistically significant increase(18). It appears that SLT awareness training is important for health profession candidates in terms of working collaboratively with a team. In our study, it was found that 66.7% of the students were informed about

SLT through social media. In Köklü's study, 61.0% of students stated that they obtained information about the SLT profession from social media/the internet (14). Similarly, it was noted in Altınsoy's study that students obtain information from social media. These results are not

Table 5. The Awareness of the Working Areas of SLT According to the Introductory Characteristics of Final Year Nursing Students

	X ²	n	Sd	p
Gender				
Question 1 - Aphasia	11.045	109	3	0.011
Family Type				
Question 4 - Stuttering	13.338	109	6	0.038
Place of Residence for The Longest Period				
Question 3 - X-linked language disorders	13.529	109	6	0.035
Information Status About SLT				
Question 12 - Swallowing Disorders	9.939	109	3	0.019

X² = Ki-kare testi, Sd = Standard deviation, p < 0,05

surprising when considering the sample group for whom social media usage is indispensable. Additionally, it demonstrates that social media is quite important for raising awareness about the SLT profession.

In our study, 98.2% of the students indicated that SLT works with school-aged children, 87.2% with preschool children, 78.0% with adolescents, and 61.1% with adults. It was stated that 84% of students express that SLT works with every age group (14). In the study by Puhlman and Johnson, it was found that 90% of the students stated that SLT works with every age group (19). In Altinsoy's study, it was determined that the three best populations for SLT to work with are school-aged children, preschool children, and adolescents (10). Although the results of this study conducted with health profession candidates are not sufficient, it is considered positive from the perspective of team collaboration that they indicate SLT works with all age groups, especially children.

In our study, 78.9% of the students believe that SLT is a graduate of a bachelor's/master's program. Köklü found that 85% of the students had accurate information about the education level of SLT (14). In the study by Puhlman and Johnson, 81% of the students indicated that the required education level for SLT is a bachelor's/master's degree (19). In Altinsoy's study, two-thirds of the students believe that SLT should be studied at the undergraduate/graduate level (10). These findings are similar to our study. Even if not at a sufficient level, it is observed that students correctly identified the education level of SLT. However, in their study, Oğuz and Aytaç found that only 25.7% of the students indicated that SLT should have a bachelor's/graduate degree (11). These findings are consistent with ours and reflect a growing awareness of the educational requirements for SLT. Although there is still room for

improvement, it is evident that students increasingly recognize the proper academic qualifications needed for the profession. However, in contrast, Oğuz and Aytaç found that only 25.7% of students believed that SLT should require a bachelor's or graduate degree (11). This suggests that awareness has increased in more recent years.

In our study, 89.9% of the students indicated that they work with a child development specialist, 86.2% with a special education teacher/specialist, 85.3% with a psychologist, and 80.7% with a teacher. It was stated that most students work with an SLT, audiologist, and special education specialist (14). In the study by Puhlman and Johnson, the most frequently given responses regarding this matter were identified as teachers and physiotherapists (19). These findings highlight the interdisciplinary nature of speech and language therapy, as SLTs often collaborate with a wide range of professionals to support individuals with communication disorders. Similarly, it has been reported that most students work with SLTs, audiologists, and special education specialists (14). In the study by Puhlman and Johnson, the most frequently mentioned professionals working alongside SLTs were teachers and physiotherapists (19). These results further emphasize the collaborative framework within which SLTs operate, underlining the importance of teamwork in providing comprehensive care.

In our study, 100% of the students indicated that they work with speech disorders, 96.3% with stuttering, 78.0% with autism, 76.1% with cleft lip/palate, and 73.4% with voice disorders. In Köklü's study, 99% of the students indicated that the areas of work for SLT include stuttering (14), and 74% indicated speech sound/articulation disorders. Oğuz and Aytaç, as well as Puhlman and Johnson, found similar results in their studies (11-19). In

Altınsoy's study, it is stated that students mostly express that SLT works on speech sound disorders or stuttering (10)

Oğuz and Aytar, as well as Puhlman and Johnson, reported comparable results in their studies (11-19). In Altınsoy's study, it was also noted that students most commonly associate SLT with the management of speech sound disorders and stuttering. These findings collectively indicate a strong awareness among students of the key disorders addressed by SLTs, particularly in the domains of fluency and speech sound disorders.

Conclusion and Recommendations

In our study, it was found that students' awareness of language and speech disorders and their areas of work was insufficient. It is very important for nurses, who make up a large part of the healthcare team, to have sufficient awareness in this regard, as it enables them to correctly guide patients and provide timely and effective interventions. Having nursing candidates knowledgeable about the roles, responsibilities, and competencies of their team members will strengthen collaboration and enhance the quality of patient care. The knowledge level of nursing candidates regarding the procedures for working with the SLT profession, situations where patients need to be referred, and the topics necessary for team collaboration is quite inadequate. The addition of interdisciplinary courses to the undergraduate curriculum, conducting case presentations with health team members, and organizing seminars will contribute to increasing awareness of the SLT profession. Additionally, promoting the profession through social media will increase public awareness and support the establishment of a supply-demand system.

Speech and language therapy is still relatively new in our country, it is not given adequate recognition. As a result, individuals with speech and language disorders seek help from various professionals. Since the healthcare sector requires a multidisciplinary team effort, other healthcare professionals must be aware of the field of speech and language therapy. As an important part of the healthcare team, nurses' knowledge in this area will greatly contribute to the referral of patients for early and effective intervention. For these reasons, it is essential to determine the knowledge levels of final-year nursing students who will soon step into the nursing profession to raise awareness about speech and language therapy.

LIMITATIONS OF THE STUDY

There are several limitations to this study. First, due to the nature of the cross-sectional study, we cannot estimate the dynamic changes between the variables and relationships. Second, this study was conducted only in a single group of students in Kastamonu province with a limited sample representation.

Ethics Committee Approval: Permission for the implementation of the research was obtained from Kastamonu University's clinical research ethics committee (dated 20/11/2024, decision number 2024-KAEK-119).

Informed Consent: Informed consent was acquired, and only voluntary participants were included in the study.

Authorship Contributions: Idea/Concept:MNS, Design:MNS, DK, Supervision:MNS, Data Collection and Processing:MNS, DK, Analysis or Interpretation:DK, Literature Search:MNS, DK, Writing:DK, MNS, GUK, Critical Review: MNS, References and Fundings:-Materials:-.

Conflict of Interest: The authors have no conflicts of interest to disclose.

Financial Disclosure: This study has not received funding support from any official, commercial, or non-profit organization.

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