RCPHN
Research in Community and Public Health Nursing

Original Article

pISSN 2983-0648 · eISSN 2288-4203
Res Community Public Health Nurs 2026;37(1):39-48
https://doi.org/10.12799/rcphn.2025.01242

The Moderating Effect of Korean Language Proficiency on the Relationship Between Self-Rated Health Status and Quality of Life Among International Students in Korea

Hanyi Lee[1], **Jiyeon An**[2]

[1]Associate Professor, College of Nursing, Hanyang University, Seoul, Korea
[2]Associate Professor, Department of Nursing, Kyung-in Women's University, Incheon, Korea

Purpose: This study aimed to examine whether Korean language proficiency moderates the relationship between international students' self-rated health status and quality of life (QoL) in South Korea, given the critical role of language skills in cultural adaptation and well-being.
Methods: A secondary analysis was conducted using data from the 2023 Seoul Survey on Foreign Residents. The sample included 409 international students residing in Seoul. Hierarchical multiple regression and PROCESS macro (Model 1) were used to examine the moderating effect of Korean language proficiency on the relationship between self-rated health status and QoL.
Results: Self-rated health status and Korean language proficiency were each positively associated with QoL, and the moderating effect of language proficiency was statistically significant. Among international students with low Korean proficiency, the association between self-rated health status and QoL was strong, whereas this relationship was negligible among those with high proficiency. These findings suggest that Korean language proficiency buffers the negative impact of poor health on QoL.
Conclusion: Korean language proficiency is a protective factor for international students' QoL, mitigating the negative effects of poor self-rated health status. These findings underscore the need for integrated, culturally sensitive health policies and support programs that reduce language barriers and promote language acquisition to enhance the well-being of international students.

Keywords: Health status; Language; Quality of life; International; Students

Introduction

The number of international students in Korea has more than doubled over the past decade, from 91,332 in 2015 to 208,962 in 2024 [1]. To enhance educational competitiveness and position Korea as one of the world's top ten destinations for international students, the Korean government aims to attract 300,000 international students by 2027 [2]. The recruiting of international students helps universities maintain enrollment rates, strengthens global competitiveness, enhances Korea's international profile, and facilitates the effective utilization of high-quality global human resources [3].

Despite these benefits, the rapid growth in international student enrollment poses significant challenges in terms of quality management. International students often face multiple stressors, including exposure to unfamiliar cultures, language barriers, and social isolation, all of which can negatively affect their physical and mental health as well as their overall quality of life (QoL) [4]. A study by Yim [5] found that only 31.6% of international students at one university accessed healthcare services when ill or injured, primarily due to medical costs, limited Korean proficiency, and insufficient understanding of Korea's healthcare system. Similarly, Kwak et al. [6] reported that although enrollment in the national health insurance system is mandatory, international

Received: August 6, 2025; **Revised:** December 23, 2025; **Accepted:** December 29, 2025
Corresponding author: Jiyeon An
Department of Nursing, Kyung-in Women's University, 63 Gyeyangsa-ro, Gyeyang-gu, Incheon 21041, Korea
Tel: +82-32-540-0451, Fax: +82-32-555-2614, Email: jyan030@kiwu.ac.kr

© 2026 Korean Academy of Community Health Nursing
This is an Open Access article distributed under the terms of the Creative Commons Attribution NoDerivs License (https://creativecommons.org/licenses/by-nd/4.0) which allows readers to disseminate and reuse the article, as well as share and reuse the scientific material. It does not permit the creation of derivative works without specific permission.

students frequently experience economic burdens or lack essential information about insurance procedures, further limiting their access to healthcare. Lim et al. [7] also identified a significantly higher rate of unmet medical needs among international students (18.7%), compared to Korean nationals (3.9%) among Koreans, highlighting persistent vulnerabilities in healthcare utilization among this population.

Prior study has consistently demonstrated that international students prefer pharmacies over clinics or hospitals for health issues [8]. In addition, both limited language proficiency and financial constraints remain substantial barriers to healthcare access [9]. Additionally, international students living alone are particularly vulnerable to complex health issues stemming from loneliness and social isolation [10]. Qualitative research further suggests that financial limitations often lead to unhealthy dietary choices - such as frequent consumption of instant foods - and contribute to difficulty maintaining healthy lifestyles due to academic and employment demands, as well as mental health challenges, including depression arising from cultural adjustment difficulties [11]. Consequently, self-rated health status plays a crucial role in international students' ability to adapt culturally, integrate socially, and maintain a high QoL, underscoring its importance for national policies and student settlement strategies [12].

QoL is a multidimensional concept encompassing physical health, psychological well-being, social relationships, and environmental conditions, transcending mere health indicators [13]. International students' QoL is significantly influenced by their physical and mental health status, cultural adaptation stress, available social support, healthcare accessibility, and overall living conditions [14,15]. QoL thus serves as an essential predictor of international students' overall well-being throughout their academic tenure abroad [16].

Within this context, examining the relationship between international students' self-rated health status and QoL is critical. Both factors significantly influence students' adaptation, future employment opportunities, and long-term settlement in Korea. Korean language proficiency is a key factor, as it substantially affects international students' health and QoL. Language proficiency is closely associated with health literacy, which is defined as the ability to effectively access, understand, evaluate, and apply health-related information. Enhanced health literacy improves health perceptions, attitudes, and behaviors, positively affecting QoL [17]. Conversely, limited Korean language proficiency may impede students' health information-seeking behaviors, restrict access to healthcare and, in turn, negatively affecting health outcomes [9].

Although most international students are young adults in generally good health, the association between self-rated health status and QoL may vary depending on individual-level resources, including Korean language proficiency and the availability of social support [18]. In particular, for students navigating unfamiliar environments, Korean language proficiency plays a critical role in facilitating adjustment and managing daily challenges [19]. Beyond basic communication, higher language proficiency enables more effective engagement in social interactions, improved access to health-related information, and greater utilization of support systems. These capacities may serve as protective mechanisms, moderating the negative impact of poor self-rated health status on QoL [18,19].

Therefore, this study aims to examine the moderating effect of Korean language proficiency on the relationship between self-rated health status and QoL among international students. Specifically, the study hypothesizes that higher Korean language proficiency is expected to strengthen the positive relationship between self-rated health status and QoL. Findings from this study will provide foundational data to inform the development of targeted nursing interventions that consider Korean language proficiency and to provide empirical evidence to enhance international student healthcare programs in both university medical institutions and community-based nursing services.

Methods

Study design

This study conducted a secondary analysis of data from the 2023 Seoul Survey on Foreign Residents [20] using a descriptive correlational research design.

Participants and data collection

This study used data from the 2023 Seoul Survey on Foreign Residents conducted by the Seoul Metropolitan Government [20]. The survey targeted 2,500 foreign residents aged 20 years or older who had resided in Seoul for at least 91 days as of September 2023. A stratified proportional sampling method based on residency status and nationality was used to select the participants. Data were collected through structured face-to-face interviews conducted in Korean by trained interviewers. Of the 2,500 respondents, 409 individuals were classified as international students in the original dataset, a group corresponding to those holding either a student (D-2) or Korean language trainee (D-4) visas.

Measurements

1. Dependent variable: QoL

QoL was assessed using a self-report questionnaire consisting of six items that measure subjective satisfaction across various life domains, including housing conditions, economic conditions, welfare environment, social environment, educational environment, and urban safety. These domains were selected to reflect the multidimensional nature of QoL, encompassing both material and psychosocial aspects of urban living [21,22].

Each item asked participants to rate their satisfaction with their QoL while living in Seoul using a 5-point Likert scale (1 = very dissatisfied, 5 = very satisfied). The total QoL score was calculated as the average of these six items, with higher scores indicating higher overall life satisfaction. Cronbach's alpha for this measure was .810.

2. Independent variable: self-rated health status

Self-rated health status was measured by a single item in which participants rated their overall health status while residing in Seoul on a 5-point scale ranging from 1 (very poor) to 5 (very good). This measure is considered appropriate for capturing the subjective health perceptions of international students.

3. Moderating variable: Korean language proficiency

Korean language proficiency was assessed across four domains: speaking, reading, writing, and listening. Each domain was rated on a 5-point Likert scale, and the overall score was calculated as the mean of the domain scores. Cronbach's alpha for this measure was .918.

4. Covariates

The covariates included nationality, age, length of stay in Korea, gender, academic status, living arrangement, discrimination experiences, health insurance coverage, primary healthcare utilization, and difficulty accessing healthcare services. Nationality was categorized into three groups - East Asia, South and Southeast Asia, and Western and other regions - to account for cultural variations in health perceptions and behaviors [23]. Academic status was categorized as undergraduate and graduate students. Living arrangement was dichotomized into living alone and living with others. Discrimination experiences were measured using a 5-point Likert scale (1 = never experienced, 5 = very severe), focusing on experiences of discrimination due to being a foreigner in various contexts such as in streets, neighborhoods, stores, public institutions, housing, and workplaces. Responses were dichotomized to indicate the presence (≥ 3 points) or absence (< 3 points) of discrimination experiences. Health insurance coverage was assessed to determine whether respondents were covered by any type of insurance. Participants were categorized into "insured" (having workplace or local health insurance, foreign worker medical cooperative, or private medical insurance) and "uninsured." Primary healthcare utilization was classified based on the type of institution most frequently used: formal healthcare facility (clinics and hospitals), community-based care (foreigner clinics and public health centers), or non-clinical care (pharmacy or self-care). Difficulty accessing healthcare services was measured by asking respondents to rate how difficult it was for them to access necessary healthcare services using a 5-point Likert scale, with higher scores indicating greater difficulty. This variable was analyzed as a continuous variable.

Data analysis

Data were analyzed using IBM SPSS Statistics version 29.0 (IBM Corp., Armonk, NY, USA) and PROCESS macro for SPSS version 4.2. All analyses were conducted using survey weights to account for the complex sampling design, except for the moderating analysis, which was performed using unweighted data because the PROCESS macro does not support weighting. Descriptive statistics (frequencies, percentages, means, and standard deviations) were computed using weighted data, while unweighted sample counts were reported in tables for reference. Differences in QoL based on general characteristics were analyzed using weighted t-tests and one-way ANOVA, followed by Scheffé post-hoc tests. Pearson's correlation analysis was conducted to examine the relationships among major variables. Factors influencing QoL were identified through hierarchical multiple regression analysis. Multicollinearity was assessed, and the values were within acceptable ranges, with VIF(Variance Inflation Factors) ranging from 1.043 to 2.251 and tolerance levels between 0.444 and 0.959. To examine the moderating effect of Korean language proficiency on the relationship between self-rated health status and QoL, PROCESS macro (Model 1) was used. A bootstrap method with 5,000 samples was employed to estimate the 95% confidence intervals for statistical significance. Simple slope analysis was conducted at one standard deviation above and below the means of the moderating variable. The results were visualized using R version 4.5.1 and the ggplot2 package.

Ethical considerations

This study adhered to ethical standards to ensure participant privacy and confidentiality. This study used secondary data that had

been anonymized and was therefore exempt from review by the Institutional Review Board (IRB No.: HYUIRB-202411-022).

Results

General characteristics of participants

Participants in this study comprised international students from East Asia (51.7%), South and Southeast Asia (32.1%), and Western and other regions (16.2%). The mean age of the participants was 24.51 ± 3.45 years, and their mean length of stay in Korea was 2.61 ± 2.19 years. Female constituted 63.0% of the total sample, and 68.9% were undergraduate students. More than half (52.9%) of the students reported living alone. A substantial proportion (72.0%) had experienced discrimination, and 81.0% reported having health insurance. Regarding primary healthcare utilization, the majority (51.4%) indicated using formal healthcare facilities when they were ill. The mean scores for the key variables were as follows: self-rated health status was 3.68 ± 0.89, Korean language proficiency was 3.07 ± 0.91, and QoL was 3.69 ± 0.60. These scores indicate moderate levels overall (Table 1).

Table 1. General Characteristics of the Participants (*N*=409)

Variables	Categories	n†	%
		Mean ± SD	
Nationality	East Asia	169	51.7
	South and Southeast Asia	142	32.1
	Western and Others	98	16.2
Age (years)		24.51 ± 3.45	
Length of stay in Korea (years)		2.61 ± 2.19	
Gender	Male	169	37.0
	Female	240	63.0
Academic status	Undergraduate students	304	68.9
	Graduate students	105	31.1
Living arrangement	Living alone	219	52.9
	Living with others	190	47.1
Discrimination experiences	Absence	119	28.0
	Presence	290	72.0
Health insurance coverage	Uninsured	83	19.0
	Insured	326	81.0
Primary healthcare utilization	Formal healthcare facility	194	51.4
	Community-based care	63	14.2
	Non-clinical care	152	34.3
Difficulty accessing healthcare services		2.94 ± 1.02	
Self-rated health status		3.68 ± 0.89	
Korean language proficiency		3.07 ± 0.91	
QoL		3.69 ± 0.60	

†Unweighted frequency, QoL=Quality of life.

Relationships between participant characteristics and QoL

QoL significantly differed by nationality (F = 2461.69, $p < .001$), gender (t = 4.98, $p < .001$), academic status (t = 2.10, $p = .035$), living arrangement (t = 15.48, $p < .001$), discrimination experiences (t = 72.90, $p < .001$), health insurance coverage (t = 4.72, $p < .001$), and primary healthcare utilization (F = 1745.03, $p < .001$). Age (r = -.06, $p < .001$), length of stay in Korea (r = -.12, $p < .001$), and difficulty accessing healthcare services (r = -.07, $p < .001$) showed negative correlations with QoL. Conversely, self-rated health status (r = .20, $p < .001$) and Korean language proficiency (r = .01, $p = .045$) exhibited positive correlations with QoL (Table 2).

Table 2. Group Differences and Correlations with QoL (*N*=409)

Variables	Categories	QoL	
		Mean ± SD	t / F / r(*p*) Scheffé
Nationality	East Asia[a]	3.53 ± 0.63	2461.69 (< .001)† c > b > a
	South and Southeast Asia[b]	3.84 ± 0.53	
	Western and Others[c]	3.88 ± 0.53	
Age (years)			-.06 (< .001)
Length of stay in Korea (years)			-.12 (< .001)
Gender	Male	3.70 ± 0.56	4.98 (< .001)‡
	Female	3.68 ± 0.63	
Academic status	Undergraduate student	3.68 ± 0.59	2.10 (.035)‡
	Graduate student	3.70 ± 0.63	
Living arrangement	Living alone	3.65 ± 0.62	15.48 (< .001)‡
	Living with others	3.73 ± 0.58	
Discrimination experiences	Absence	3.95 ± 0.57	72.90 (< .001)‡
	Presence	3.58 ± 0.58	
Health insurance coverage	Uninsured	3.66 ± 0.63	4.72 (< .001)‡
	Insured	3.69 ± 0.60	
Primary healthcare utilization	Formal healthcare facility[a]	3.79 ± 0.62	1745.03 (< .001)† a > c > b
	Community-based care[b]	3.39 ± 0.58	
	Non-clinical care[c]	3.65 ± 0.54	
Difficulty accessing healthcare services			-.07 (< .001)
Self-rated health status			.20 (< .001)
Korean language proficiency			.01 (.045)

†F value, ‡t value, QoL = Quality of life.

Effects of self-rated health status and Korean language proficiency on QoL

A hierarchical regression analysis was conducted to examine the factors influencing QoL among international students (Table 3). In Model 1, sociodemographic and health-related variables—nationality, age, length of stay in Korea, gender, academic status, living arrangement, discrimination experiences, health insurance coverage, and primary healthcare utilization—accounted for 26% of the variance in QoL ($F = 1868.91$, $p < .001$). In model 2, the inclusion of self-rated health status significantly increased the explained variance by 3% ($\Delta R^2 = 0.03$, $p < .001$). Model 3 further included Korean language proficiency, yielding an additional 1% increase in explained variance ($\Delta R^2 = 0.01$, $p < .001$). In the final model (model 3), all sociodemographic and health-related variables continued to significantly predict QoL. In particular, both self-rated health status ($\beta = .17$, $p < .001$) and Korean language proficiency ($\beta = .06$, $p < .001$) were positively associated with QoL.

Moderating effect of Korean language proficiency

To investigate the moderating effect of Korean language proficiency, an interaction term between self-rated health status and Korean language proficiency was added to the regression model (Table 4). Results indicated that self-rated health status had a positive effect on QoL ($B = 0.31$, $p = .002$), and Korean language proficiency was positively associated with QoL ($B = 0.34$, $p = .006$). The interaction term was statistically significant ($B = -0.07$, $p = .024$), suggesting a significant moderating effect of Korean language proficiency.

A simple slope analysis was conducted to further interpret the interaction (Figure 1). Among participants with low Korean language proficiency, self-rated health status exhibited a strong positive association with QoL ($B = 0.16$, $p < .001$). This association was moderately reduced but remained significant at the average proficiency level ($B = 0.10$, $p = .001$). However, among those with high Korean language proficiency, self-rated health status was not significantly associated with QoL ($B = 0.03$, $p = .400$).

Discussion

This study examined the moderating effect of Korean language proficiency on the relationship between self-rated health status and QoL among international students residing in Seoul. By empirically verifying the combined effects of self-rated health status and Korean language proficiency on QoL, this study aimed to inform strategies that support cultural and social adaptation, as well

Table 3. Hierarchical Regression Analysis Predicting QoL (N=409)

Variables	Categories	Model 1			Model 2			Model 3		
		β	SE	p	β	SE	p	β	SE	p
Nationality	East Asia	-.37	0.006	< .001	-.34	0.006	< .001	-.35	0.006	< .001
	South and Southeast Asia	.01	0.006	.084	.03	0.006	< .001	.01	0.006	.010
Age (years)		-.09	0.001	< .001	-.08	0.001	< .001	-.08	0.001	< .001
Length of stay in Korea (years)		-.09	0.001	< .001	-.11	0.001	< .001	-.13	0.001	< .001
Gender	Female	-.04	0.004	< .001	-.03	0.004	< .001	-.03	0.004	< .001
Academic status	Graduate student	.20	0.003	< .001	.17	0.003	< .001	.17	0.003	< .001
Living arrangement	Living with others	.04	0.004	< .001	.02	0.004	< .001	.03	0.004	< .001
Discrimination experiences	Presence	-.29	0.005	< .001	-.27	0.005	< .001	-.28	0.005	< .001
Health insurance coverage	Insured	.03	0.005	< .001	.04	0.005	< .001	.03	0.005	< .001
Primary healthcare utilization	Formal healthcare facility	.14	0.005	< .001	.18	0.005	< .001	.17	0.005	< .001
	Community-based care	-.16	0.007	< .001	-.12	0.007	< .001	-.13	0.007	< .001
Difficulty in accessing healthcare		.01	0.002	.110	-.01	0.002	< .001	-.01	0.002	.001
Self-rated health status					.17	0.002	< .001	.17	0.002	< .001
Korean language proficiency								.06	0.002	< .001
		$F = 1868.91$			$F = 1965.98$			$F = 1854.92$		
		$p < .001$			$p < .001$			$p < .001$		
		Adjusted $R^2 = 0.26$			Adjusted $R^2 = 0.29$			Adjusted $R^2 = 0.29$		
					$\Delta R^2 = 0.03$			$\Delta R^2 = 0.01$		

Reference group: Nationality (Western and others), Gender (male), Academic status (undergraduate student), Living arrangement (living along), Discrimination experiences (none), Primary healthcare utilization (non-clinical care).

Table 4. Moderation Effect of Korean Language Proficiency on the Relationship between Self-rated Health Status and QoL (*N*=409)

Variables	B	SE	*p*	LLCI	ULCI
Self-rated health status→ QoL (X→Y)	0.31	0.097	.002	0.117	0.497
Korean language proficiency → QoL (M→Y)	0.34	0.120	.006	0.099	0.571
Interaction → QoL (X*M → Y)	-0.07	0.031	.024	-0.129	-0.009
		$F = 8.63, p < .001, R^2 = .21$			

LLCI = Lower Limit Confidence Interval; ULCI= Upper Limit Confidence Interval.
X = Independent variable (Self-rated health status); M = Moderating variable (Korean language proficiency; Y = Dependent variable (QoL).
Adjusted covariates: Nationality, Age, Length of Stay in Korea, Gender, Academic status, Living arrangement, Discrimination experiences, Health insurance coverage, Primary healthcare utilization, Difficulties in accessing healthcare.

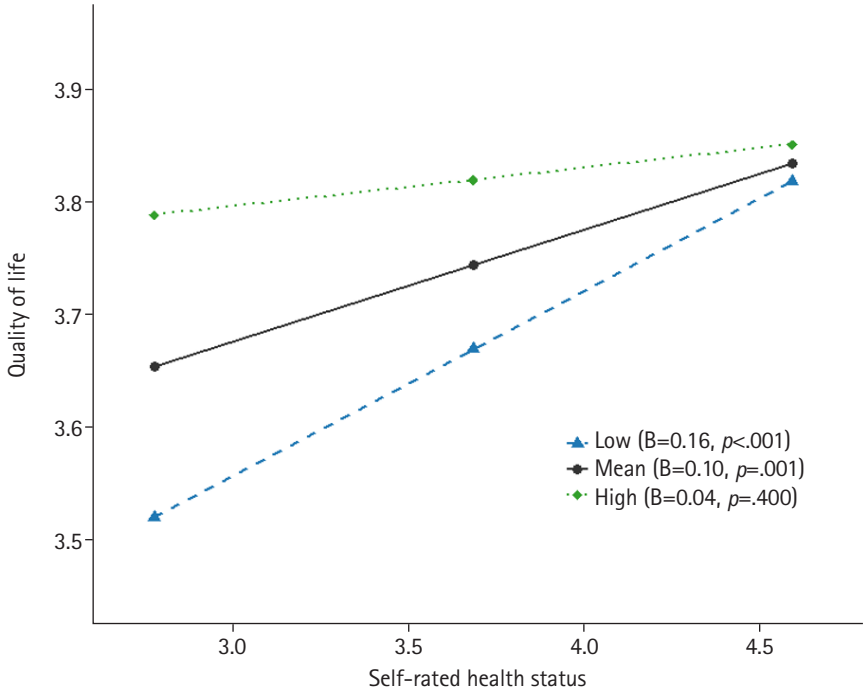

Figure 1. Moderating Effect of Language Proficiency on Self-rated Health Status and QoL.

as successful settlement of international students in both university settings and the broader community. This study yielded several important findings and implications.

First, the analysis of group difference revealed that various sociodemographic characteristics (e.g., nationality, age, length of stay in Korea, gender, academic status, living arrangement, and discrimination experiences and healthcare-related characteristics (e.g., health insurance coverage, primary healthcare utilization, and difficulty accessing healthcare services) were significantly associated with QoL. An individual's QoL is shaped by a complex interplay of physical and mental health, social relationships, and environmental factors [12]. For international students, disparities between the sociocultural contexts of their home countries and the host country—such as differences in health beliefs and levels of social capital—necessitate a more multifaceted understanding of their QoL. Lee [24] categorized international students' adjustment into four interrelated domains: academic, psychological, cultural, and linguistic. These domains are deeply interconnected, highlighting the need for a comprehensive understanding of international students' adjustment. Therefore, studies on international students should control for variables such as nationality, length of stay in Korea, academic status, and living arrangement, while also considering health-related social capital factors, such as health insurance coverage and access to healthcare services, when exploring the relationship between self-rated health status and QoL.

Second, Korean language proficiency demonstrated a moderating effect on the relationship between self-rated health status and QoL. Overall QoL is closely related to general health [25], and constitutes a key element of sociocultural adaptation among

international students, the interplay between general health and QoL warrants more in-depth exploration. International students' adaptation refers to the absence of discrimination and barriers across domains such as academic adjustment, health maintenance behaviors, social connectedness, and a sense of belonging within the host-cultural environment [26]. Within these domains, language proficiency serves as fundamental individual competency enabling effective adaptation. Language proficiency is an essential requirement for international students to achieve their primary goals of academic engagement and social interaction, and it further serves as a core competency that enables them to immerse themselves in the sociocultural environment without discrimination while fostering a sense of belonging as members of the host society. In other words, language proficiency enhances life satisfaction by promoting psychological stability and well-being throughout the sociocultural adaptation process.

Previous studies indicate that international students frequently face unmet medical needs due to limited health literacy and that insufficient cognitive, social, and emotional interaction can diminish their sense of cultural belonging [27,28]. Language proficiency has additionally been identified as a factor that enhances self-efficacy and academic achievement [29], and higher levels of Korean language proficiency are associated with stronger national belonging and greater life satisfaction [30]. Moreover, language proficiency, together with social support, is recognized as a key predictor of interpersonal and cross-cultural adaptation; improvements in proficiency reduce acculturative stress and facilitate smoother cultural adjustment. Likewise, the findings of this study indicate that, whin the complex interplay of various individual characteristics and social resources, language proficiency is closely associated with international students' QOL and overall health status.

Third, linguistic adaptation mitigates the negative effects of poor self-rated health status on QoL. Language proficiency not only influence individuals' health perceptions and behaviors but also serve as a psychosocial resource that buffers against the negative consequences of declining health [31]. The results of this study showed that the moderating effect of language proficiency on the relationship between self-ratied health status and QoL was more pronounced in groups with poor or fair health. This indicates that language proficiency operates as a protective factor that helps maintain well-being when health problems arise. At the same time, however, international students with low Korean language proficiency often face barriers to healthcare utilization in practice.

A previous study [32] analyzing the determinants of healthcare utilization among international students residing in Korea found that students with poor Korean language proficiency actually utilized less healthcare services, suggesting that language barriers contribute to unmet medical needs. In Korea, complex appointment scheduling and registration systems inevitably hinder access to healthcare when language barriers exist. Thus, although language proficiency buffers the negative impact of poor health on QoL, international students with insufficient proficiency remain structurally disadvantaged because they have limited access to various services the could support their health. Those in poor health have higher levels of stress and reduced physical and mental resources, making them more likely to require assistance from coping resources [33]. For international students, language proficiency can be said to have a stress-buffering effect [34]. Therefore, while language proficiency have a minimal impact on QoL in healthy groups, they have a buffering effect in those with poor health. These dual dynamics, in which language proficiency functions as a coping resource while limit proficiency operates as a structural barrier, highlighting linguistic vulnerability as a critical determinant of QoL among international students. Among students with low Korean language proficiency, poor self-rated health status was associated with a marked reduction in QoL. However, studies addressing both health and QoL among international students in Korea remain limited. Previous studies [35,36] suggest that policies and programs for international students are often designed with a focus on education and labor market participation, frequently neglecting fundamental aspects such as health and well-being. The present study contributes to the literature by empirically demonstrating that Korean language proficiency, as a sociocultural resource, plays a moderating role in the link between health and QoL.

Previous study on international students' health and QoL has primarily focused on general health status as a key predictor of QoL [12], with specific emphasis on mental health issues such as depression, psychological distress, and oral health [37,38]. However, these studies have often overlooked Korean language proficiency as a key important predictor or control variable, thereby limiting a comprehensive understanding of the sociodemographic characteristics that influence international students' health outcomes.

Studies conducted in other countries have shown that perceived language-based discrimination among international students is significantly associated with adverse mental health outcomes, including depression and anxiety [39]. Limited proficiency in the host country's language also serves as a substantial barrier to accessing health insurance and healthcare services [40].

University health and counseling professionals have also identified language barriers as a key factor contributing to delays in help-seeking behaviors among international students experiencing mental health challenges [41]. These findings highlight the necessity of incorporating Korean language proficiency and related barriers as critical factors in study on international students' health.

To enhance international students' health and QoL, integrated strategies at both the university and community levels are essential. To university-level policy support, interventions such as multilingual health information dissemination, medical interpretation services, and peer health mentoring programs for international students are necessary. These initiatives can improve short-term access to healthcare and long-term health outcomes, ultimately enhancing students' potential for local settlement and contributing to the advancement of global health equity. Community and public health nurses can identify linguistic barriers as social determinants of health and implement responsive strategies, such as multilingual health education, interpreter coordination, and culturally sensitive peer navigation programs.

This study has several limitations. First, due to its cross-sectional design, this study precludes causal inference between the examined variables. Second, QoL was measured using items developed specifically for the Seoul Survey, as opposed to internationally standardized scales, which may limit the generalizability of the findings. Third, because the sample consisted solely of international students residing in Seoul, the findings may not be representative of international students in other regions. Fourth, as the Seoul Survey was not available in participants' native languages, some international students with limited Korean proficiency may have faced minor comprehension challenges during the interviews. This contextual limitation should be acknowledged, as the survey language may have influenced how certain questions were interpreted or answered. Finally, Korean language proficiency was measured solely based on functional skills and did not account for affective or contextual aspects, including language anxiety or context-specific communication abilities. Future studies should address these limitations by incorporating longitudinal designs and in-depth qualitative approaches.

Conclusions

This study examined the moderating effect of Korean language proficiency on the relationship between self-rated health status and QoL among international students residing in Seoul. The findings revealed that Korean language proficiency not only had a direct positive effect on QoL but also buffered the negative impact of poor health status. This suggests that language adaptation serves as a protective factor for maintaining well-being, extending beyond the scope of basic communication.

These results underscore the importance of considering both linguistic and psychosocial factors when developing effective strategies to enhance the health and QoL of international students. They also highlight the importance of adopting an integrated and culturally sensitive approach in developing health policies and support systems for this population. Given the increasing number of international students, it is essential for universities and local communities to collaborate in reducing language barriers and improving access to health services. Establishing institutional frameworks that promote more equitable and accessible healthcare is crucial.

ORCID

Hanyi Lee, https://orcid.org/0000-0001-8721-0390
Jiyeon An, https://orcid.org/0000-0003-1964-3092

Conflict of interest

The authors declared no conflict of interest.

Funding

None.

Authors' contributions

Hanyi Lee contributed to conceptualization, data curation, formal analysis, methodology, visualization, and writing - original draft, review & editing. Jiyeon An contributed to conceptualization, writing - original draft, review & editing, and validation.

Data availability

Please contact the corresponding author for data availability.

Acknowledgements

None.

References

1. Ministry of Education. Status of foreign students in domestic higher education institutions in 2024 [Internet]. Sejong: Ministry of Education; 2024 [cited 2025 Jul 8]. Available from: https://www.moe.go.kr/
2. Ministry of Education. Study Korea 300K project [Internet]. Sejong: Ministry of Education; 2023 [cited 2025 Jul 8]. Available from: https://www.moe.go.kr/boardCnts/viewRenew.do?boardID=294&boardSeq=96027&lev=0&searc
3. Korean Council for University Education (KCUE). Current status and future tasks of attracting foreign students. KCUE Higher Education Issue. 2024;3:1–8.
4. Koh MK. A critical review of international student research. Journal of the Korean Association of Regional Geographers. 2022;28(4):474–488. https://doi.org/10.26863/JKARG.2022.11.28.4.474
5. Yim EE. A mixed research study on the perception and experience of international students' health insurance and medical services: focusing on the case of K university. Welfare & Cultural Diversity Studies (Welfare & Culture). 2025;7(1):33–66. http://doi.org/10.51155/KAMW.2025.7.1.33
6. Kwak YK, Lee BJ, Kim KT, Koh MK, Kim KH, Kim KC. Current status of foreign students and social security challenges for an inclusive society. Research report. Sejong: Korea Institute for Health and Social Affairs; 2021 Dec. Report No.: 2021-08. Available from: https://www.kihasa.re.kr/publish/report/view?seq=42658
7. Lim JS, Sun HY, Yoo BW. A study on national health insurance literacy among international students in Korea and their medical service use. Korean Journal of Health Promotion. 2023;23(3):156–168. https://doi.org/10.15384/kjhp.2023.23.3.156
8. Lee NY, Han JY. Health status of international students in Korea. Journal of East-West Nursing Research. 2011;17(1):48–56. https://doi.org/10.14370/jewnr.2011.17.1.048
9. Yoon JW. An exploratory study of health information seeking behaviors among international students in Korea. Journal of the Korean Society for Information Management. 2021;38(4):231–250. http://doi.org/10.3743/KOSIM.2021.38.4.231
10. Park MJ, Kim SA. Characteristics and types of loneliness, social isolation, and mental health problems in single-person households: focusing on single-person households in Seoul. Health and Social Welfare Review. 2022;42(4):127–141. https://doi.org/10.15709/HSWR.2022.42.4.127
11. Kim JW, Oh SM, Lee DY. Experiences in healthcare management among international students living in Korea. Journal of Korean Academy of Fundamentals of Nursing. 2025;32(1):45–58. https://doi.org/10.7739/jkafn.2025.32.1.45
12. Achangwa C, Lee TJ, Park JH, Lee MS. Quality of life and associated factors of international students in South Korea: a cross-sectional study using the WHOQOL-BREF instrument. Healthcare (Basel). 2022;10(7):1262. https://doi.org/10.3390/healthcare10071262
13. World Health Organization. WHOQOL: measuring quality of life. Research report. Geneva: World Health Organization; 1995.
14. Vakkai RJY, Harris K, Chaplin KS, Crabbe JJ, Reynolds M. Sociocultural factors that impact the health status, quality of life, and academic achievement of international graduate students: a literature review. Journal of International Students. 2020;10(3):758–775. https://doi.org/10.32674/jis.v10i3.1222
15. Lee KE, Yom YH, Chang HK. Influences of acculturative stress and social support on subjective quality of life among Chinese students in Korea. The Journal of Korean Academic Society of Nursing Education. 2011;17(3):514–523. https://doi.org/10.5977/JKASNE.2011.17.3.514
16. Smith AP, Smith H. Jelley T. Studying away strategies: well-being and quality of university life of international students in the UK. Journal of Education, Society and Behavioural Science. 2018;26(4):1–14. https://doi.org/10.9734/JESBS/2018/43377
17. Xiao Z, Lee J, Liu W. Korean and Vietnamese immigrants are not the same: health literacy, health status, and quality of life. Journal of Human Behavior in the Social Environment. 2020;30(6):711–729. https://doi.org/10.1080/10911359.2020.1740852
18. Shadowen NL, Williamson AA, Guerra NG, Ammigan R, Drexler ML. Prevalence and correlates of depressive symptoms among international students: Implications for university support offices. Journal of International Students. 2019;9(1):129–149. https://doi.org/10.32674/jis.v9i1.277
19. Shen R. The effects of psychosocial factors on international students' mental health and relevant interventions. SHS Web of Conferences. 2023;157:01021. https://doi.org/10.1051/shsconf/202315701021
20. Seoul Metropolitan Government. 2023 Seoul survey: foreign residents data [Internet]. Seoul: Seoul Metropolitan Government; 2023 [cited 2025 Mar 25]. Available from: https://data.seoul.go.kr/dataList/OA-15564/F/1/datasetView.do
21. Wesz JGB, Miron LIG, Delsante I, Tzortzopoulos P. Urban quality of life: A systematic literature review. Urban Science.

2023;7(2):56. https://doi.org/10.3390/urbansci7020056
22. Greyling T, Tregenna F. Construction and analysis of a composite quality of life index for a region of South Africa. Social Indicators Research. 2017;131(3):887–930. https://doi.org/10.1007/s11205-016-1294-5
23. United Nations Statistics Division. Standard country or area codes for statistical use (M49) [Internet]. New York: United Nations; 2024 [cited 2025 Jul 25]. Available from: https://unstats.un.org/unsd/methodology/m49/
24. Lee BR. Barriers to academic and social integration: an integrative review of Chinese international students' experiences in South Korea. Multicultural Education Studies. 2025;18(2):37–60. http://doi.org/10.14328/MES.2025.6.30.37
25. Verster JC. Išeri´c E. Ulijn GA. Oskam SMP. Garssen J. Single-item assessment of quality of life: Associations with well-being,mood, health correlates, and lifestyle. Journal of Clinical Medicine. 2024;13(17):5217. https://doi.org/10.3390/jcm13175217
26. Indrayathi PA, Kovács E, Januraga PP, Pradnyani PE, Rahyuda I, Kolozsvári LR. Exploring determinants of well-being among international students: A basis for health policy and risk management in higher education. Risk Management and Healthcare Policy. 2025;18:3359–3370. https://doi.org/10.2147/RMHP.S534448
27. Omilabu M, Neiterman E. "Maybe I should just risk tetanus": the experience of post-secondary international students accessing healthcare services in Ontario, Canada. Journal of American College Health. 2026;74(2):325–331. https://doi.org/10.1080/07448481.2025.2519378
28. Yu Q, Brunsting NC, Smart J, Bingham WP. Language proficiency, second language educational experience, and psychological well-being among international students at U.S. universities. Research in Higher Education. 2025;66:3. https://doi.org/10.1007/s11162-024-09821-7
29. Kim MR, Black S, Clifton J. Evidence-based holistic approach to supporting international students' English language proficiency needs and wellbeing: The impact of personalized autonomous learning. Applied Linguistics. 2025;46(4):668–690. https://doi.org/10.1093/applin/amae038
30. Im DH, Basilisco R, Shin KS, Bae SC. Determinants of working international students' life satisfaction: the mediating role of sense of belonging. International Journal of Advanced Culture Technology. 2022;10(4):322–336. https://doi.org/10.17703/IJACT.2022.10.4.322
31. Fisher CL, Fowler C, Krieger J, Pitts MJ, Worthington AK, Nussbaum JF, editors. Health communication, language, and social action across the life span. New York: Peter Lang; Dec 2024. https://doi.org/10.3726/b21965
32. Lee DK, Kim KH, Kwon SM. The determinants of health care utilization of international students in Korea. The Korean Journal of Health Economics and Policy. 2021;27(2):121–148.
33. Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. Psychological Bulletin. 1985;98(2):310–357. https://doi.org/10.1037/0033-2909.98.2.310
34. Tseng L. Psychological distress, stressors, and social support: A general benefits and stress-buffering analysis of cross-cultural workers [dissertation]. [Wheaton]: Wheaton College Graduate School; 2020. 19 p.
35. Mun JH, Yoon JW. An analysis of the adaptation-related research trends of foreign students. The Journal of Humanities and Social science 21. 2021;12(4):2931–2940. http://doi.org/10.22143/HSS21.12.4.208
36. Kwon SH. Keyword network analysis of discussions on international students in South Korea. The Journal of Learner-Centered Curriculum and Instruction. 2025;25(4):1073–1085. http://doi.org/10.22251/jlcci.2025.25.4.1073
37. Achangwa C, Lee TJ, Lee MS. Psychological well-being of foreign university students during the COVID-19 pandemic: a cross-sectional study in South Korea using the Kessler Psychological Distress Scale (K10). Journal of Global Health Science. 2021;3(2):e15. https://doi.org/10.35500/jghs.2021.3.e15
38. Lee HH. A Study on the psychological health of foreign students in Korea. The Journal of Humanities and Social sciences 21. 2022;13(6):3771–3781. https://doi.org/10.22143/HSS21.13.6.261
39. Wei M, Liang YS, Du Y, Botello R, Li CI. Moderating effects of perceived language discrimination on mental health outcomes among Chinese international students. Asian American Journal of Psychology. 2015;6(3):213–222. http://doi.org/10.1037/aap0000021
40. Mackert M, Koh HE, Mabry-Flynn A, Champlin S, Beal A. Domestic and international college students: health insurance information seeking and use. Journal of International Students. 2017;7(3):542–561. http://doi.org/10.5281/zenodo.570016
41. Newton DC, Tomyn AJ, LaMontagne AD. Exploring the challenges and opportunities for improving the health and wellbeing of international students: perspectives of professional staff at an Australian university. Journal of the Australian and New Zealand Student Services Association. 2021;29(1):74–92. https://doi.org/10.30688/janzssa.2021.1.01