

The Awareness of Speech and Language Therapy Among University Students

Üniversite Öğrencileri Arasında Dil ve Konuşma Terapistliği Mesleğine İlişkin Farkındalığın Araştırılması

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Abstract: Although speech and language therapy has been improving in Türkiye since the early 2000s, there are few surveys of how much recognition of this profession has been achieved in the Turkish population. The first aim of this study was to determine the level of awareness of the speech and language therapy profession at Akdeniz University in Antalya. Secondary aims were to observe any differences when the students were evaluated in groups of health-related/non-health-related fields, and females/males. The study was conducted as a public awareness survey with 420 Akdeniz University students from 20 different faculties. Descriptive statistical analyses and Pearson Chi-squared test were performed. The results showed a low awareness of speech and language therapy profession in Akdeniz University students ($n=124$, 30%) and social media was the most common source of obtaining information. University students thought that speech and language therapists worked mostly in special education settings with children and adults who had speech sound disorders and stuttering. The recognition of speech and language therapy was greater among female students ($\chi^2=7.665$, $p=.006$) and students from medical majors ($\chi^2=13.219$, $p<.001$). There is a clear need to raise awareness of speech and language therapy among university students in Antalya.

Keywords: Awareness; Speech and language therapy; University students

Özet: Dil ve konuşma terapistliği 2000'li yılların başından bu yana Türkiye'de gelişmekte olmasına rağmen, bu mesleğin Türk toplumunda ne kadar tanındığına dair çok az araştırma bulunmaktadır. Bu çalışmanın ilk amacı, Antalya'daki Akdeniz Üniversitesi öğrencilerinin dil ve konuşma terapistliği mesleğine ilişkin farkındalık düzeyini belirlemektir. İkinci amaç ise öğrencilerin bölümleri sağlıklı ilintili olan/olmayan şekilde karşılaştırıldığında ve cinsiyetlerine göre değerlendirildiğinde bulgularda herhangi bir farklılık olup olmadığını gözlemlemektir. Çalışma, 20 farklı fakülteden 420 Akdeniz Üniversitesi öğrencisi ile bir kamuoyu farkındalık araştırması olarak yürütülmüştür. Tanımlayıcı istatistiksel analizler ve Pearson kare testi yapılmıştır. Sonuçlar, Akdeniz Üniversitesi öğrencilerinin dil ve konuşma terapistliği mesleği hakkında farkındalıklarının düşük olduğunu ($n=124$, %30) ve sosyal medyanın en yaygın bilgi edinme kaynağı olduğunu göstermiştir. Üniversite öğrencileri, dil ve konuşma terapistlerinin çoğunlukla özel eğitim ortamlarında konuşma sesi bozukluğu ve kekemeliği olan çocuk ve yetişkinlerle çalıştığını düşünmektedir. Dil ve konuşma terapistliğinin tanınırlığı kız öğrenciler ($\chi^2=7.665$, $p=.006$) ve tıp fakültesi öğrencileri ($\chi^2=13.219$, $p<.001$) arasında daha yüksektir. Sonuç olarak, Antalya'daki üniversite öğrencileri arasında dil ve konuşma terapistliği farkındalığının artırılmasına yönelik önemli düzeyde bir ihtiyaç söz konusudur.

Anahtar Kelimeler: Farkındalık; Dil ve konuşma terapisi; Üniversite öğrencileri

1. Introduction

Speech and language therapist is a qualified person who practices professionally in the fields of communication (speech production, fluency, language, cognition, voice, resonance, hearing) and swallowing with individuals of all ages (ASHA, 2016). Speech and language therapy (SLT) is the profession in which speech and language therapists perform particularly in the evaluative, diagnostic and therapeutic services.

Compared to other health-related specialities, SLT has only been recognized more recently throughout the world. In the literature of the last quarter of the 20th century, some researchers reported that society had limited and insufficient knowledge about the SLT profession (Pearlstein, Russell & Fink, 1977; Killarney & Lass, 1981; Parsons, Bowman & Iacono, 1983). This has been changing in the 21st century, with a few studies noting an increase in the awareness of communication disorders and

SLT, even if not yet at an adequate level (Chu et. al., 2019; Tang & Chu, 2021) while others have claimed a high degree of awareness of SLT (Reddy, Shanbal & Arunraj, 2016; Reddy, 2019).

In Türkiye, which is categorized as a developing country, the development of SLT as a distinct field took place in the early 2000s. Since that time, there have been great improvements in the evaluation, diagnosis, and therapy services for the Turkish population with speech, language, voice and swallowing difficulties. To date, there is no available documentation of the numbers who could apply for SLT services in Türkiye. However, there have been some studies on the awareness of Turkish society of SLT or communication disorders (Topbaş, 2006; Maviş, 2007; Aydın Uysal & Tura, 2018; Duru, Akgün & Maviş, 2018; Aydın Uysal, Güdük & Tura, 2019; Oğuz & Aytar, 2020; Kement, Topbaş & Bulut, 2022). The overall conclusion from those studies is that the level of awareness of SLT is not sufficiently high.

The trend towards studying the level of knowledge about speech and language disorders in some specific populations, such as mothers, teachers, doctors or nurses, etc., is of importance as these are the individuals who are most likely to first identify communication disorders. It can be seen from the literature that there has not been a great tendency to investigate the awareness of SLT in university students. Some surveys have reported findings from undergraduate students who were potentially going to work with speech and language therapists (Sullivan & Cleave, 2003; Cedergren, 2015) and others have focused on male college students to determine the awareness, knowledge and attitudes associated with the profession according to gender stereotype (Puhlman & Johnson, 2019). This study was conducted with university students as the time spent at university can be considered to be the last junction before turning into the roads where the “awareness” and “impairment” of communication patterns as a speaker or a listener will be significant when the individual (a) joins the workforce, and (b) becomes a parent.

The primary aim of this research was to evaluate the basic awareness of university students about SLT in Antalya. It has been asserted in literature that healthcare providers are more aware of communication disorders and SLT (Breadner, Warr-Leeper & Husband, 1987; Chu et. al., 2019; Reddy, 2019; Mahmoud, Aljazi & Alkhamra, 2014; Tang & Chu, 2021). A secondary aim of this study was to evaluate the findings by separating the university students into two categories of health-related and non-health-related sciences. Some studies have also stated that females know much more about SLT than males (Maviş, 2007; Chu et. al., 2019; Thordardottir, Topbaş & Working Group 3 of COST Action IS1406, 2021), so in the third and final phase of this study, the results of females and males were compared.

This study was conducted in Akdeniz University, which has 125 different undergraduate departments in 24 faculties, and is located in the Mediterranean region of Türkiye. The study included a total of 420 undergraduates, aged 17-51 years, studying in 20 faculties in the central campus in Antalya and one faculty off-campus in Kumluca. The faculties of the students participating in the study included both health-related (faculty of dentistry, two faculties of health sciences one of which was in Kumluca, faculty of medicine and faculty of nursing) and non-health-related faculties consisting of a broad spectrum of faculties such as fine arts, maritime, theology, etc. Both faculties of health sciences do not include a speech and language therapy department and no student reported specialization in this field. The presence of a speech and language therapist in the family, having received speech and language therapy before, etc. were not counted as exclusion criteria. The data were collected over a one-month period, by delivering the questionnaires by hand to 20 students in each faculty, gathered in the cafeteria. Approval for the study was granted by the Ethics Committee of Akdeniz University (protocol no: KAEK-297) and each student provided written informed consent for participation. According to the descriptive data presented in Table 1, the majority were second and third-year students younger than 25 years, studying in non-health-related majors, with an almost equal distribution of males and females.

The public awareness questionnaire of speech-language pathology developed by Breadner, Warr-Leeper and Husband (1987) was used in this research. The first administration of this form was in 1980 to 264 subjects and the second investigation was conducted in 1985 to 252 people in London. The results of the 1980 and 1985 samples were compared by Breadner, Warr-Leeper and Husband (1987). The Turkish version of this questionnaire has been utilized by Duru, Akgün and Maviş (2018) in which the level of awareness among 224 people was examined, and a survey of Aydın Uysal and Tura (2019) in which the views and knowledge of 189 parents of children with speech and language disorders were investigated. This Turkish version was adapted for university students with a few changes such as omitting the items related to having children/grandchildren and total income status. The questionnaire used in this study comprised four sections: Section A related to demographic information, Section B to the general state of health, Section C to awareness of speech-language pathology items, and Section D to decision-making for disorders. The questionnaire included 30 items, which consisted of three items related to demographic data, 11 items with two choices of response, six items with more than two choices and 10 items answered on five-point Likert-type scale.

Data obtained in the study were analyzed statistically using IBM SPSS Statistics software version 23.0. Descriptive statistics were used to evaluate distribution of the variables. Pearson's Chi-squared test was applied to identify the levels of awareness according to gender and

2. Method

health-related/non-health-related categories. Missed items were included. Of the 420 students enrolled, 392 (93.3%) completed the questionnaire in full. All respondents completed Sections A and B, 24 (5.7%) did not fully complete Section C and six (1.4%) did not complete Section D.

3. Results

The results will be discussed section-by-section within the questionnaire. Section A elicited demographic information and these results are shown in Table 1.

Section B was related to the general health status of the participants. According to the results, the majority of the students (88.6%) stated that they were well and 85.2% had not used any drugs in the past month. More than half of the students (67.4%) had never seen a neurologist or a psychiatrist. The vast majority of the students (89%) had no history of head trauma or injury.

In Section C, the students were asked about their experiences and opinions about the SLT profession. Approximately 30% of the students had read or heard about SLT, and social media was reported to be the main source of obtaining information (Figure 1).

The majority of the students (90.7%) had not met a speech and language therapist and many of them (87.6%) did not know anyone who had.

The results revealed that among the university students, 1.7% ($n=7$) had been referred to a speech and language therapist by a medical doctor. The pathologies reported were speech and voice disorders (speech sound disorders, stuttering and dysphonia). A few respondents (11.4% $n=48$) stated that they knew someone who needed a consultation from a medical expert for a speech and language problem. These problems were predominantly stuttering, speech sound disorders and delayed speech.

As seen in Figure 2, in response to Q16 that speech and language therapists mostly worked with the pre-school children, school-age children, teenagers and adults, more than half of the university students thought that elderly groups were seen mostly by speech and language thera-

pists and infants were the least seen group. In response to Q17, the majority of the students stated that speech and language therapists should have training beyond high school for at least 4 years. The least marked option was "at least 3 years". The responses to Q18 showed that it was thought that speech and language therapists provided services mostly in special education centres, counseling centres, hospitals and private clinics. Crisis management centres and geriatric nursing homes were regarded as the places where speech and language therapists worked the least.

More than half of the respondents (66%) thought the term, "speech correctionist" could also be appropriate for a speech and language therapist, but the term "speech pathologist" was much more preferred by 81% of the university students.

In Section D of the questionnaire, ten cases were presented which needed speech and language assessments and interventions. Using a 5-point Likert-type scale, the respondents decided whether each of these cases needed referral to a speech and language therapist. The responses of "yes" and "probably yes" show that the university students largely recognized speech sound disorders and early stuttering (Figure 3). Two-thirds of the university students were also quite aware of children with learning disabilities, voice problems, attention deficit, language disorder and risk of stroke. The highest rate of responses of "no" and "probably not" were for delayed speech and hearing problems.

Based on the "not sure" responses, the university students seemed to be confused with the prevalence of Alzheimer's disease by gender.

The final question in Section D asked students which pathological populations a speech and language therapist would be expected to work with. The vast majority of the participants thought that speech and language therapists mostly work with adults who stutter (91.9%) and people with total loss of speech (for example; hearing disorder) (90%). Over half of the respondents stated that children with autism (57.4%) and individuals with brain disease or brain injury (50.5%) were the populations with whom speech and language therapists work. Individuals

Table 1. Descriptive Characteristics of the University Students

	Gender		Age (M= 21,55; SD= 2,81)		Years of Students		Faculties of Students				
	N	percent	N	percent	N	percent	N	percent			
Female	217	51.7%	17 - 24	393	93.6%	Freshmen	70	16.7%	Health-related	100	23.8%
Male	203	48.3%	≥ 25	27	6.4%	Sophomores	150	35.7%	Non-health-related	320	76.2%
						3rd year	117	27.9%			
						4th year	73	17.4%			
						5th year	9	2.1%			
						6th year	1	0.2%			

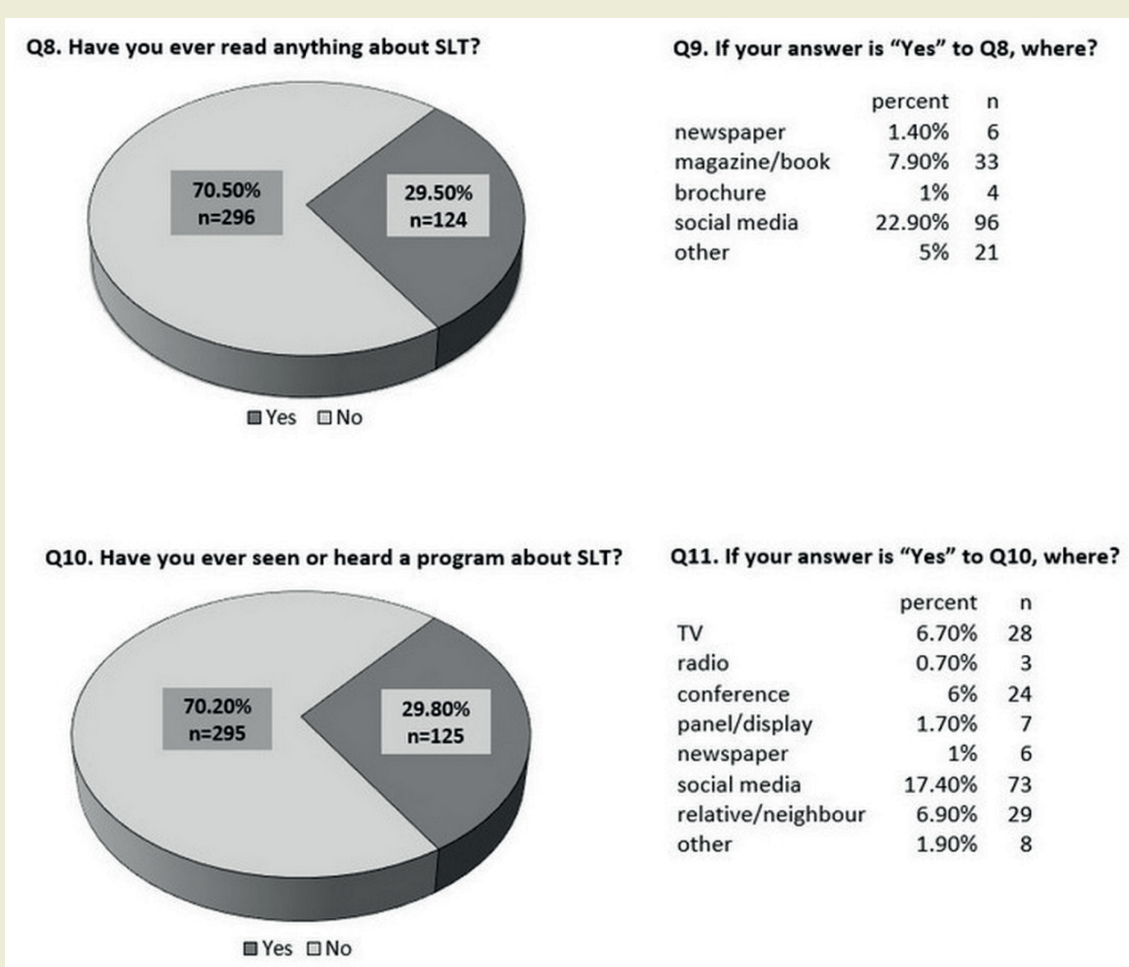


Figure 1. Distributions and Frequencies of the University Students' Responses to Q8, Q9, Q10 and Q11 (Q9 and Q11 were multiple-choice questions)

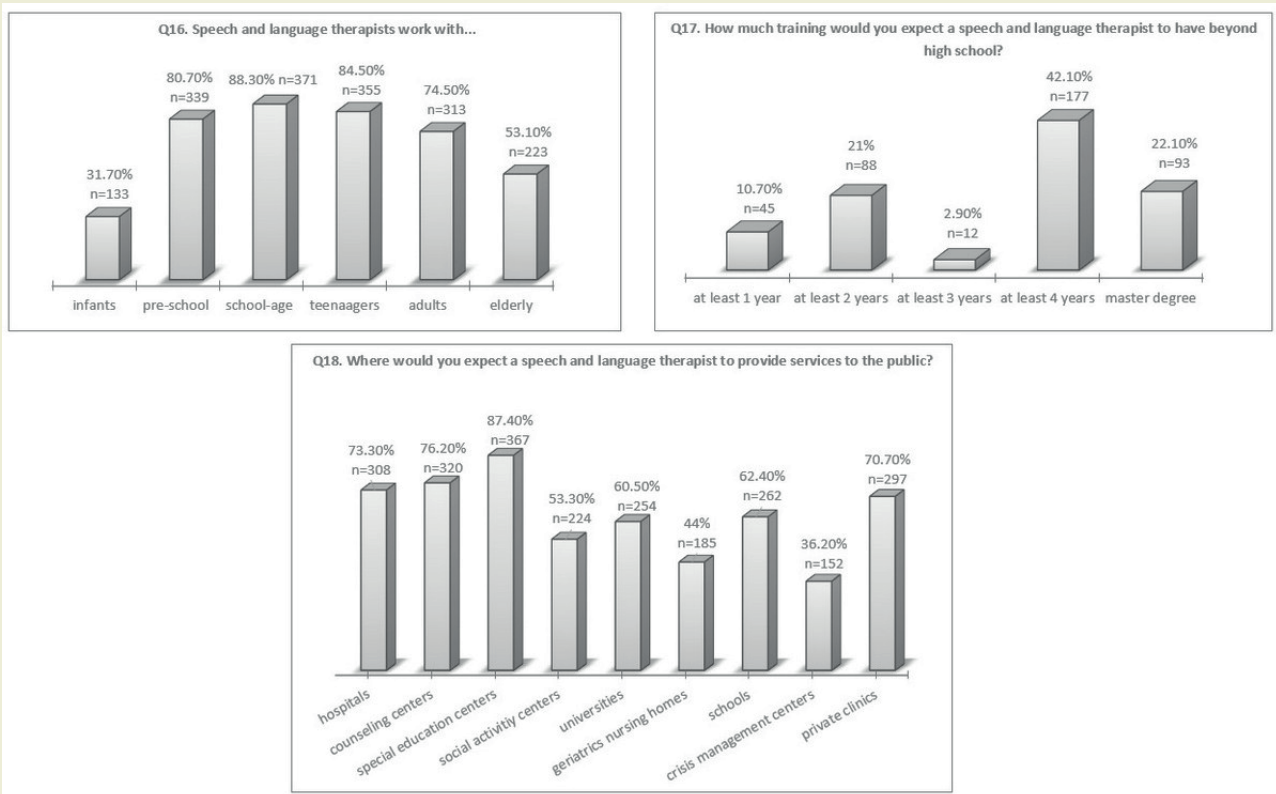


Figure 2. The Responses of the University Students to Q16, Q17 and Q18

with pneumonia, those who have lost their eyesight and leukemia patients were the groups least associated with SLT. Other groups ranged from 10% to 50% of the participants.

The results of Pearson’s Chi-squared analyses showed a significant relationship between the awareness of SLT

and the subject majors of the students ($\chi^2=13.219$ $df=1$ $p=.000$) (Figure 4). Students studying health-related subjects were much more familiar with SLT than students in non-health-related fields. The relationship between awareness of SLT and student gender was statistically significant ($\chi^2=7.665$ $df=1$ $p=.006$). Females were determined to have much more awareness of SLT than males.

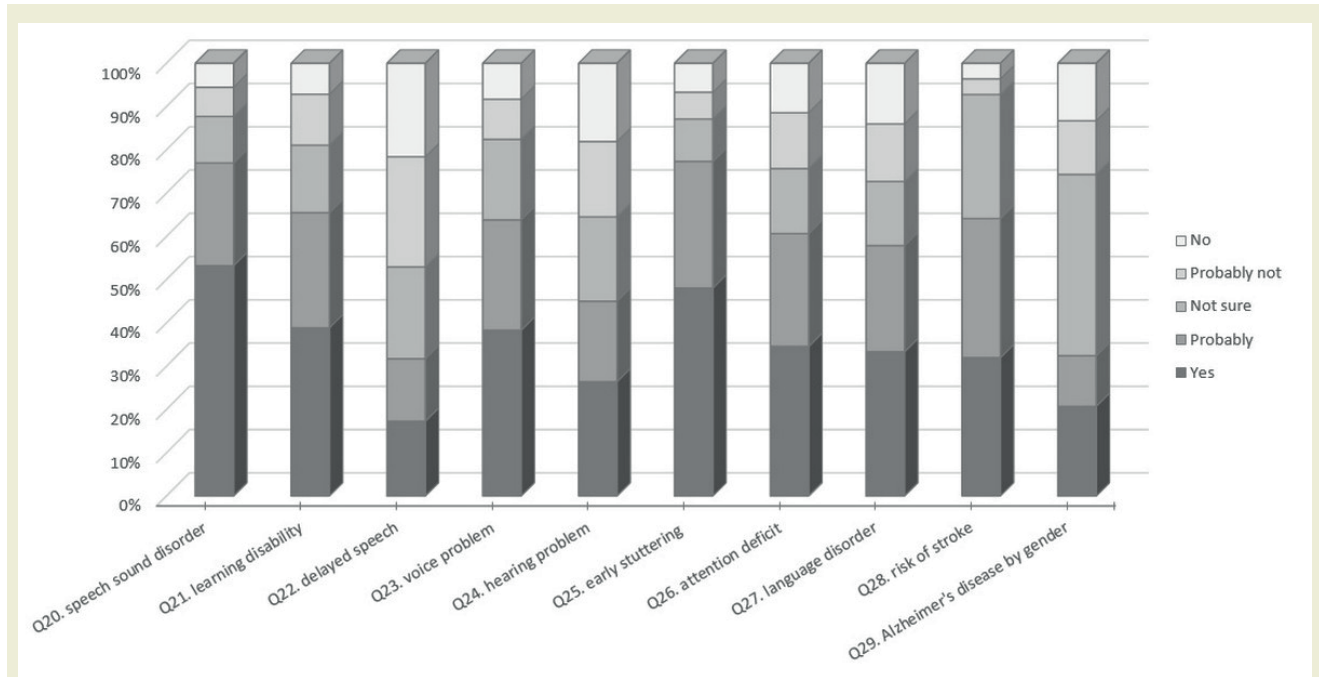


Figure 3. The Distributions of University Students’ Decision-making Responses to Case Scenarios

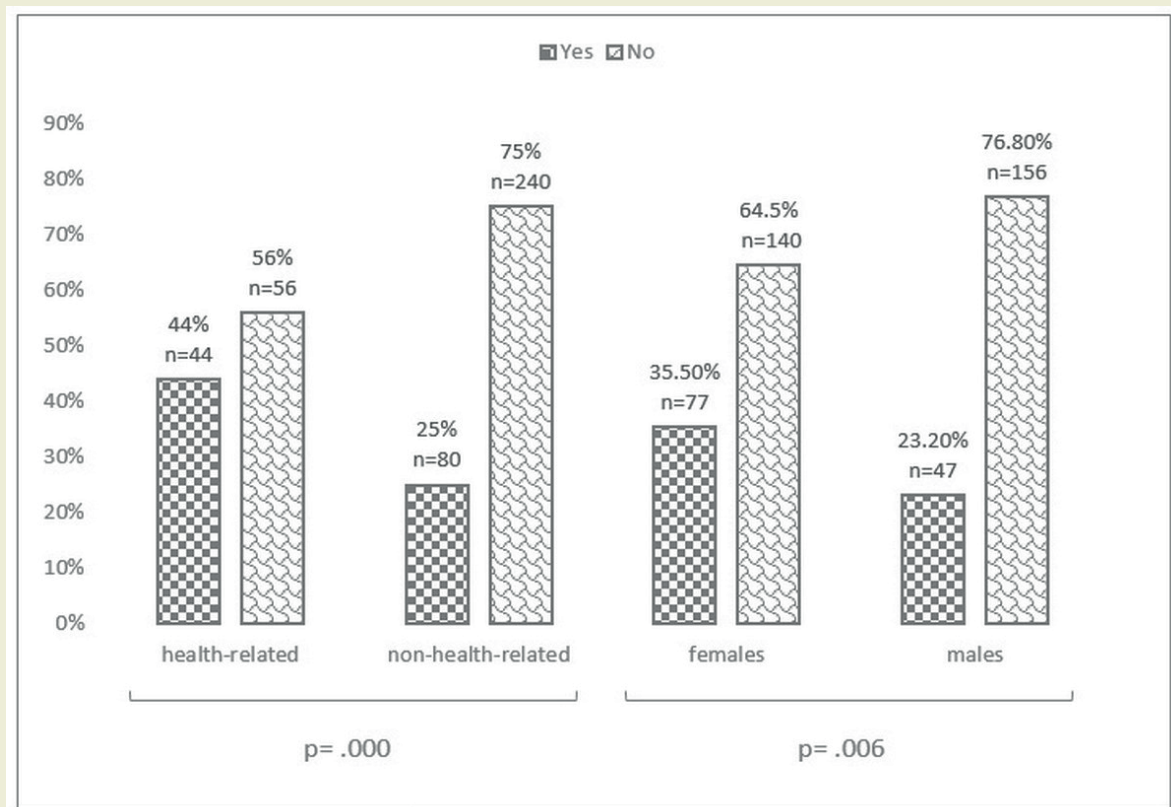


Figure 4. Responses to “Q8. Have you ever read anything about SLT?” According to the Major Subject of Study and Gender of the Students

4. Discussion

The aim of the present study was to examine the level of awareness of SLT among university students in Akdeniz University in Antalya, and to observe any change according to gender or health-related/non-health-related fields of study. The study results demonstrated a low level (30%) of general awareness among university students, which was consistent with the findings of previous studies (Maviş, 2007; Mahmoud, Aljazi & Alkhamra, 2014; Aydın Uysal & Tura, 2018; Tang & Chu, 2021). However, some studies of the general population (Chu et. al., 2019; Tang & Chu, 2021) have found university students to be more knowledgeable about SLT.

In the current study, the fact that social media was main source of information about SLT was not surprising as university students constitute “Generation Z” and the phenomenon in this young group is that they have had unlimited internet access throughout their lives (Dolot, 2018). The finding is also unsurprising because some researchers have stated that Generation Z connect online for at least 10 hours a day (Seemiller & Grace, 2016). In a study by Thordardottir, Topbaş and Working Group 3 of COST Action IS1406 (2021) it was reported that not only university students but also the general population learned about language impairment mostly from social media.

The results of Duru, Akgün and Maviş (2018) are also consistent with the results of the current study in two ways: first, two-thirds of the respondents thought speech and language therapists should have training of at least 4 or more years beyond high school. This demonstrated that university students were aware that SLT was a profession in which speech and language therapists should be highly trained. Secondly, the top three populations with whom speech and language therapists work were thought to be school-age children, pre-schoolers and teenagers. From this it can be inferred that the respondents in the previous study and the present study discounted the groups of infants as too early and the elderly as too late for speech and language intervention.

In the current study, 75% of the university students expected that a speech and language therapist would provide services in special education centres, counseling centres and hospitals as these are the places in Türkiye where speech and language therapists mostly work. However, as private clinics can be found increasingly all around Türkiye, 70% of the university students considered a speech and language therapist might perform services in such clinics. This was an encouraging result indicating that university students know where to apply and how to reach SLT services when needed.

In the mid-20th century, SLT profession was known as “speech correctionist” in the medical intervention teams in England and United States (Gibson & Shetye, 2023). The term “speech correctionist” recalls the elocution teacher in Turkish. The findings of the current study

demonstrated that 66% of the university students were not able to distinguish speech correctionist from speech therapist. However, many students found the term “pathologist” to be a more correct alternative to “therapist”, which indicated that more than 80% of the students realised that SLT is a profession which includes a clinical diagnosis and intervention functions in communicative disorders.

From the outcomes of the case scenarios, if “yes” and “probably” responses were taken into account together, it can easily be understood that the university students recognized SLT as a profession which deals mostly with speech sound disorders and stuttering. The students also expected speech and language therapists primarily to help people with total loss of speech to regain communication abilities. This supports the study by Duru, Akgün and Maviş (2018). The downward trends towards the delayed speech scenario showed that the students seemed to believe the “watch and see” approach. In a study (Thordardottir, Topbaş & Working Group 3 of COST Action IS1406, 2021), which included 18 European countries, one of which was Türkiye, it was found that childhood language impairment (CLI) was the least known abnormality of developmental disorders and the rate of CLI awareness in Türkiye was reported at the moderate level of 55% (Kement, Topbaş & Bulut, 2022). However, in the study (Chu et. al., 2019), the respondents marked “Yes” options to the case scenarios with speech and language delay.

An interesting finding was associated with “people with muscle diseases.” In the current study, 23.8% (n=100) of the university students were studying health-related major subjects but only 13.8% (n=58) expected a speech and language therapist to work with people with muscle diseases. This demonstrated a lack of knowledge about oral-motor correlations of speech delivery among the health-related students. However, this could be explained by the fact that many of the students were in the early years of university study, and only 73 of 420 were in the final academic years. Puhlman and Johnson (2019) reported an essential relationship between students’ awareness level of the SLT profession and academic year. It can be assumed that if there had been many more health-related students in final years, the relationship between the anatomy and physiology of fine-motor movements and oral-motor speech behaviour in muscle diseases would be more recognized.

When the findings of this study were examined in detail in respect of the secondary aims, it was clear that females and students in health-related fields were much more familiar with SLT. Previous studies (Maviş, 2007; Mahmoud, Aljazi & Alkhamra; 2014; Chu et. al., 2019; Reddy, 2019; Tang & Chu, 2021) have reported that females and those studying in health-related fields had greater familiarity with the SLT profession. This finding is important because students in health-related fields will work in collaboration with speech and language therapists in their careers and females are future mothers, so an awareness

of SLT enables opportunities for early intervention.

Speech and language therapists work not only with communicative disorders but also with swallowing disorders. However, a notable limitation of the questionnaire used in this study was that there was no item related to the deglutition function of the anatomic region and/or patients suffering from dysphagia.

Puhlman and Johnson (2019) investigated the relationship of male students' academic year and their awareness of SLT, and determined a linear increase from the first year of training to the last. Thus, another limitation of this study was that the academic year of the university students was not examined as a variable on the level of awareness of the SLT profession.

In Turkish culture, society can be confused about the function of SLT because of the use of "therapist" or "therapy" in the name of profession, as it can be regarded as the implementation of psychological interventions. This attitude may have restricted the university students from making correct judgments. Therefore, there is a need for further qualitative studies to evaluate what comes to mind when the term speech and language therapist is used.

Missed items were found in Section C (5.7%) and Section D (1.4%) although the majority of students was completed the questionnaire in full. In a review article, Kang (2013) recommended to the researchers to raise the data collected as the best solution for the missing data. Therefore, in the current survey, the sample size is considered to be sufficiently large to minimize the bias.

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In conclusion, the results of this study demonstrated a low level of awareness of the SLT profession among Akdeniz University students. Social media was the most common source of information about SLT. University students regarded SLT as a profession mostly working with children and people with speech sound disorders or stuttering at special education centres. Speech and language therapy was more recognized by students in health-related fields and females.

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