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Exploring the Mediating Effect of Self-Efficacy on the Relationship Between Cultural Intelligence and Life Satisfaction: A Study of Chinese Students in South Korea

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Abstract: With the acceleration of globalization, an increasing number of Chinese students are choosing to study in South Korea. However, cross-cultural adaptation poses a significant challenge for these students. In this context, cultural intelligence (CQ), the ability of individuals to adapt to diverse cultural environments, becomes particularly important. While existing research indicates that CQ plays a crucial role in cross-cultural interactions, its impact on life satisfaction and the underlying mechanisms remain underexplored. This study conducted a stratified sampling online survey targeting Chinese students in various regions of South Korea. The survey regions were geographically categorized as follows: the northern region, including Seoul and Gyeonggi-do; the central region, including Daegu and Gyeongbuk; and the eastern region, including Busan. This categorization encompassed a total of five cities, aiming to ensure the representativeness and diversity of the sample. Ultimately, 392 valid responses were obtained, and data processing and hypothesis testing were performed using SPSS 25.0. The research results indicate that CQ significantly and positively predicts life satisfaction among Chinese students in South Korea. Moreover, self-efficacy partially mediates the relationship between CQ and life satisfaction, with CQ enhancing life satisfaction by boosting self-efficacy. These findings not only enrich the theoretical foundation of cross-cultural adaptation but also deepen our understanding of the adaptation processes and related psychological mechanisms of Chinese students in South Korea. They provide a new perspective for improving the life satisfaction of Chinese students studying in South Korea.

Keywords: Cultural Intelligence; Life Satisfaction; Self-Efficacy; Chinese Students; South Korea.

1. Introduction

With the acceleration of globalization, China's participation and importance in the international arena have increased significantly, leading to a dramatic rise in the number of Chinese students opting to study abroad [1]. Overseas study experiences not only provide valuable personal and educational opportunities but also often confer internationally recognized higher education qualifications, which are highly beneficial for international students' future employment prospects and personal development [2]. International education has thus become a critical pathway for students to enhance their personal growth, broaden their global perspectives, and experience cultural diversity [3].

With the strengthening of diplomatic relations between China and South Korea, geographical proximity, and the growing global influence of the "Korean Wave" (Hallyu) culture, an increasing number of Chinese students are choosing to study in South Korea [4]. According to the Blue Book of China's Study Abroad Development Report (2023-2024) released by CCG [5], Chinese students remained the largest source of international students in the United States, the United Kingdom, Australia, Japan, Germany, New Zealand, South Korea, and Malaysia during the 2022/23 academic year. Additionally, the number of Chinese students studying in Europe and countries along the Belt and Road Initiative has also increased.

Despite many cultural similarities between China and South Korea, such as an emphasis on collectivism and Confucianism [6, 7], there are significant cultural differences between the two countries. These differences, which include language, values, and social customs, pose challenges for international students.

Chen [8] conducted a study on 170 Chinese international students in Incheon, South Korea, revealing that over half of the participants exhibited mild to severe depressive symptoms. Nearly half of the students experienced sleep-wake disorders, reflecting significant cultural adaptation stress. This stress was particularly pronounced among students who were single, working part-time, had poor subjective health status, poor sleep quality, and unhealthy eating habits. Depression was closely associated with cultural adaptation stress and unhealthy dietary habits. Additionally, language barriers, homesickness, and lack of support from friends and family significantly increased the feelings of loneliness and psychological stress among the students [9]. Given these challenges, it has become exceedingly important to explore the factors influencing the life satisfaction of Chinese students in Korea.

Cultural intelligence (CQ) encompasses an individual's ability to understand, cope with, and adapt to new cultural environments [10]. This capability is not only related to academic success but also directly impacts daily life satisfaction and psychological well-being [11]. According to Ang, Van Dyne [12] cultural intelligence is one of the key factors for international students successfully adapting to foreign cultures. Therefore, fostering cultural intelligence among Chinese students in South Korea is essential for improving their overall experience and well-being.

Additionally, in cross-cultural environments, the level of self-efficacy may determine how international students assess and respond to challenges posed by cultural differences. Self-efficacy, defined as an individual's confidence in their ability to complete specific tasks, is comprehensively elaborated by

Bandura [13] in his social cognitive theory. It plays a crucial role in regulating emotional states and behavioral choices. Although existing literature has identified a connection between cultural intelligence and life satisfaction [14, 15], research on the mediating role of self-efficacy in this relationship remains relatively scarce.

This study aims to address gaps in the existing literature by thoroughly analyzing the interrelationships between cultural intelligence (CQ), self-efficacy, and life satisfaction, and by examining the mediating role of self-efficacy between CQ and life satisfaction. The findings will offer empirical support for enhancing the life satisfaction of Chinese students studying in South Korea. Additionally, this research will expand the theoretical foundation of cross-cultural adaptation and deepen our understanding of the adaptation processes and related psychological mechanisms of Chinese students within a cross-cultural environment in South Korea.

2. Literature Review

2.1. Cultural Intelligence and Life Satisfaction

Life satisfaction is a key component of subjective well-being, which primarily arises from an individual's contentment with their life circumstances [16]. The assessment of life satisfaction involves a cognitive process where individuals compare their current state to their desired level of satisfaction [17]. This evaluation encompasses not only cognitive factors but also subjective experiences, playing a crucial role in promoting individual subjective well-being and psychosocial adaptation. It is considered the ultimate goal of human development [18].

Cultural intelligence, as introduced by Earley and Ang [10], refers to an individual's ability to effectively manage and resolve issues in cross-cultural environments. It encompasses four primary dimensions: metacognitive CQ, cognitive CQ, motivational CQ, and behavioral CQ. In cross-cultural contexts, CQ provides individuals with the necessary skills to understand and adapt to new cultures. High levels of CQ enable individuals to keenly perceive and comprehend subtle cultural differences, thereby swiftly addressing and resolving potential cultural conflicts [19]. Moreover, individuals with higher CQ tend to adapt more quickly to new cultures and experience less impact from stress and difficulties [20]. According to Berry [21] theory of cross-cultural adaptation, individuals who can effectively understand and adjust to new cultural environments are more likely to experience life satisfaction and happiness.

Empirical research further supports the positive impact of cultural intelligence (CQ) on life satisfaction. For instance, a survey conducted by Le, Jiang [14] on immigrant workers in Australia demonstrated a positive correlation between cognitive CQ and life satisfaction. Similarly, Chen, Lin [15] found a positive relationship between CQ and the life satisfaction of students living abroad. These findings highlight the significant influence of CQ on individual life satisfaction in diverse cultural environments. Based on the aforementioned literature and empirical findings, this study proposes the following hypothesis:

H1: Among Chinese international students in South Korea, cultural intelligence is positively correlated with life satisfaction.

2.2. Self-efficacy and life satisfaction

Self-efficacy theory, proposed by Bandura [22], is defined as an individual's belief in their capability to organize and execute actions required to achieve specific goals. Bandura [23] further emphasized that individuals with high self-efficacy are more likely to positively evaluate their abilities and persist in the face of challenges, as they believe in their high capacity to achieve their objectives. This concept helps explain why individuals with similar knowledge and skills exhibit significant differences in behavior, as the primary determinant of human behavior change is the expectation of efficacy in achieving specific goals [24].

The positive correlation between self-efficacy and life satisfaction has been widely supported by research. For example, studies by Ang, Van Dyne [12], Çakar [25], Caprara, Steca [26], Luszczynska, Scholz [27] have all demonstrated this relationship. Similarly, Azizli, Atkinson [28] found a strong correlation between general self-efficacy and life satisfaction in a study of 242 university students. Based on the aforementioned literature and empirical findings, this study proposes the following hypothesis:

H2: Among Chinese international students in South Korea, self-efficacy is positively correlated with life satisfaction.

2.3. Cultural intelligence and self-efficacy

Cultural intelligence (CQ) is a critical factor in successfully adapting to different cultural contexts, defined as the capability to effectively identify, understand, and address cultural differences in cross-cultural environments [29]. This ability not only aids in resolving cross-cultural issues but also significantly enhances an individual's self-efficacy. Several studies have shown that individuals with higher cultural intelligence perform better in cross-cultural adaptation and communication skills. For instance, Lawrence [30] examined the cross-cultural adaptation of Taiwanese international students and found that CQ is positively correlated with both self-efficacy and cross-cultural adaptation and communication skills. Additionally, Wawrosz and Jurásek [24] conducted a survey of 190 university students, further confirming the importance of CQ in predicting self-efficacy in cross-cultural communication. These findings suggest that individuals with high levels of CQ are more likely to feel confident and effective in cross-cultural interactions. Based on these empirical research results, this study proposes the following hypothesis:

H3: Among Chinese international students in South Korea, cultural intelligence is positively correlated with self-efficacy.

2.4. The Mediating Role of Self-Efficacy in the Relationship Between Cultural Intelligence and Life Satisfaction

Self-efficacy is considered one of the significant predictors of cultural intelligence. Bandura [31] emphasized that self-efficacy significantly influences individuals' cognition, emotional experiences, and self-motivation. This cognition is crucial for understanding how individuals cope with daily challenges and successfully adapt to diverse cultural environments. The study by Chang, Tseng [32] revealed that problem-solving ability, moderated by self-efficacy, has a significant impact on cultural intelligence. Their research also found that self-efficacy plays a mediating role between cultural intelligence and cross-cultural adaptation among international exchange students, indicating that self-efficacy not only directly influences cultural intelligence but also indirectly enhances it by improving individuals' cross-cultural adaptation abilities.

Nguyen, Jefferies [33] discovered that higher self-efficacy is associated with better self-regulation, life satisfaction, and well-being. This finding underscores the critical role of self-efficacy in promoting individual psychological well-being. Additionally, Lee, Kim [34] showed that self-efficacy partially mediates the relationship between perceived stress and life satisfaction, mitigating the negative impact of stress and thereby enhancing life satisfaction. These studies suggest that self-efficacy not only helps individuals cope more effectively with daily challenges but also improves overall life quality by reducing the adverse effects of stress on health. Based on these empirical findings, this study proposes the following hypothesis:

H4: Among Chinese students in South Korea, self-efficacy mediates the relationship between cultural intelligence and life satisfaction.

3. Method

3.1. Participants

This study conducted a stratified sampling online survey targeting Chinese students in different regions of South Korea. The survey regions were geographically divided as follows: the northern region including Seoul and Gyeonggi-do, the central region including Daegu and Gyeongbuk, and the eastern region including Busan, covering a total of five cities. This division aimed to ensure the representativeness and diversity of the sample. A total of 438 questionnaires were distributed, and after excluding invalid responses, 392 valid questionnaires were obtained, resulting in a response rate of 89.50%. Regarding gender distribution, there were 178 male respondents (45.41%) and 214 female respondents (54.59%). The age distribution indicated that 262 respondents (66.84%) were aged 18-27, 100 respondents (25.51%) were aged 28-37, and 30 respondents (7.65%) were aged 38-47. In terms of educational level, 81 respondents (20.66%) were undergraduates, 176 respondents (44.90%) were master's students, and 135 respondents (34.44%) were doctoral students. Details are provided in Table 1.

Table 1. Demographic Characteristics of the Sample

Variable	Items	N	Percent (%)	Cumulative Percent (%)
Gender	Male	178	45.41	45.41
	Female	214	54.59	100
Age	18-27	262	66.84	66.84
	28-37	100	25.51	92.35
	38-47	30	7.65	100
Education leave	Undergraduate	81	20.66	20.66
	Master student	176	44.9	65.56
	Doctoral student	135	34.44	100
Total		392	100	100

3.2. Participants

3.2.1. Cultural Intelligence Scale (CQS)

This study utilized the Cultural Intelligence Scale (CQS) developed by Ang, Van Dyne [29] The scale consists of 20 items that assess four dimensions: Metacognitive CQ, Cognitive CQ, Motivational CQ, and Behavioral CQ. Responses are recorded using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating higher levels of cultural intelligence. In this study, the Cronbach's alpha coefficients for the four dimensions were 0.911 for Metacognitive CQ, 0.885 for Cognitive CQ, 0.865 for Motivational CQ, and 0.867 for Behavioral CQ. The overall Cronbach's alpha coefficient for the scale was 0.882, indicating good internal consistency.

3.2.2. Satisfaction with Life Scale (SWLS)

This study utilized the Satisfaction with Life Scale (SWLS) developed by Diener, Emmons [18] to assess individuals' subjective evaluation of their life satisfaction. The scale consists of five items (e.g., "I am satisfied with my life"), employing a 7-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). Higher scores indicate greater life satisfaction. In this study, the Cronbach's Alpha coefficient for the SWLS was 0.837, demonstrating good internal consistency

3.2.3. General Self-Efficacy Scale (GSES)

This study employed the General Self-Efficacy Scale (GSES) developed by Schwarzer and Jerusalem [35]. The scale comprises 10 items, using a 4-point Likert scale ranging from 1 ("not at all true") to 4 ("exactly true"). Higher scores reflect higher levels of self-efficacy. In this study, the Cronbach's Alpha coefficient for the GSES was 0.911, indicating excellent internal consistency.

3.3. Procedure

In this study, we used the online questionnaire tool "Wenjuanxing" to design and distribute the survey. During the distribution process, researchers thoroughly explained the study's purpose and significance to the participants. To enhance the response rate and data quality, we assured respondents that their answers would remain completely anonymous and that the data collected would be used solely for scientific research purposes, thus ensuring privacy and information security. The survey commenced on March 18, 2024, and concluded on April 15, 2024, spanning approximately four weeks.

4. Results

The data processing and hypothesis testing in this study were conducted using SPSS 25.0. The analyses included frequency analysis, descriptive statistics, Pearson correlation analysis, confirmatory factor analysis, and linear regression analysis.

4.1. Validity analyses

In validity analysis, the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity are commonly used to assess whether the data is suitable for factor analysis. The KMO measure evaluates sampling adequacy by examining partial correlations between variables, with values closer to 1 indicating that the variables share a common factor, thus making the data appropriate for factor analysis. Bartlett's test of sphericity checks whether the correlation matrix of the observed variables is close to an identity matrix, thereby assessing the non-independence of variables. Significant test results suggest that there is sufficient correlation between variables to justify factor analysis.

In this study, the results of the KMO measure and Bartlett's test of sphericity are presented in Table 2. The KMO measure was 0.925, indicating strong partial correlations among the variables and suggesting that the data is highly suitable for factor analysis. Bartlett's test of sphericity yielded an approximate chi-square value of 7055.642 with 595 degrees

of freedom and a p-value less than 0.001 (p = 0.000). This highly significant result clearly indicates that the correlation matrix is not an identity matrix, and there are significant correlations between variables. These findings strongly support the presence of underlying structures, confirming that the dataset is appropriate for factor analysis.

Table 2. KMO and Bartlett test

KMO		0.925
Bartlett test	Approx. Chi-Square	7055.642
	df	595
	p value	0.000

4.2. Descriptive Analysis

In this study, the descriptive analysis encompassed data from 392 participants, including assessments of the four sub-dimensions of cultural intelligence—metacognitive, cognitive, motivational, and behavioral cultural intelligence—as well as self-efficacy and life satisfaction. The results of the analysis are presented in Table 3.

The findings indicate that metacognitive cultural intelligence scored relatively high (M = 5.265, SD = 1.263), suggesting that participants possess strong reflective and regulatory capabilities in cross-cultural contexts. Cognitive cultural intelligence had the highest mean score (M = 5.411) and a lower standard deviation (SD = 1.183), reflecting a deep understanding of different cultures among the participants. The mean score for motivational cultural intelligence was 4.915, with a standard deviation of 1.222, indicating a relatively lower level of motivation and confidence in cross-cultural interactions. Behavioral cultural intelligence had the lowest mean score (M = 4.824) and the highest standard deviation (SD = 1.328), suggesting that participants may struggle more with behavioral adaptation and strategy implementation compared to other dimensions.

Additionally, the mean score for self-efficacy was 3.05, indicating that most participants have a positive view of their abilities, though the score is slightly below the maximum of 4. The mean score for life satisfaction was 5.099, with a standard deviation of 1.223, indicating that while most participants are generally satisfied with their lives, there is significant variability in individual satisfaction levels.

Overall, these descriptive statistics provide a detailed perspective on the distribution of cultural intelligence and related psychological measures within the sample, laying a foundation for subsequent factor analysis and data interpretation.

Table 3. Descriptive Analysis

Items	Min	Max	Mean	SD
Metacognitive CQ	1.25	7	5.265	1.263
Cognitive CQ	2.17	7	5.411	1.183
Motivational CQ	2	7	4.915	1.222
Behavioural CQ	1.6	6.8	4.824	1.328
General Self-Efficacy	1.5	4	3.05	0.697
Life Satisfaction	2	7	5.099	1.223

4.3. Pearson Correlation Analysis

The Pearson correlation analysis revealed significant relationships between different constructs. The results are presented in Table 4. The correlation coefficients for metacognitive cultural intelligence, cognitive cultural intelligence, motivational cultural intelligence, behavioral cultural intelligence, self-efficacy, and life satisfaction were all significant at the *** p < 0.001 level. These results indicate significant positive correlations between the different dimensions of cultural intelligence, self-efficacy, and life satisfaction. This finding supports the theoretical hypothesis that cultural intelligence enhances life satisfaction by increasing individual self-efficacy.

Table 4. Pearson Correlation Analysis

	Mean	Std. Deviation	1	2	3	4	5	6
Metacognitive CQ	5.265	1.263	1					
Cognitive CQ	5.411	1.183	0.343***	1				
Motivational CQ	4.915	1.222	0.326***	0.362***	1			
Behavioural CQ	4.824	1.328	0.274***	0.327***	0.329***	1		
General Self-Efficacy	3.05	0.697	0.299***	0.343***	0.310***	0.326***	1	
Life Satisfaction	5.099	1.223	0.521***	0.495***	0.471***	0.491***	0.419***	1
* p<0.05 ** p<0.01 *** p<0.001								

4.4. Suitability testing of measurement models

Table 5 presents the factor loadings for the observed variables across different factors, highlighting the non-standardized coefficients, standard errors, critical ratios (CR), p-values, and standardized estimates. The significant p-values (*** p < 0.001) across all observed variables indicate strong relationships with their respective factors, confirming the validity of the measurement model.

4.5. Self-efficacy mediation test

In this section, we examine how the four dimensions of cultural intelligence (metacognitive, cognitive, motivational, and behavioral) influence life satisfaction through the mediating variable of self-efficacy. Detailed analysis results are presented in Table 6. The findings indicate that the four dimensions of cultural intelligence not only have direct effects on life satisfaction but also exert significant indirect effects through self-efficacy, thereby enhancing the overall impact on life satisfaction to varying degrees.

Specifically, metacognitive cultural intelligence exhibits a partial mediation effect on life satisfaction through self-efficacy, with an indirect effect value of 0.017, accounting for 5.78% of the total effect. Cognitive cultural intelligence also shows a partial mediation effect, with an indirect effect value of 0.024, representing 10.04% of the total effect. Motivational cultural intelligence demonstrates a partial mediation effect, with an indirect effect value of 0.017, accounting for 8.46% of the total effect. Similarly, behavioral cultural intelligence has a partial mediation effect, with an indirect effect value of 0.021, making up 8.57% of the total effect.

Overall, the combined indirect effect of the four

dimensions of cultural intelligence on life satisfaction through self-efficacy is 0.079, which constitutes 32.24% of the total effect. These findings underscore the crucial mediating role of self-efficacy between cultural intelligence and life satisfaction. They reveal the multi-layered pathways through which cultural intelligence enhances life satisfaction by boosting self-efficacy.

Table 5. Factor Loadings

Factor	Observed Variable	Non Std. Coef.	Std. Error	*CR*	*p*	Std. Estimate
Metacognitive CQ	Metacognitive CQ1	1	-	-	-	0.763
	Metacognitive CQ2	0.944	0.062	15.208	***	0.791
	Metacognitive CQ3	1.019	0.067	15.245	***	0.793
	Metacognitive CQ4	0.891	0.063	14.21	***	0.739
Cognitive CQ	Cognitive CQ1	1	-	-	-	0.776
	Cognitive CQ2	0.928	0.065	14.317	***	0.713
	Cognitive CQ3	1.012	0.064	15.733	***	0.774
	Cognitive CQ4	0.955	0.064	14.885	***	0.738
	Cognitive CQ5	0.98	0.065	14.984	***	0.742
	Cognitive CQ6	0.977	0.064	15.153	***	0.749
Motivational CQ	Motivational CQ1	1	-	-	-	0.722
	Motivational CQ2	0.917	0.07	13.112	***	0.712
	Motivational CQ3	1	0.072	13.97	***	0.761
	Motivational CQ4	1.017	0.072	14.088	***	0.767
	Motivational CQ5	1.029	0.071	14.423	***	0.787
Behavioural CQ	Behavioural CQ1	1	-	-	-	0.73
	Behavioural CQ2	0.995	0.073	13.702	***	0.736
	Behavioural CQ3	1.03	0.072	14.277	***	0.768
	Behavioural CQ4	1.044	0.073	14.293	***	0.769
	Behavioural CQ5	1.045	0.074	14.133	***	0.76
General Self-Efficacy	General Self-Efficacy1	1	-	-	-	0.723
	General Self-Efficacy2	0.975	0.072	13.616	***	0.71
	General Self-Efficacy3	0.959	0.072	13.282	***	0.693
	General Self-Efficacy4	1.061	0.072	14.642	***	0.762
	General Self-Efficacy5	0.978	0.073	13.426	***	0.7
	General Self-Efficacy6	0.915	0.072	12.657	***	0.661
	General Self-Efficacy7	0.984	0.072	13.737	***	0.716
	General Self-Efficacy8	0.938	0.073	12.76	***	0.666
	General Self-Efficacy9	1.004	0.073	13.76	***	0.717
	General Self-Efficacy10	1.056	0.072	14.576	***	0.759
Life Satisfaction	Life Satisfaction1	1	-	-	-	0.675
	Life Satisfaction2	0.939	0.077	12.276	***	0.712
	Life Satisfaction3	1.036	0.079	13.196	***	0.777
	Life Satisfaction4	1.066	0.089	12.015	***	0.694
	Life Satisfaction5	0.984	0.08	12.289	***	0.712

Note: The dash '-' indicates that the item serves as a reference。*** p<0.001

5. Conclusion and Discussion

5.1. Cultural Intelligence and Life Satisfaction

This study examined the impact of cultural intelligence on the life satisfaction of Chinese international students in South Korea. The results indicated that cultural intelligence has a significant positive effect on life satisfaction, thus supporting hypothesis H1. This finding aligns with the research outcomes of [15, 24, 36-38], all of which confirm the importance of cultural intelligence in enhancing life satisfaction.

Faran, Dastgeer [36] found that expatriates working in Pakistan, despite facing mobility restrictions, could enhance their life satisfaction by leveraging their cultural intelligence. This underscores the practical value of cultural intelligence in improving adaptability and a sense of fulfillment in cross-cultural environments. Consequently, for international students, effectively utilizing cultural intelligence to enhance life satisfaction becomes a crucial consideration.

5.2. Self-Efficacy and Life Satisfaction

The findings of this study indicate that self-efficacy has a significant positive impact on life satisfaction, supporting hypothesis H2. This result aligns with the findings of [25, 28, 39], who also observed a positive correlation between self-efficacy and life satisfaction. Bandura [13] emphasized that high levels of self-efficacy can enhance an individual's confidence and motivation when facing challenges, demonstrating positive psychological effects across various domains. Schwarzer and Jerusalem [40] further confirmed that self-efficacy plays a crucial role in psychological health and overall well-being.

The importance of self-efficacy is particularly pronounced in cross-cultural environments. Luszczynska, Scholz [27] pointed out that self-efficacy can assist individuals in better adapting to the uncertainties and stresses of new environments. This adaptation is critical for maintaining psychological health and achieving life satisfaction in culturally diverse settings.

In summary, the positive relationship between self-efficacy and life satisfaction observed in this study reinforces the existing body of literature. High self-efficacy contributes to improved psychological resilience and well-being, particularly in challenging and cross-cultural contexts. These findings highlight the importance of fostering self-efficacy to

enhance life satisfaction.

Table 6. Mediation Effect Analysis

Item	Symbol	Meaning	Effect Size	95% CI		Conclusion	Proportion of Effect Size
				Lower Limit	Upper Limit		
Metacognitive CQ=>General Self-Efficacy=>Life Satisfaction	a*b	Indirect Effect	0.017	0.001	0.042	Partial Mediation	5.78%
Metacognitive CQ=>General Self-Efficacy	a	Cultural Intelligence=>General Self-Efficacy	0.077	0.023	0.131		
General Self-Efficacy=>Life Satisfaction	b	General Self-Efficacy=>Life Satisfaction	0.221	0.083	0.358		
Metacognitive CQ=>Life Satisfaction	c'	Direct Effect	0.276	0.201	0.352		
Metacognitive CQ=>Life Satisfaction	c	Total Effect	0.294	0.218	0.369		
Cognitive CQ=>General Self-Efficacy、General Self-Efficacy=>Life Satisfaction	a*b	Indirect Effect	0.024	0.004	0.050	Partial Mediation	10.04%
Cognitive CQ=>General Self-Efficacy	a	Cultural Intelligence=>General Self-Efficacy	0.11	0.05	0.169		
General Self-Efficacy=>Life Satisfaction	b	General Self-Efficacy=>Life Satisfaction	0.221	0.083	0.358		
Cognitive CQ=>Life Satisfaction	c'	Direct Effect	0.215	0.132	0.298		
Cognitive CQ=>Life Satisfaction	c	Total Effect	0.239	0.156	0.322		
Motivational CQ=>General Self-Efficacy=>Life Satisfaction	a*b	Indirect Effect	0.017	0.001	0.040	Partial Mediation	8.46%
Motivational CQ=>General Self-Efficacy	a	Cultural Intelligence=>General Self-Efficacy	0.078	0.021	0.135		
General Self-Efficacy=>Life Satisfaction	b	General Self-Efficacy=>Life Satisfaction	0.221	0.083	0.358		
Motivational CQ=>Life Satisfaction	c'	Direct Effect	0.184	0.105	0.264		
Motivational CQ=>Life Satisfaction	c	Total Effect	0.201	0.122	0.281		
Behavioural CQ=>General Self-Efficacy=>Life Satisfaction	a*b	Indirect Effect	0.021	0.004	0.047	Partial Mediation	8.57%
Behavioural CQ=>General Self-Efficacy	a	Cultural Intelligence=>General Self-Efficacy	0.095	0.044	0.146		
General Self-Efficacy=>Life Satisfaction	b	General Self-Efficacy=>Life Satisfaction	0.221	0.083	0.358		
Behavioural CQ=>Life Satisfaction	c'	Direct Effect	0.224	0.153	0.296		
Behavioural CQ=>Life Satisfaction	c	Total Effect	0.245	0.174	0.317		
		Overall Indirect Effect	0.079				32.24%

5.3. Cultural intelligence and self-efficacy

Individuals with high cultural intelligence (CQ) demonstrate greater confidence and effectiveness when facing cross-cultural challenges, directly enhancing their life satisfaction. This finding aligns with the research conducted by Earley and Ang [10], thereby supporting hypothesis H3,

which posits a positive correlation between cultural intelligence and self-efficacy. Individuals with high cultural intelligence typically exhibit stronger cross-cultural communication skills and superior emotional regulation abilities. They can rapidly comprehend and adapt to new cultural environments, thereby mitigating the negative impacts of cultural shock. This not only confers an advantage in cross-cultural interactions but also enables them to remain calm and confident when confronting unknown or complex situations [41]. Such confidence and adaptability significantly enhance their self-efficacy, fostering a greater willingness to embrace challenges and persevere.

Individuals with high cultural intelligence are more adept at handling cross-cultural conflicts with flexibility and effectiveness. They can identify and understand the cultural differences underlying conflicts and employ appropriate strategies for mediation and resolution. This conflict management capability not only reduces tension and misunderstandings in cross-cultural interactions but also bolsters their self-efficacy, as they believe in their ability to manage and resolve complex cross-cultural issues [35].

5.4. The Mediating Role of Self-Efficacy

This study further investigated the mediating role of self-efficacy in the relationship between cultural intelligence and life satisfaction among Chinese international students in South Korea. The results revealed the significant mediating role of self-efficacy in this relationship, indicating that cultural intelligence not only directly impacts life satisfaction but also indirectly enhances its positive effect by increasing self-efficacy. This finding supports hypothesis H4 and aligns with Bandura [13] self-efficacy theory, which posits that self-efficacy is central to individuals' perceptions of their capabilities, significantly influencing their behavioral choices, persistence, and coping strategies.

Moreover, self-efficacy as a mediating mechanism reflects how cultural intelligence enhances individuals' adaptability and ability to cope with challenges, thereby improving life satisfaction. This is consistent with the perspective of Thomas [42], who argued that cultural intelligence enhances functional and psychological adaptation in cross-cultural environments. Van Dyne, Ang [41] also supported this view, finding that individuals with high cultural intelligence exhibit higher self-efficacy in cross-cultural settings, leading to increased life satisfaction. Additionally, the work of Schwarzer and Jerusalem [35] emphasizes the importance of self-efficacy in managing stress and achieving well-being, which is crucial for international students facing the challenges of adaptation. Similarly, Earley and Ang [10] highlighted that cultural intelligence contributes to successful international experiences by fostering better coping mechanisms and resilience. Therefore, enhancing the self-efficacy of international students can not only improve the practical application of their cultural intelligence but also increase their life satisfaction.

5.5. Limitations and Future Research Directions

This study has several limitations, which also indicate potential directions for future research. Firstly, due to the use of a cross-sectional survey design, this study cannot establish causal relationships. As a result, it cannot rule out the potential influence of other variables and cannot observe changes in variables over time. This design limitation may affect the reliability of the study's conclusions. To overcome this limitation, future research could consider employing a longitudinal study design. By collecting data at multiple time points, researchers could more accurately track and analyze the factors influencing life satisfaction among international students and their changes over time [43]. Integrating quantitative and qualitative research methods, such as in-depth interviews and case studies, will help to comprehensively understand the nature of life satisfaction among international students and its complex influencing factors [44].

Secondly, this study's sample is primarily composed of Chinese international students from South Korea. This specific sample limits the external validity and generalizability of the research findings. Variations in international student populations by country and region may influence life satisfaction and the adaptation process. Future research should expand the sample coverage to include more regions and diverse types of international students to enhance the representativeness and applicability of the findings [45].

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