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Original Research

Development of the Attitude Scale Towards Rural Health Services: a study with university health students in Türkiye

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Abstract

Aim: This study aims to develop a scale to assess the attitude of university students towards rural health services.

Method: The research was conducted with 378 students studying in university health-related departments in Türkiye. The Attitude Scale Towards Rural Health Services was developed through a systematic process including problem identification, literature review, item-writing, gathering of expert opinion, pilot application and finalisation. Initially consisting of 35 items, the item pool was reduced to 21 items after expert review and pilot testing. Exploratory factor analysis was carried out on the data. In addition, composite reliability and average variance extracted values of the scale and its subdimensions were calculated.

Results: Exploratory factor analysis identified three factors: positive attitude, voluntarism and contribution, and concerns and limitations. Reliability analysis showed that the Cronbach's alpha values for all subscales were greater than 0.70, indicating high internal consistency.

Conclusion: The study concluded that the Rural Health Services Attitude Scale is a valid and reliable tool for assessing health students' attitudes towards rural health services.

Keywords

factor analysis, health students, reliability and validity, scale development, Türkiye.

Introduction

Rural health faces significant challenges worldwide; access to health care is a major issue in both developing and developed countries[1]. Globally, rural populations experience poorer health outcomes and less access to health care than urban centres[2]. WHO and the World Organization of Family Physicians have begun to address these issues through joint initiatives and policies[3]. Developing sustainable rural healthcare models and improving the education of healthcare professionals are critical to achieving health equity in rural areas, particularly in developing countries[1,3]. Research shows that adapting healthcare models to meet the needs of rural communities is essential; in this context, policy changes and strengthening community engagement are crucial[4]. In addition, expanding research on rural health workforce and services would be beneficial to improve access and outcomes for rural health on a global scale[2].

Rural health is a complex concept that transcends the traditional urban–rural dichotomy. It encompasses a range of social relationships, processes and environments associated with rural life[5]. The definition of 'rural' itself is contested, with no consensus on what constitutes a rural area[6]. This lack of clarity can lead to misclassification, complicating epidemiological data and health policy[7].

Rural populations often face health inequities and limited access to health services, but rural life can also have a positive impact on health through strong social ties and access to green spaces[6]. Studies show that women living in rural areas have a holistic view of health and consider rural life essential to their wellbeing[5]. To effectively address rural health, it is crucial to develop a global rural health research agenda and to improve definitions of rurality, recognising its heterogeneity and contextual nature[6,7].

The concepts of rural areas and rural health services are addressed from different perspectives in the academic literature, and a clear understanding of these concepts is crucial for the development of health policies and practices. Rural areas are generally defined as regions with low population density, where agriculture and nature-based economic activities dominate. Compared with urban areas, rural areas face various constraints in accessing basic services such as infrastructure, education and health care[8]. Criteria such as population density, the structure of economic activities and settlement patterns are used to define rural areas[9]. Rural health services are designed to meet the health needs of people living in rural areas and include elements such as the distribution of health professionals and medical resources to rural areas, the improvement of transport and communication infrastructure, and the development of solutions to local health problems[1]. Rural health services often have more limited resources than urban health services, which can adversely affect health outcomes in rural areas[2].

The effectiveness of rural health services depends on factors such as the distribution and motivation of the rural health workforce, the adequacy of health infrastructure and the accessibility of health services to local communities[1]. The literature suggests various strategies for improving rural health services, including telemedicine, community-based health programs and policies encouraging work in rural areas[4]

Attitudes towards rural health services play a critical role in the effective and accessible delivery of these services[1,4]. In countries with diverse geographic and demographic structures, accessing health services in rural areas is more challenging than in urban centres. These challenges can affect the willingness of healthcare professionals to work in rural areas and the trust of rural communities in health services. Understanding the attitudes of university health-related department students towards rural health services can be decisive for their career choices post-graduation and the quality of rural health services. However, scales evaluating these attitudes in the literature are limited. This study aims to develop a valid and reliable psychometric tool to measure the attitudes of health-related department students towards rural health services in Türkiye. This scale will assess students' perceptions of rural health services, the knowledge and experiences they gained during their education, and their intentions to pursue careers in rural areas. The findings will significantly contribute to focusing health policies and education programs on rural health services.

Rural health services in Türkiye

Rural health care in Türkiye faces unique challenges due to geographical, socioeconomic and infrastructural disparities. In rural areas, healthcare delivery is often hampered by inadequate access to facilities, healthcare workers and medical technologies. These regions typically experience poorer health outcomes due to limited health resources and difficulties in accessing specialised care. Despite efforts to improve rural health services through government initiatives and collaboration with civil society organisations, these disparities persist. The shortage of doctors and nurses willing to work in rural areas exacerbates these challenges[10].

In Türkiye, 7% of the national population, approximately six million Turkish citizens, live in rural and remote areas[11]. For complex reasons related to the interplay between health and place, this spatially, economically, socially and culturally diverse group often experience health outcomes that are quantitatively and qualitatively different and significantly worse than those of urban dwellers. Framing rurality as the conceptual opposite of the urban norm may have limited utility. However, given the disparities in health services and the interactions between the two, there are important social and equity issues[12].

Since 2010, health services in rural areas of Türkiye have been provided through the family medicine system. Family doctors are responsible for providing comprehensive and continuous preventive health services, primary diagnosis, treatment and rehabilitative health services to people of all ages, genders and illnesses in specific locations. They also provide mobile health services when required and work full-time. Each family doctor is supported by at least one family health worker (nurse, midwife or health officer[13].

Research articles highlight various factors influencing the challenges and developments in rural health services in Türkiye. Despite improvements in general health indicators, disparities such as higher rates of chronic diseases and limited access to health services persist in rural areas[14]. The Turkish government has initiated various programs to address these issues, such as the Health Transformation Program, which has led to significant improvements in health outcomes and healthcare delivery[15].

Telemedicine and innovative service models have been proposed to improve access to health care for the rural elderly population[14]. Factors influencing physicians' willingness to work in rural areas include their professional group, marital status and income, with young and single physicians being more open to rural practice[16]. Despite progress, challenges remain in reorganising the referral system, improving staff supply and further developing the management structure of public hospitals[15].

Review of the literature

The literature is replete with studies indicating that rural health services worldwide face significant challenges. In Australia, for example, key issues include providing integrated care, maintaining workforce capacity and ensuring access to services[17,18]. In India, post-independence efforts to build a comprehensive rural health infrastructure have encountered difficulties. Despite early plans that emphasised the importance of this infrastructure, it has been difficult to achieve the goals set[19]. In the US, rural populations face higher rates of poverty, lower levels of education and lack of access to health services, resulting in higher rates of morbidity and mortality[20]. Rural hospitals play a critical role in the delivery of rural health services, but face challenges in adapting to the evolving health paradigm, achieving financial sustainability and ensuring the quality of health services[21].

Studies also highlight significant differences in health indicators between rural and urban centres. For example, people living in rural Australia generally have a shorter life expectancy than those living in urban areas. Australian data for 2002–2004 show that life expectancy decreases and mortality rates increase with remoteness. For example, men living in outer regions have a life expectancy of 77 years, compared with 79 years in major cities, and this falls to 72 years in very remote areas, where Aboriginal and/or Torres Strait Islander populations are relatively large[22].

Several instruments in the literature focus on rural health services and their evaluation. Cox and Amsters (2002) propose the Goal Attainment Scale as an effective outcome measure for rural health services, emphasising its ability to set individualised goals and summarise heterogeneous service outcomes[23]. Shekara (2018) examines rural health services in India, focusing on micro-level service delivery issues and management aspects[24]. Graves (2008) discusses the challenges of access to rural health services, noting the lower proportion of health professionals in rural areas and the problems of economies of scale faced by rural health services[25]. Smith et al.(2006) highlight the importance of measuring consumer satisfaction with rural health services, comparing two methods of analysis and emphasising the need for careful interpretation of satisfaction ratings[26].

There are also studies in the literature that examine students' attitudes towards rural health services. Key findings include that medical students from rural backgrounds are more willing to work in rural areas than their counterparts from urban backgrounds[27,28]. However, overall interest in rural health services among medical students is generally low[28,29]. Factors that deter students from rural practice include low salaries, limited infrastructure, delayed career progression and inadequate family facilities[28,30]. While rural-origin students have more positive perceptions of rural health services, they may be more concerned about the needs of their spouse/partner and children's education. Students from urban areas may be more influenced by personal factors, educational opportunities and social/cultural amenities[27].

Researchers suggest improving rural incentive packages, enhancing retention strategies, and promoting collaboration between medical education departments, health ministries and state governments to address the shortage of rural health providers[28-30].

The study by Walsh et al (2023) examined the activities of rural health university departments, funded by the Commonwealth, aimed at increasing the recruitment and retention of allied health and nursing workforces in rural areas. Focusing on student placements, the study found that interprofessional learning, high-quality supervision and community engagement significantly contributed to positive placement experiences and increased intentions to work in rural areas. Furthermore, it was found that university departments integrated into rural communities enhanced placement capacity and community relationships[31].

Aim and impact of the present study

This study aims to develop a valid and reliable scale to measure the attitudes of healthcare students towards rural health services. The limited availability of scales assessing attitudes towards rural health services in the literature highlights the importance of this study. It will provide valuable insights into understanding students' attitudes towards rural health services and determining their impact on post-graduation career choices. The developed scale will assist in the development of strategies to improve educational programs and health policies related to rural health services, thereby contributing to improving the quality and accessibility of health services in rural areas.

Methods

Research design

This study is quantitative research aimed at developing a scale for healthcare students to measure attitudes towards rural health services. A survey model was used in the research. The survey model aims to describe a current or past situation as it is/was. In this model, the phenomenon, object or individuals are described in their natural conditions. The study aims to comprehensively assess students' attitudes towards rural health services and to develop a valid and reliable measurement tool in this regard.

Sample

The population of this study consists of healthcare students enrolled in any public or private university in Türkiye during the second semester of the 2023–2024 academic year. The sample of the study consists of 378 participants who volunteered to participate in the study. At the beginning of the survey, participants were given a short paragraph explaining the purpose of the study and informed consent was obtained. There are various criteria for determining sample size. A commonly used criterion is that the sample size should be at least 5–10 times the number of items in the scale. Accordingly, for a scale consisting of 21 items, a minimum of 210 participants (21 × 10 = 210) can be considered sufficient. Based on this criterion, the sample size of 378 participants used in this study can be considered adequate[32].

Detailed information about the participants who took part in the study can be found in Table 1.

According to Table 1, 52.4% of the participating students are female, 37.0% are enrolled in other health-related departments, 39.9% reside in provincial centres, 21.7% live in the Marmara region and 55.3% described their economic status as moderate.

Table 1: Demographic characteristics of study participants (*n*=378) from university health-related departments in Türkiye

Characteristic	Variable	*n*	%
Gender	Female	198	52.4
	Male	180	47.6
Department of study	Medicine	75	19.8
	Nursing	94	24.9
	Midwifery	69	18.3
	Other health department	140	37.0
Type of settlement where most of life spent	Village	30	7.9
	District	82	21.7
	Provincial centre	151	39.9
	Metropolitan	11 5	30.4
Region family lives in	Southeast	44	11.6
	East Anatolia	65	17.2
	Mediterranean	19	5.0
	Black Sea	73	19.3
	Marmara	82	21.7
	Aegean	46	12.2
	Central Anatolia	49	13.0
Family income status	Poor	74	19.6
	Moderate	95	25.1
	Good	209	55.3

Scale development process

The development process of the Rural Health Services Attitude Scale was informed by the stages proposed by Worthington and Whittaker (2006)[33]. These stages include the definition of the problem, the determination of objectives and questions, the writing of items, the creation of drafts and forms, the solicitation of expert opinions, the formation of a preliminary application form, the conduct of a pilot study and the finalisation of the scale.

The initial stage of the scale development process involved the identification of the problem. In this context, an examination was conducted of the attitudes of university health-related department students towards rural health services and academic publications related to rural health services. A review of the literature was conducted to examine issues related to rural health services, as well as academic publications that addressed factors hindering and promoting these services. Based on this information, scale items were created[27]. Several different sources were consulted[1-7,17-19,22,28-30,34].

In the second stage, the item-writing process was initiated based on the findings of the literature review. A total of 35 items were generated. During the scale-creation process, particular attention was paid to the clarity of the items, the inclusion of both positive and negative statements and ensuring that each item represented a single judgement[33].

In the third stage of the study, feedback was obtained from two academicians with expertise in rural health services and four field experts (two doctors, one nurse and one midwife). Following the expert feedback, 12 items were removed from the draft scale. Three language experts were consulted for linguistic accuracy, resulting in the removal of two items due to semantic inconsistencies. As a result of the content validity analysis, the content validity index was found to be between 0.83 and 1.00. Following this, the scale was finalised.

In the fourth stage, the final checks of the scale were completed and it was prepared for implementation. The response options were constructed in accordance with the principles of the Likert scale. The scale employed a five-point Likert-type rating scale, with response options ranging from 'strongly agree' to 'strongly disagree'. The classifications of degree of agreement with items were 'strongly disagree' (1), 'disagree' (2), 'neutral' (3), 'agree' (4) and 'strongly agree' (5). Higher scores on the scale indicate an increased willingness of students to provide rural health services.

To assess the reliability of the scale over time, a test–retest reliability analysis was conducted. The scale was administered to the same sample group at a 12-day interval, and the correlation between the initial and follow-up responses was examined. The resulting test–retest reliability coefficient was 0.84, indicating good reliability.

Data collection tools and data collection

The data collection tool consists of two parts.

Demographic information form

This section contains five items designed to identify the demographic characteristics of the participating students. It collects information such as gender, academic department, family income level, region where a family resides and type of settlement where they have spent most of their lives.

Rural Health Services Attitude Scale

This scale consists of 21 items divided into three subdimensions. It includes two reverse-coded items (R2 and R6). Data were collected using a questionnaire created using Google Forms, and the link was shared with the students. Data collection took place online from 11 October 2023 to 20 June 2024.

Data analysis

First, missing data analysis was performed on the collected data. To avoid missing data, the online survey required responses to all questions. Analyses were performed on data from 378 participants.

To analyse the collected data, the structure of the scale was first assessed using exploratory factor analysis (EFA)[33]. For construct validity, model fit indices were calculated and, for convergent validity, composite reliability (CR) and average variance extracted (AVE) values of the scale were calculated. Finally, *t*-tests and analysis-of-variance tests were used to test whether there were differences in students' attitudes towards rural health services based on demographic variables.

Ethics approval

After the objective and scope of the study had been determined, the necessary procedures were followed to evaluate its ethical suitability. An application was then submitted to the Scientific Research and Publication Ethics Committee of Artvin Çoruh University. The committee granted ethics approval for the study on 5 February 2023 (decision E-18457941-050.99-80549). Prior to participation, students were provided with a questionnaire containing a brief paragraph explaining the purpose of the research, and informed consent was obtained. The survey process adhered to the tenets set forth in the Helsinki Declaration.

Results

Exploratory factor analysis

The findings of the EFA for the Attitudes Towards Rural Health Services Scale are presented in Table 2.

The Kaiser–Meyer–Olkin measure of sampling adequacy was found to be 0.936, indicating excellent results. A high value indicates that the sample size is adequate for factor analysis. The Bartlett's test of sphericity yielded a statistically significant *p*-value of 0.000, which is less than 0.05[33].This indicates that there are strong correlations among the variables and that the data are likely from a multivariate normal distribution[35]. In light of these findings, the data are deemed suitable for factor analysis.

As indicated in Table 2, the total variance explained is 44.36%. The first factor accounts for 36.60% of the total variance, the second factor for 4.29%, and the third factor for 3.47%. These values are sufficient for social sciences, indicating that the items provide an adequate explanation of the factors and that the factors provide an adequate explanation of the scales[33]. It can therefore be concluded that the model displays structural validity.

In accordance with standard criteria for scale development[35], factor loading values exceeding 0.400 were deemed significant. This is a widely observed phenomenon in numerous studies. In the EFA results, the decision to retain three factors was based on eigenvalues. Accordingly, factors with eigenvalues greater than 1 were considered. The eigenvalue of the first factor was found to be 7.686, the second factor 1.190, and the third factor 1.070.

In the factor analysis process, both oblique and orthogonal rotation methods were examined to determine whether the factors were independent. Initially, direct oblimin rotation was applied to assess the correlations between factors. The results indicated that the factors had low to moderate correlations (–0.25/0.28, $|r| < 0.30$)[35,36]. This finding supported the conclusion that the factors were largely independent and that varimax rotation was an appropriate choice. additionally, the use of varimax rotation enhanced the clarity of factor loadings, facilitating a more interpretable scale structure. Therefore, varimax rotation was preferred in the final analyses.

In the context of EFA, the number of factors was not predetermined. The naming of the three dimensions was informed by a literature review[1-7,17-19,22,28-30,34] and the aggregation of weighted items within each dimension of the scale. Accordingly, the first dimension was designated as ‘positive attitude’, the second as ‘volunteerism and contribution’ and the third as ‘concerns and limitations’.

The positive attitude dimension encompasses items that pertain to the favourable aspects of working in rural health services. The volunteerism and contribution dimension encompasses items related to the significance and voluntary nature of providing health services in rural areas. The concerns and limitations dimension encompasses items pertaining to concerns and limitations associated with working in rural areas.

Ultimately, no items were excluded on the grounds of low factor loading or cross-loading onto multiple factors within the scale.

Table 2: Exploratory factor analysis† results for the Attitudes Towards Rural Health Services Scale

Subdimension	Item number and description	Factor load	Eigenvalue/variance explained

Positive attitude	R1 – It does not matter whether I work in a rural area, city center, or elsewhere; I just want to be appointed.	0.588	7.686/36.60%
	R3 – I have the necessary qualities to provide healthcare services in rural areas.	0.481	
	R5 – I would prefer to work in rural areas because there is less workload.	0.659	
	R8 – I am considering volunteering to provide rural healthcare services.	0.543	
	R9 – I am excited about providing healthcare services in rural areas because I will have more interaction with people.	0.551	
	R10 – Providing healthcare services in rural areas offers a less stressful work environment.	0.552	
	R13 – Providing healthcare services in rural areas would be a better learning experience for me.	0.551	
	R15 – I believe I will develop myself by taking on more responsibility while providing healthcare services in rural areas.	0.477	
	R16 – I believe working in rural areas will boost my self-confidence.	0.525	
	R17 – I believe I can learn new methods and practices by working in rural areas.	0.616	
	R18 – I believe working in rural areas will provide opportunities for conducting research and collecting data.	0.557	
Voluntarism and contribution	R4 – Training on rural healthcare services should be included in the health department curriculum.	0.518	1.190/4.29%
	R7 – Providing healthcare services in rural areas is meaningful to me.	0.606	
	R11 – I believe I can make a difference in people%u2019s lives by working in rural areas.	0.507	
	R12 – I believe I can contribute to the equitable distribution of healthcare services by working in rural areas.	0.640	
	R14 – I think providing healthcare services in rural areas is an opportunity to meet different cultures and communities.	0.603	
	R19 – I believe I can assist with other needs of the local population while providing healthcare services in rural areas.	0.571	
	R20 – Providing healthcare services in rural areas is important to me in terms of making a positive impact on the community.	0.655	
	R21 – Every healthcare worker should work in rural areas for a certain period.	0.432	
Concerns and constrains	R2 – I am not very positive about the idea of working in rural healthcare services.	0.539	1.070/3.47%
	R6 – I do not want to work in rural areas because I believe my professional development would be limited.	0.637	

† Extraction method: maximum likelihood. Rotation method: varimax with Kaiser normalisation. Kaiser–Meyer–Olkin measure of sampling adequacy: 0.936. Bartlett's test of sphericity: approx. χ^2 of 3297.292. Degrees of freedom: 210. p=0.000. Total variance explained: 44.36%

Basic analyses

The CR, AVE and Cronbach's alpha coefficients of the subdimensions of the Attitudes Towards Rural Health Services Scale developed in this study were examined. The results are presented in Table 3.

As can be seen in Table 3, an item analysis based on item total correlations was carried out on the data obtained from the target group for reliability analysis. The overall reliability coefficient of the entire scale was found to be α=0.901, with the reliability coefficients of the subdimensions being greater than 0.700, indicating that the scale is highly reliable. CR values greater than 0.70 and AVE values greater than 0.50 are generally desirable[36].

According to Hair et al (2010), an AVE of less than 0.50 is acceptable if the CR is greater than 0.60[37]. Psailla and Wagner (2007) stated that an AVE of greater than 0.40 is an acceptable value[38]. In the context of the literature, it can be said that the scale has achieved model fit validity. The skewness and kurtosis coefficients of the Attitudes Towards Rural Health Services Scale ranged from 1.261 to –0.716, indicating that the scale data are normally distributed[35].

The correlation coefficients between the subdimensions of the scale were also examined. Significant relationships were found between all subdimensions (p<0.01). The correlation coefficients ranged from 0.747 to –0.177, indicating moderate relationships between the subdimensions of the scale.

Table 3: Cronbach's alpha, composite reliability and average variance extracted values of the Attitudes Towards Rural Health Services Scale subdimensions

Subdimension	Number of items	Standard error	Mean	Cronbach's α	AVE	CR	Skewness	Kurtosis
Positive attitude	11	0.724	3.36	0.891	0.311	0.831	–0.633	0.903
Voluntarism and contribution	8	0.684	3.51	0.849	0.326	0.792	–0.716	1.261
Concerns and Constrains	2	0.867	2.74	0.703	0.349	0.515	0.409	0.223
Attitudes towards rural health services scale	21	0.593	3.36	0.901	0.242	0.881	–0.648	1.107

AVE, average variance extracted. CR, composite reliability.

Discussion

The purpose of this study was to determine the attitudes of students in health-related departments at universities towards rural health services and to introduce a psychometric measurement tool to the literature for this purpose. The results of the EFA indicate that the scale consists of 21 items and has a structure of three factors: 'positive attitude', 'volunteerism and contribution' and 'concerns and constraints'. The factor loadings exceed the commonly accepted threshold in the social sciences

(>0.400), indicating that the items of the scale adequately represent the relevant factors. The Kaiser–Meyer–Olkin value of 0.936 and the significant results of the Bartlett test ($p<0.05$) indicate that the sample size is sufficient for factor analysis and that there are high correlations between the variables. These results confirm that the basic conditions for factor analysis are met[33,35].

The overall reliability coefficient of the scale (Cronbach's alpha of 0.901) and the reliability coefficients of the subdimensions being greater than 0.700 indicate that the scale is highly reliable. Additionally, the CR and AVE values of the subdimensions being at acceptable levels support the internal consistency and construct validity of the scale[37]. CR values greater than 0.70 and AVE values greater than 0.50 demonstrate the robustness of the scale's measurement structure.

The significant and moderate correlation coefficients between the subdimensions (0.747/–0.177) indicate consistent and expected relationships among the subdimensions. The skewness and kurtosis coefficients indicating that the scale data follows a normal distribution enhance the accuracy and validity of the statistical analyses[35]. The literature highlights the critical role of correlation analyses in scale development studies for understanding the relationships among subdimensions[39].

Limitations

As with any study, there are certain limitations in this research. Evaluating this study within the framework of the limitations outlined below is deemed appropriate.

Data collection method

The data were collected through online surveys. Online data collection methods can lead to limitations in the accuracy and reliability of responses as participants complete the survey questions on their own. Additionally, factors such as the accessibility of online surveys and internet connectivity may limit participation.

Scale development process

In the scale development process, items were eliminated and revised based on expert opinions. However, expert opinions may not always be objective and can introduce subjective influences on the final structure of the scale. Future studies would benefit from testing the scale with different groups of experts and a broader range of participants to enhance its validity and reliability.

Time limitation

The data were collected within a specific timeframe (11 October 2023 to 20 June 2024). Events or changing conditions during this period could influence participants' attitudes towards rural health services. This limitation may restrict the ability to reflect changes in attitudes over time.

Confirmatory factor analysis

In this study, only EFA was conducted to examine the underlying structure of the scale. To strengthen the scale's psychometric properties, future research should replicate the factor structure using CFA on an independent sample to confirm its stability and generalisability.

Conclusion

This study demonstrates that the scale developed to measure attitudes towards rural health services is both valid and reliable. The findings indicate that this scale can be effectively used in research concerning rural health services and contributes significantly to the related literature. In the literature, measuring attitudes towards rural health services and understanding the attitudes of students who will work in these fields are considered essential steps in improving rural health services.

Future studies could further enhance the scale's validity and reliability by testing it across different demographic groups and geographic regions. Additionally, longitudinal studies are recommended to understand how attitudes towards rural health services change over time. Universities should establish specialised training programs focusing on rural health services, which should help students develop positive attitudes towards working in rural areas. Programs and projects that encourage volunteering in rural health services should be developed. Students' voluntary work in rural areas will not only contribute to their personal development but also aid in the equitable distribution of health services. Strategies should be developed to reduce concerns and limitations associated with working in rural areas. These strategies should effectively communicate the advantages of working in rural areas and the potential challenges students may face in this field.

These recommendations can contribute to the development of positive attitudes towards rural health services and improve the quality of services in this area.

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Conflicts of interest

The authors declare no conflicts of interest.

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