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Sağlık Teknikerliği Öğrencilerinin Kültürlerarası Duyarlılık ve Zenofobi Düzeyleri: Kesitsel Bir Çalışma

Transcultural Sensitivity And Xenophobism of Health Students: A Cross-Sectional Study

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ÖZET

Bu çalışma, sağlık teknikeri öğrencilerinin kültürlerarası duyarlılık ve zenofobi düzeylerini belirlemeyi amaçlamıştır. Çalışmaya 315 öğrenci gönüllü olarak katılım sağlamıştır. Veriler; sosyodemografik bilgi formu, Kültürlerarası Duyarlılık Ölçeği ve Zenofobi Ölçeği kullanılarak toplanmış ve SPSS 24.0 yazılımı ile analiz edilmiştir. Öğrencilerin kültürlerarası duyarlılık puan ortalaması 78.30±5.48, zenofobi ölçek puan ortalaması ise 53.04±13.75 olarak saptanmıştır. Yabancı dil bilme, farklı kültürlerden bireylerle eğitim alma, yurt dışında bulunma, sosyal medyada farklı kültürlerle iletişim kurma ve yurt dışında çalışma isteği gibi faktörler ile kültürlerarası duyarlılık puanları arasında istatistiksel olarak anlamlı bir fark ($p \leq 0.001$) bulunmuştur. Zenofobi puanlarında cinsiyet ve sınıf düzeyi değişkenlerine göre anlamlı farklılıklar tespit edilmiştir. Çalışmada, İletişimde Sorumluluk ($\beta = 0.402$), zenofobinin en güçlü pozitif yordayıcısı olmuştur. Yani, iletişimde hissedilen yüksek sorumluluk bilinci, zenofobiyi artırmaktadır. İletişimden Zevk Alma ve Farklılıklara Saygı boyutları ise zenofobiyi anlamlı düzeyde azaltmaktadır. Kültürlerarası duyarlılıktaki farklılıklar, zenofobi düzeylerindeki değişimin önemli bir kısmını açıklamaktadır. Olumlu duygusal bileşenler zenofobiyi azaltırken; iletişimde yüksek sorumluluk hissi, muhtemelen kaygıya neden olduğu için zenofobiyi istemeden artırabilmektedir.

Anahtar kelimeler: Zenofobi, Sağlık Eğitimi, Kültürlerarası Duyarlılık

ABSTRACT

This study aimed to determine the levels of transcultural sensitivity and xenophobia among health technician students. Data were collected from 315 students who volunteered for the study. Data were collected using a sociodemographic information form, namely the Transcultural Sensitivity Scale and the Xenophobia Scale. The data were analyzed using the SPSS 24.0 package software. Students' mean transcultural sensitivity score was determined to be 78.30±5.48, and their mean xenophobia scale score was 53.04±13.75. A statistically significant difference was found between Transcultural Scale scores and experiential factors such as foreign language knowledge, receiving training with people from different cultures, being in a foreign country, communicating with people from different cultures on social media, and the desire to work abroad ($p \leq 0.001$). Significant differences were found in students' Xenophobia Scale scores based on gender and current class level. Responsibility in Communication ($\beta = 0.402$) was the strongest positive predictor of xenophobia, while Enjoyment of Communication and Respect for Differences were significant negative predictors. Differences in students' transcultural sensitivity levels explained a significant portion of the variance in xenophobia levels. While positive affective components reduce xenophobia, a high sense of responsibility in communication may inadvertently increase xenophobia, possibly due to anxiety. The curriculum should be revised to incorporate interventions specifically aimed at reducing xenophobia and transcultural anxiety.

Keywords: Xenophobia, Health Education, Transcultural Sensitivity

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INTRODUCTION

Migration, a universal phenomenon throughout history, has led to societies adopting a multicultural structure, primarily due to increased global mobility. This situation has resulted in individuals communities encountering different cultures more frequently. Turkey, owing to its geopolitical location and rich historical heritage, has hosted various cultures, religions, languages for centuries, and its multicultural social structure has become even more pronounced in the present day due to intense migration (Özmete, 2018; Taşdemir et al., 2019). The rise in cultural diversity can also bring negative attitudes such as xenophobia (Durat and Tarsuslu, 2022). Especially within healthcare services, this phenomenon is termed medical xenophobia, referring to the negative attitudes displayed by health professionals towards migrant refugee patients (Peñuela-O'Brien et al., 2023). Such discrimination develops into a significant public health issue by leading to inequalities in access to healthcare, and this poses serious barriers to the provision of quality care (Aker and Kartal, 2023).

In this context, the concept of transcultural sensitivity, which denotes health professionals' ability to understand, and accept, appreciate different cultures, gains significant importance (İbiş, 2018; Chen and Starosta, 2024). Transcultural sensitivity is not only a component of effective communication but also a basic constituent of the emotional dimension of cultural competence (İbiş, 2018). For health professionals, the ability to empathize by understanding patients' cultural backgrounds, beliefs, and values forms the foundation for delivering equitable high-quality healthcare for all (Bulduk et al., 2017; Rengi and Polat, 2017).

Studies in the literature examine the levels of cultural sensitivity xenophobia among health professionals and students in various contexts. Some research reports high levels of cultural sensitivity (Ernawati, 2022; Ünver, 2019; Yıldız et al., 2024), while others point to high levels of xenophobia (Aker and Kartal, 2023; Güngör et al., 2021). These findings highlight the necessity for these topics to be addressed more effectively in educational curricula and professional practices. Especially in a country with high immigration, such as Turkey, determining the levels of cultural sensitivity xenophobia among students in the healthcare field will contribute significantly to the knowledge base in this area.

The primary aim of this study is to determine the levels of transcultural sensitivity xenophobia among students enrolled in associate degree healthcare programs to examine the relationship between these two concepts. While previous research has often focused on the overall correlation between transcultural sensitivity and xenophobia (Durat & Tarsuslu 2022; Akçoban & Şahmaran 2022, Delibaş et al. 2020), few studies have systematically investigated the differential unique predictive roles of the individual transcultural sensitivity sub-dimension***s*** on xenophobia (Dursun Ergezen & Aydın 2025). The findings obtained will therefore not only shed light on the revision of the health education curriculum in terms of cultural competence but also contribute to the existing knowledge base by pinpointing which specific facets of transcultural sensitivity are most critical in predicting xenophobic attitudes.

METHOD

Study Design Setting

This study utilized a descriptive cross-sectional design. The research population consisted of all students enrolled in healthcare associate degree programs (including Aged Care, First Aid and Emergency, Medical Documentation and Secretarial, Medical Laboratory Techniques, and Medical Imaging Techniques) within the Vocational School of Health Services at Xxxxxxxx University during the 2024–2025 academic year.

Sample and Data Collection

A convenience sampling method was employed to recruit participants. Out of the accessible population,

315 students who met the inclusion criteria volunteered to participate in the study (%68.47).

Inclusion criteria: Participants were required to be 18 years of age or older. They were expected to be associate degree healthcare program students actively continuing their education and willing to paricipate in the study. Being able to access the data collection tools was also an inclusion criterion. Participation was voluntary anonymous. The reporting of this cross-sectional study was guided by the STROBE Statement checklist. An online survey form, prepared using Google Forms (Google, Mountain View, California, USA), was used as the data collection tool, and the link to this form was sent to the students via text message. Research data were collected using three instruments: the Introductory Information Form, the Transcultural Sensitivity Scale (TSS), and the Xenophobia Scale.

The survey form consisted of four sections:

Informed Consent and Introduction Section: This section provided an informational text explaining the study's purpose, the importance of voluntary participation, and included the options "I want to voluntarily participate in this research" and "I do not want to participate in this research." Only students who gave their voluntary consent could proceed to the second section.

Introductory Information Form

This form included 13 questions designed to determine the students' sociodemographic characteristics (age, gender, parental education level, perception of income level, etc.). Furthermore, it contained information regarding the students' program class year, region of residence, professional perspective, foreign language proficiency, experiential attitudes towards people from different cultures (e.g., communication on social media, desire to work abroad).

Transcultural Sensitivity Scale (TSS)

The TSS was developed by Chen Starosta (2000) and adapted to Turkish by Bulduk et al. (2001). This five-point Likert-type scale aims to measure individuals' level of transcultural sensitivity. The scale consists of a total of 24 items comprising five sub-dimensions: Respect for Cultural Differences, Interaction Engagement, Interaction Confidence, Interaction Enjoyment, and Interaction Attentiveness. The scale score range is between 24 -120. In this study, the internal consistency coefficient was found to be α=0.84.

Xenophobia Scale

Developed by Kees Van Der Veer et al. (2011) to determine the attitudes of healthcare workers towards foreigners (Van Der Veer, 2013) and adapted to Turkish by Bozdağ and Kocatürk (2017), the Xenophobia Scale consists of 18 items. Responses are evaluated using a 5-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"). Items 7 -11 are reverse-scored. The scale score ranges between 18-90, with a higher score indicating a higher level of xenophobia. In this study, the scale reliability coefficient is α=0.93.

Data Analysis

The collected data were analyzed using SPSS 24.0 software. Prior to inferential testing, descriptive statistics (means ± Standard Deviation, frequencies, percentages) were calculated. The Shapiro-Wilk test confirmed the normal distribution of the data, thereby supporting the use of parametric tests. For bivariate comparisons, Independent Samples t-test was applied to examine differences between two groups, One-Way ANOVA was utilized for comparisons involving more than two groups. Spearman's correlation analysis was performed to investigate the relationships between numerical variables, and internal consistency was assessed using Cronbach's alpha. Finally, Multiple Linear Regression analysis was conducted to determine the predictive power of the TSS sub-dimensions on the

Xenophobia Total Score, with Stardized Beta (β) coefficients used to interpret the relative strength of the predictors. The threshold for statistical significance across all analyses was set at p<.05.

RESULTS

The mean age of the students participating in the study was 20.41±4.0 years. 76 %of the students were female, 62 %were second-year students. The distribution of students by department was as follows: Medical Imaging Techniques 23.2%, Elderly Care 29.5%, Medical Documentation Secretariat 15.6%, First Emergency Aid 19.4%, and Medical Laboratory Techniques 12.4% (Table 1).

Table 1. Sociodemographic Characteristics of Students

Age	M±SD 20.49±3.32		
		n	%
Gender	Female	239	75.9
	Male	76	24.1
Grade	1 st Grade	122	38.7
	2 nd Grade	193	61.3
Department	Elderly Care	93	29.5
	First and Emergency Aid	61	19.4
	Medical Imaging Techniques	73	23.2
	Medical Documentation and Secretarial Services	49	15.6
	Medical Laboratory Techniques	39	12.4
income status	Income equals expenses	168	53.3
	Income exceeds expenses	37	11.7
	Income less than expenses	110	34.9
Region of residence	City	152	48.3
	District	113	35.9
	Village	50	15.9
	Abroad	0	0
Foreign Language Proficiency	Yes	98	31.1
	No	217	68.9
Intercultural Coexistence	Yes	203	64.4
	No	112	35.6
Multicultural Education Environment	Yes	77	24.4
	No	238	75.6
Perceived Benefits of Intercultural Coexistence	Yes	296	94.0
	No	19	6.0
Residence Abroad	Yes	27	8.6
	No	288	91.4
Frequency of Cross-National Communication on Social Media	Daily	10	3.2
	Weekly	5	1.6
	Occasionally	126	40.0
	Never	174	55.2
Post-Graduation Intention to Work Abroad	Yes	229	72.7
	No	86	27.3

Confiden 48.3 % of the students were living in the city center, 31.1% stated they had knowledge of a foreign language. 64.4 % of the students had interacted with people from different cultures, 24.4 % reported participating in educational practices with people from different cultures. %94 of the students stated that there are positive aspects to interacting with people from different cultures. 91.4 % of the students reported never having been to a foreign country, while 72.7 expressed a desire to work abroad after graduation 55.2 %of the students stated that they had never communicated with people from different countries on social media (Table 1).

The TSS score was 78.30±5.48 (low-moderate level). The mean sub-dimension scores were: Responsibility for Communication 19.16±1.96, Respect for Cultural Differences 22.0±2.32, Confidence in Communication 15.71±1.46, Enjoyment of Communication 11.09±1.91, Attentiveness in Communication 10.30±1.17. The mean total score of the students on the Xenophobia Scale was 53.04±13.75 (Table 2).

Table 2. Scale Score Means and Sub-Dimension Score Means

Scale	Mean±SD
Xenophobia Scale	53.04±13.75
Transcultural Sensitivity Scale (TSS)	78.30±5.48
Responsibility for Communication Subscale	19.16±1.96
Respect for Cultural Differences Subscale	22.0±2.32
Confidence in Communication Subscale	15.71±1.46
Enjoyment of Communication Subscale	11.09±1.91
Attentiveness in Communication Subscale	10.30±1.17

M = Mean; SD = Standard Deviation

A statistically significant difference was found between TSS scale scores experiential factors such as foreign language knowledge, interacting with receiving training with people from different cultures, being in a foreign country, communicating with people from different cultures on social media, desire to work abroad ($p \leq 0.001$). Significant differences were found in the xenophobia scale scores according to the students' gender current class level.

A statistically significant correlation was found between the TSS sub-dimensions of Responsibility in Communication, Respect for Cultural Differences, Confidence in Communication, Enjoyment of Communication ($p < 0.05$) (Table 3).

Table 3. Differences in Scale Scores by Sociodemographic Characteristics

Characteristics	Xenophobia		TSS	
Gender				
Female	51.88	**p=0.025**	78.41	U= 9014,000
Male	56.71	U=9014.000	77.94	p=0.922
Department				
Elderly Care	52.03±13.32		78.43±5.69	
First and Emergency Aid	55.55±15.27		79.70±5.64	
Medical Documentation and	56.36±13.07	p=0.095	77.06±6.12	p=0.234
Secretarial Services			78.23±4.45	
Medical Laboratory Techniques	50.30±14.31		77.83±4.94	
Medical Imaging Techniques	51.47±12.67			
1 st Grade	50.72±12.99	**p=0.008**	78.21±5.23	p=0.922
2 nd Grade	54.51±14.04	U=9693.500	78.35±5.64	U=11696.500
income status				**p=0.018**
Income equals expenses[1]	51.91±11.98		77.54±5.22	[1-2] p=0.052
Income exceeds expenses[2]	53.70±14.05	p=0.564	79.72±4.86	[1-3] p=0.112
Income less than expenses[3]	54.56±15.97		78.98±5.89	[2-3] p=0.831
Region of residence				
City	54.38±14.49		79.11±5.07	
District	52.56±12.43	p=0.358	77.95±5.72	**p=0.005**
Village	50.06±14.00		76.62±5.74	
Foreign Language Proficiency				
Yes	54.36±14.93	U=9935.00	79.13±5.43	U=8823.000
No	52.45±13.17	P=0.351	77.92±5.**47**	**P=0.015**
Intercultural Coexistence				
Yes	53.17±14.42	U=11357.500	78.91±5.47	U=9202.00
No	52.81±12.49	P=0.989	77.18±5.33	**P=0.005**
Multicultural Education Environment				
Yes	55.67±15.60	U=8069.500	79.89±5.29	U=7392.500
No	52.19±13.01	p=0.114	77.78±5.45	**p=0.011**
Perceived Benefits of Intercultural Coexistence				
Yes	52.73±13.61	U= 2358.000	78.58±5.34	U=1601.00
No	57.84±15.27.	p=0.238	73.84±5.83	**p=0.002**
Residence Abroad				
Yes	53.37±16.05	p=0.843	76.59±6.89	p=0.147
No	53.01±13.54	U=3798.500	78.46±5.31	U=3232.000
Frequency of Cross-National Communication on Social Media				**p=0.000**
Daily [1]	60.40±20.13		81.80±8.16	[1-2] **p=0.000**
Weekly [2]	53.60±13.99		76.40±4.39	[1-3] p=0.536
Occasionally [3]	53.32±13.62	p=0.321	79.76±5.17	[1-4] p=0.482
Never[4]	52.40±13.40		77.09±5.23	[2-4] p=1.00
				[3-4] p=**0.000**
Post-Graduation Intention to Work Abroad				
Yes	53.58±14.07	U=9141.500	78.76±5.44	U=8294.500
No	51.61±12.82	p=0.327	77.05±5.42	**p=0.031**

* Mann Whitney U; ** Kruskal Wallis; ***Dunn's Multiple Comparison Test

The results of the multiple regression analysis investigated the predictive power of the sub-dimensions of the TSS on the Xenophobia Total Score. A moderate relationship was found between the TSS sub-dimensions the Xenophobia Total Score (R=0.446). The established regression model was found to be statistically significant ($F(4,310)=19.253; p<.001$), explaining approximately 19.9% of the variance in the Xenophobia Total Score ($R2=.199$). This result indicates that at least one combination of the TSS sub-dimensions significantly predicts Xenophobia (Table 4).

Table 4. Correlation Between Scale Scores

Scale	Xenophobia Scale
Transcultural Sensitivity Scale (TSS)	p=0.613
Responsibility for Communication Subscale	**p=0.000**
Respect for Cultural Differences Subscale	**p=0.022**
Confidence in Communication Subscale	**p=0.034**
Enjoyment of Communication Subscale	**p=0.003**
Attentiveness in Communication Subscale	p=0.452

Spearman correlation; p <0.05

According to the regression analysis results presented in Table 5; Responsibility in Communication, Enjoyment of Communication, and Respect for Cultural Differences were identified as statistically significant predictors of Xenophobia. The 'Responsibility in Communication' ($β=0.402$, $p < 0.01$) sub-dimension emerged as the strongest predictor in the model and exhibited a positive relationship with xenophobia. he sub-dimensions of 'Enjoyment of Communication' ($β=-0.183$, $p < 0.01$) and 'Respect for Cultural Differences' ($β=-0.178$, $p < 0.01$) were found to be negative predictors of xenophobia. These findings suggest that as individuals' respect for cultural differences and the pleasure they derive from intercultural communication increase, their tendency toward xenophobia significantly decreases. The 'Confidence' sub-dimension (p=0.054) was not found to be a statistically significant predictor of xenophobia

The unstardized regression equation demonstrating the predictive relationship between the Transcultural Sensitivity sub-dimensions the Xenophobia Total Score is presented as follows:

$Xenophobia=21.876-1.311(B1)+0.960(B2)-1.056(B3)+2.811(B4)$ (Table 5).

In this equation, the predictors correspond to:

B1: Enjoyment of Communication

B2: Confidence

B3: Respect for Differences

B4: Responsibility in Communication

Table 5. Multiple Linear Regression Analysis Results Predicting Xenophobia Total Score from Transcultural Sensitivity Sub-Dimensions

Predictor (TSS Sub-Dimension)	Stardized Coefficient (β)	Significance (Sig.)	Direction of Effect (B)
Responsibility in Communication	.402	.000***	Positive (+2.811)
Enjoyment of Communication	−.183	.001**	Negative (-1.311)
Respect for Cultural Differences	−.178	.001**	Negative (-1.056)
Confidence	.102	.054	Positive (+0.960)

***p < .001; **p < .01; *p < .05

DISCUSSION

This study was conducted to determine the levels of intercultural sensitivity xenophobia among students enrolled in associate degree healthcare programs to examine the relationship between these two critical concepts. The findings reveal the current state areas needing improvement in the cultural competence of future healthcare professionals. Choi Kim (2018) notes that while cultural sensitivity courses have been incorporated into medical nursing curricula, these educational efforts are often deemed insufficient. This inadequacy is further compounded by the dearth of academic resources specifically addressing this topic within associate degree healthcare programs (Bulduk et al., 2017), thereby elevating the urgency significance of the issue. The projection of ethnocentric approaches and cultural values by healthcare professionals into service delivery risks reducing the quality of patient-centered care, which can lead to serious adverse outcomes (Bilgiç and Şahin, 2019). In this context, determining the levels of cultural sensitivity and xenophobia among associate degree healthcare students is vital for restructuring the curriculum in terms of cultural competence and making necessary educational arrangements.

In the literature, the mean TSS scores of healthcare students range from a minimum of 76.49 to a maximum of 94.60, with our study finding a mean of 78.30 (Aktas et al., 2015; Choi and Kim, 2018; Bulduk et al., 2017; Bulduk et al., 2011; Çetişli et al., 2016; Bilgiç and Şahin, 2019; Durgun, Uzunsoy, Tümer and Huysuz, 2019; Delibaş et al. 2020). This low-moderate score is curial, given that cultural competence is critical for successful healthcare delivery. This finding suggests that students in various associate degree programs, such as Medical Imaging Techniques, Elderly Care, may be less exposed to cultural sensitivity topics in their curricula compared to those in bachelor's programs (like nursing or medicine). Our results, contrary to studies reporting higher TSS scores (Durgun et al., 2019; Bilgiç and Şahin, 2019), indicate a serious need for cultural interaction sensitivity training among associate degree healthcare students.

When examining the TSS sub-dimensions, the distribution of students' mean scores (Responsibility for Communication: 19.16±1.96; Respect for Cultural Differences: 22.02±2.32; Confidence in Communication: 15.71±1.46; Enjoyment of Communication: 11.09±1.91; Attentiveness in Communication: 10:30±1.17) shows significant consistency with other studies in the literature (Aktaş et al., 2015; Bulduk et al., 2017; Bilgiç and Şahin, 2019; Şahin et al., 2009). This consistency confirms that the cultural sensitivity profiles of healthcare students across different universities programs (First Emergency

Aid, Anesthesia, Dialysis, etc.) generally share a similar structure. Specifically, the highest score in the Respect for Cultural Differences sub-dimension and the lowest score in the Attentiveness in Communication sub-dimension suggest that students demonstrate respect for cultural diversity at a *cognitive* level but may lack sufficient attention sensitivity during *practical* interactions with people from different cultures. This outcome, similar to the concern raised by Choi Kim (2018) for nursing education, provides evidence that current curricula are insufficient in developing the practical behavioral dimension of cultural sensitivity. Consequently, these consistent findings indicate the critical need for targeted educational interventions in associate degree healthcare programs to enhance cultural sensitivity levels, particularly in communication and practical attentiveness skills.

In this study, no significant relationship was found between the total TSS score and xenophobia. However, a significant relationship was found between Xenophobia scores and the TSS sub-dimensions of Responsibility in Communication, Respect for Cultural Differences, Confidence in Communication, and Enjoyment of Communication. The literature contains studies reporting a negative correlation between cultural sensitivity ethnocentrism/xenophobia levels (Allen, 2010; Bilgiç and Şahin, 2019; Jirwe, Emami and Gerrish, 2015; Delibaş et al, 2020; Yıldız et al, 2023; Yıldız et al, 2024; Ergezen and Aydın 2025). These studies suggest that effective cultural care may not be possible, even with cultural sensitivity training, if proper educational approaches on ethnocentrism discrimination are not provided. Accordingly, it is deemed necessary to incorporate training aimed at reducing xenophobia into the curricula of healthcare vocational groups.

The study observed that the students' sociodemographic characteristics and cultural interaction experiences significantly influenced both transcultural sensitivity xenophobia levels.

In our study, although female students were observed to have higher TSS scores, this difference was not statistically significant, which aligns with conflicting findings in the literature. Indeed, some sources argue that there is no significant difference between TSS scores gender (Yılmaz and Göcen, 2013; Bulduk et al., 2017). However, contrary to the general trend in the literature, some research reports higher cultural sensitivity levels in women (Choi and Kim, 2018; Bilgiç and Şahin, 2019), while a limited number of studies, such as those by Delibaş et al. (2020) Neuliep et al. (2001), found that men's TSS scores were significantly higher. This profound inconsistency reflects the complex influence of different populations and cultural contexts on this variable. Therefore, future detailed research focusing on ton gender-specific socialization strategies is necessary to reveal the underlying causes of differences in the development of transcultural sensitivity. Such studies will contribute to the determination of gender-specific education development strategies for reshaping of the curriculum in line with these findings.

While some studies in the literature (Yılmaz and Göçen, 2013; Delibaş et al., 2020) reported no significant difference between cultural sensitivity levels and the participants' place of residence, our study found a significant relationship between the region of upbringing (higher scores for those living in the city center) and cultural sensitivity. The primary reason for this divergent finding can be explained by the high level of cultural diversity mobility in the region where the study was conducted. It is likely that living in a multicultural urban environment provided students with greater cultural awareness sensitivity through daily interactions. When evaluated alongside the results of Üstün's (2011) study on teachers, which showed cultural sensitivity varying by region of upbringing in Turkey (Southeast Anatolia being the highest, Mediterranean Aegean the lowest), this finding highlights the decisive role of geographical cultural context in the development of cultural sensitivity. This suggests that the local cultural climate opportunities for interaction are key factors in enhancing the effectiveness of cultural sensitivity training.

As emphasized by Bekiroğlu and Balci (2014), the language an individual uses is a fundamental tool that reflects their way of interpreting the world. Therefore it is the key to effective communication with individuals from different cultures. Consistent with this perspective, Bekiroğlu and Balcı (2014), Bulduk et al. (2017) stated that cultural sensitivity levels increase as foreign language proficiency improves. The findings of our study strongly support this thesis: students who knew a foreign language were found to have a statistically higher total TSS score. This result demonstrates that foreign language knowledge is not merely a cognitive skill but also a factor that deepens cultural understanding sensitivity. In this context, conducting detailed research on the quality sufficiency of foreign language education provided in Health Vocational Schools strengthening the curriculum in line with these findings is vital for increasing the cultural competence of future healthcare professionals.

The literature consistently shows that in individuals who actively communicate with people from different cultures and construct friendships with these people (Bilgiç and Şahin, 2019; Demir and Üstün, 2017; Bulduk et al., 2017). Indeed, the study by Meydanlıoğlu et al. (2015), which compared the transcultural sensitivity of medical nursing students, also confirmed that interacting with different cultures significantly affects cultural sensitivity levels. As Bilgiç and Şahin (2019) pointed out, the desire to know and understand different cultures is a prerequisite for providing culturally competent and acceptable healthcare services. The findings of our study strongly corroborate this experiential argument. A significant difference was found in TSS scores concerning experiential factors such as interacting with people from different cultures, receiving training with them, having been to another country, and the desire to work abroad. This result clearly indicates that direct cultural interaction opportunities play a key role in increasing the transcultural competence of future healthcare professionals. Therefore, it is critically important for educational institutions to develop strategies to increase such opportunities that enable experience of cultural interaction for students. In this regard, Arpacı et al. (2025) emphasized that career development interventions significantly enhance students' career adaptability and optimism. Integrating intercultural interaction opportunities into these career planning processes may not only empower students regarding their professional future but also foster professional flexibility by reducing anxiety toward culturally diverse patient groups.

Furthermore, the finding that gender class level significantly affects xenophobia levels suggests that xenophobic attitudes vary according to demographic variables are likely to change during the educational process. Finally, the significant correlations between the sub-dimensions of the TSS indicate that the components of sensitivity exhibit a holistic structure that supports each other.

The mean xenophobia score of the students in our study 53.04±13.75, which is consistent with findings reported in the literature. For example, the mean score of 51.86±12.73 found by Akçoban and Şahmaran (2022) among healthcare technician candidates the mean score of 52.92±14.72 found by Çetin Daşlı Şimşek, (2025), the score found by Aker and Kartal (2023) in their study with midwives in Turkey confirm that our finding is within the expected range. This consistency suggests that xenophobic attitudes are a moderate prevalent issue among healthcare workers candidates in Turkey.

When xenophobia levels were examined by gender, male students' scores were found to be significantly higher. This finding aligns with studies showing higher xenophobia levels in men (Doğan and Küçükbükücü, 2025) and higher ethnocentrism scores in men than women (Delibaş et al., 2020). Research indicates that males tend to show less empathy emotional expression compared to females (Karnil et al 2003; Mestre et al 2009). This may help explain why they are more likely to hold xenophobic beliefs. Therefore, these findings once again emphasize the importance of examining the impact of gender roles and social expectations in shaping individuals' attitudes toward the cultural 'other.

The overall regression model demonstrated a statistically significant predictive relationship between IS and Xenophobia, with the sub-dimensions collectively accounting for approximately 20% of the variance in xenophobic attitudes (R2=.199). This finding supports the broader literature that views transcultural competence components as relevant factors in mitigating or understanding prejudice out-group hostility.

Consistent with established theories on transcultural competence (Chen and Starosta, 2000; Bennett, 1993), the sub-dimensions of Enjoyment of Communication (β=−.183) and Respect for Differences (β=−.178) were found to be significant negative predictors of Xenophobia. This suggests that individuals who feel comfortable enjoy interacting with culturally different others, who actively value and respect cultural differences, exhibit lower levels of xenophobia. This reinforces the idea that affective cognitive engagement with cultural difference is crucial for reducing exclusionary attitudes.

However, the most notable theoretically challenging finding was the role of Responsibility in Communication. This sub-dimension emerged as the strongest positive predictor of Xenophobia (β=.402), indicating that a heightened sense of responsibility or anxiety regarding communication is associated with increased xenophobic tendencies. This unexpected result warrants further exploration. It might suggest that "responsibility" in this context is interpreted not as an ethical commitment, but possibly as communication apprehension or a defensive hyper-awareness when interacting with out-groups. Such high levels of responsibility may translate into stress or a feeling of threat, which in turn fuels xenophobic attitudes, aligning with studies that link anxiety to intergroup bias (Stephan and Stephan, 2000; Tausch et al., 2011). This phenomenon may be further exacerbated by the professional uncertainties faced by associate degree students. As highlighted by Arpacı et al. (2025), students in fields such as elderly care often experience significant future anxiety due to ambiguous job descriptions and professional role confusion. It is argued that this lack of professional security amplifies the 'responsibility' or pressure felt during intercultural encounters, causing students to adopt xenophobic attitudes as a defensive mechanism against perceived communicative failure.

These results underscore that IS is not a monolithic construct; its different facets have distinct, sometimes contrary, impacts on xenophobia. While positive affective cognitive factors (Enjoyment, Respect) function as a protective mechanism against prejudice, certain behavioral or self-regulatory aspects (Responsibility) may inadvertently contribute to xenophobia, possibly through mechanisms like communication anxiety. Future research should clarify the psychological process underlying the positive link between high Responsibility in Communication and increased xenophobia.

CONCLUSION

With the acceleration of technological advancements and globalization, boundaries between societies are gradually disappearing, leading to increased cultural diversity. Due to the formation of multicultural structures within the same geographical area, increased migration movements, and international travel, it has become an unavoidable necessity for healthcare professionals to encounter individuals from different cultures.

In line with this necessity, the findings obtained from our study provide crucial insight into the psychological factors influencing future healthcare professionals. The study identified that while the TS sub-dimensions collectively predict Xenophobia, their individual effects are distinct. Specifically, Enjoyment of Communication Respect for Differences were confirmed as significant negative predictors, theoretically consistent with the idea that positive affective cognitive engagement reduces prejudice.

However, the most critical finding—that the Responsibility in Communication sub-dimension emerged as the strongest positive predictor of

Xenophobia—highlights a potential mechanism where heightened self-regulatory focus or communication apprehension may inadvertently fuel exclusionary attitudes. This counter-intuitive result necessitates a re-evaluation of how "responsibility" in a transcultural context is operationalized and experienced by students, suggesting a need to address intergroup anxiety alongside promoting cultural awareness.

The findings necessitate urgent adjustments in the curricula of Associate Degree Health Vocational Schools.

Firstly, it is recommended that the emphasis on cultural sensitivity should be increased in the curriculum, foreign language education should be fostered, and targeted interventions aimed at reducing ethnocentrism should be implemented. Given our results, these interventions must also focus on reducing anxiety self-protective behaviors associated with high communication responsibility, rather than merely increasing awareness.

At the actionable level, increasing international education internship opportunities, such as ERASMUS Exchange programs, or developing practical field-based projects that allow students to actively participate in the care processes of patients from different cultures, will play a critical role in experientially enhancing their cultural competence. These strategic steps are of great importance in preparing future healthcare professionals for a multicultural service environment. Furthermore, future research should employ qualitative methodologies to explore the underlying psychological reasons for the positive relationship between communication responsibility xenophobia.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data Availability

The authors confirm that all data generated or analysed during this study are included in this published article.

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