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The dynamics in the relationship between perceived cultural distance, cultural intelligence and adjustment of international students

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ABSTRACT

This study investigates the dynamics between perceived cultural distance (PCD), cultural intelligence (CQ), and international students’ sociocultural, psychological, and academic adjustment. It examines whether CQ (its total score and four sub-components separately from the total CQ) moderates the relationship between PCD and adjustment. By investigating all three dimensions of students’ adjustment, and also distinguishing the four aspects of the CQ, it provides an especially fine-grained analysis of the link between PCD, CQ and international students’ adjustment. In a cross-sectional study, 341 international college students from several universities in the Netherlands participated in an online survey. Moderation analysis (Hayes Process Macro) indicated that overall CQ and motivational CQ moderated only the relationship between PCD and sociocultural adjustment. Further analysis show that when age, gender, level of study, and region of origin controlled, PCD consistently predicted all aspects of students’ adjustment negatively. Overall CQ predicted only sociocultural and academic adjustment, but motivational CQ influenced all aspects of adjustment. Together, these results provide an insightful understanding of the role of international students’ CQ in their adjustment in the face of cultural differences.

Studying abroad offers students many promising benefits (Netz, 2021; Sisavath, 2021). However, it may also place them in a vulnerable condition (Sherry et al., 2010). Especially, when we focus on degree-seeking international students, or the students who are enrolled in a higher education institution abroad and physically living in a country different from their country of origin (Andrade, 2006; UNESCO Institute for Statistics, 2022). Like other sojourners, as they move to another country, international students face new environments that they must adjust to. However, their adjustment is also distinctive as they deal with the different challenges concerning their role as students. At the least, they will need to go through triple transitions as they move to a new country or society, a new educational system and environment, and a different level of academic study (Jindal-snap and Ingram, 2013; Sarmiento, Pérez, Bustos, Hidalgo & del Solar, 2019). Thus, the adjustment of international students can be even more arduous.

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Adjustment of international students in higher education has been one of the main topics in the studies on the internationalization of higher education (Andrade, 2006; Cao & Meng, 2022; Mesidor & Sly, 2016; Schartner & Young, 2016, 2020; Smith, 1955; J. Zhang & Goodson, 2011). While adjustment, in general, refers to the process of dealing with new and unfamiliar settings, in line with many studies on international students (Matsumoto & Hwang, 2013; Mesidor & Sly, 2016; Ward & Kennedy, 1993; Zhang & Goodson, 2011), this study focuses on adjustment as their feelings of comfort and efficacy in going through the process. The subjective experience of this progressively growing student population (UNESCO and Schneegeans, 2016; UNESCO Institute for Statistics, 2022) affects not only the students, but also the internationalization program in general. Problems in adjustment can lead to students’ academic drawbacks (Matsumoto & Hwang, 2013; Rienties, Beausaert, Grohnert, Niemantsverdriet & Kommers, 2012; Rienties & Tempelaar, 2013). It could also threaten and harm their psychological well-being, mental health, and even physical health (Brunsting et al., 2018; Matsumoto & Hwang, 2013; Mesidor & Sly, 2016; Mori, 2000; Shadowen, Williamson, Guerra, Ammigan & Drexler, 2019). On the other hand, the success of their adjustment can predict their achievement (Rienties & Tempelaar, 2013) and support the promotion of their educational program to other potential students (Shafaei & Razak, 2016). Hence, years of studies have been dedicated to understanding influential factors in international students’ adjustment (Brunsting et al., 2018; Cao & Meng, 2022; Mesidor & Sly, 2016; Smith, 1955; J. Zhang & Goodson, 2011).

Among the factors that have been linked to international students’ adjustment is cultural distance and, more specifically, perceived cultural distance. Perceived cultural distance (PCD), or individual perceptions of the differences in cultures between their host and home countries (Ambos et al., 2019; Demes & Geeraert, 2014; Sousa & Bradley, 2006), has been presumed to be a negative predictor of students’ adjustment. Numerous empirical studies (Galchenko & van de Vijver, 2007; Suinat & van de Vijver, 2009; Tausova, Bender, Dimitrova & van de Vijver, 2019; Ward & Kennedy, 1993) have supported the Cultural Distance Hypothesis (Black et al., 1991; Bochner, 2003; Hemmasi & Downes, 2013), that greater cultural differences between an individual’s home and host country are associated with a lower level of adjustment. According to this finding, should students only pursue their higher education in a country with more cultural similarity so that they would have better adjustment?

Fortunately, other studies (Cao & Meng, 2022; Hirai et al., 2015; Mesidor & Sly, 2016; Schartner & Young, 2020; J. Zhang & Goodson, 2011) also reveal some supportive factors for international students’ adjustment, which include personal resources factors (e.g., personality traits or self-efficacy) or environmental or contextual factors (e.g., social support or locals’ acceptance). However, regarding intercultural interaction, a particular factor has risen to prominence: cultural intelligence (CQ). In the view of the Culture Learning Theory approach (Shafaei & Razak, 2016), the individual is an active agent who can learn and acquire culture-specific skills to overcome the cultural challenges in their new environment. Hence, in dealing with cultural differences, cultural intelligence (CQ), or an individual’s ability to function in the face of cultural diversity (Ang & Van Dyne, 2009; Earley & Ang, 2003), could be assumed to be an essential protective factor. Empirical studies have shown that cultural intelligence, or facet(s) of it, positively predicts the intercultural adjustment of students (Guðmundsdóttir, 2015; Sharma & Hussain, 2017; Solomon & Steyn, 2017; Wawrosz & Jurasek, 2023).

If cultural distance influences international students’ adjustment negatively and cultural intelligence affects adjustment positively, how are the dynamics between PCD, CQ, and international students’ adjustment altogether? This study will investigate one of the theoretical models on the relationship between the three variables, which places cultural intelligence as the moderator in the relationship between PCD and students’ adjustment (Malay et al., 2023). In line with the active culture learning approach, the model suggests that students with higher cultural intelligence will deal better with the negative effect of cultural distance so that its effect on their adjustment will be lower. Several studies (Lorenz, Ramsey, Tariq & Morrell, 2017; Magnusson et al., 2013; Ng, Dyne, Van & Ang, 2019) have indicated support for CQ’s role as a moderator in the relationship between cultural differences and adaptation, but they focused on non-academic settings, e.g., in marketing, or only on an aspect of CQ, or on a specific type of adaptation. Hence, there is still the need for an empirical test of the hypothesis that cultural intelligence (CQ) may buffer the impact of cultural distance on international student’s adjustment.

To answer the question of whether cultural intelligence (CQ) moderates the relationship between perceived cultural distance (PCD) and international students’ adjustment, this study aims to empirically investigate the proposed hypothesis. Furthermore, it will provide a more fine-grained analysis of the relationship between PCD, CQ, and international students’ adjustment by delving into all three aspects of international students’ adjustment (psychological, sociocultural, and academic) and all four cultural intelligence dimensions (metacognitive, cognitive, motivational, and behavioral).

**International students’ adjustment**

This study focuses on adjustment as an individual’s subjective experience in dealing with various aspects of unfamiliar settings that they meet (Black, 1988; Black & Gregersen, 1991; Matsumoto & Hwang, 2013). It represents the degree of comfort the students feel with their new role(s) and the degree of efficacy they feel about themselves fitting the role requirements (Black, 1988). The role(s) referred to in their adjustment definition would include being a member of the community in the host country and a student in their academic institution.

As mentioned in the beginning, one of the distinctive aspects of international students’ adjustment is that they experience transitions in the face of different academic environments, levels, systems, or demands. Therefore, even though many previous studies on international students (Cao & Meng, 2022) define their adjustment as two aspects: psychological and sociocultural (Searle & Ward, 1990; Ward & Kennedy, 1993; J. Zhang & Goodson, 2011), this study endorses the three-dimensions adjustment concept which includes academic adjustment (Malay et al., 2023; Schartner & Young, 2016, 2020). Moreover, studies have suggested that students’ academic adjustment differs from their social adjustment (Rienties & Tempelaar, 2013; Yu & Wright, 2016). Thus, this study operationalizes international students’ adjustment as consisting of sociocultural, psychological, and academic aspects.
Sociocultural aspect of adjustment (SA) refers to how well they “fit in” or successfully perform interactions in a new cultural setting (Ward et al., 2005; Ward & Kennedy, 1994). It represents the more practical aspects of adjustment that are based on an individual’s cognitive and behavioral performances in daily life in the host environment (Demes & Geeraert, 2014; Schartner et al., 2022; Schartner & Young, 2016; Searle & Ward, 1990). In this study, SA is defined as the students’ level of efficacy in managing their daily lives in the new cultural context of their host country.

Psychological adjustment (PA) of international students refers to their affective or emotional response to their life and experiences in the new cultural environment (Searle & Ward, 1990; Ward et al., 2005; Ward & Kennedy, 1993). Other studies refer to PA as the subjective or general well-being (Demes & Geeraert, 2014; Furukawa, 1997) and life satisfaction (Ward et al., 2005). This study defines PA as students’ level of positive and negative feelings about their life in their host country.

Academic adjustment (AA) refers to how well students deal with and manage their novel academic environment, demands, and system (Anderson et al., 2016; Bastien et al., 2018; Mesidor & Sly, 2016; Schartner & Young, 2020; Wang & Hannes, 2014; Yu & Wright, 2016). Furthermore, Anderson et al. (2016) suggested that the international students’ AA also includes their evaluation on their academic lifestyle (the fitness between individual and their role as a student), achievement (academic progress and performance), and motivation (their drive to continue and complete their academic experience). In sum, this study defines AA as students’ level of efficacy and satisfaction with their current role as students and on handling their academic demands and environment.

Whether as a general construct or each aspect, international students’ adjustment has been linked to some predicting factors. As in the prior systematic literature review (Cao & Meng, 2022), they can be categorized into several clusters: demographics, personal resources/demands, contextual resources/demands, and other variables. Demographic factors include age, gender, country of origin, or level of education (Aldawarsi, Adams, Grimes & Kohn, 2018; Bastien et al., 2018; Gebregergis et al., 2019; Kânci, 2012; Tausová et al., 2019). Personal resources include factors like language proficiency, personality traits, or cultural intelligence (Andrade, 2006; Bastien et al., 2018; Hu, Liu, Zhang & Wang, 2020; Kânci, 2012; Mesidor & Sly, 2016; Shu et al., 2017; van Niejenhuis et al., 2018). Meanwhile, factors like social support, social contact, discrimination, and cultural distance (Bierwiczczek & Waldzus, 2016; de Araujo, 2011; Jackson et al., 2013; Mesidor & Sly, 2016; J. Zhang & Goodson, 2011) are grouped as contextual resources or socio-cultural factors (Bierwiczczek & Waldzus, 2016; Cao & Meng, 2022). Among those many factors, this present study will specifically focus on cultural distance and cultural intelligence as predictors of international students’ adjustment.

Perceived cultural distance (PCD) and international students’ adjustment

Culture is the collective mind programming that distinguishes the members of one group or category from people from others (Hofstede, 2011). It is also defined as a distributed set of practices, values, and beliefs that are shared through interaction with other group members (Kemmelmeier & Kusano, 2018). The group of people in these definitions may refer to various collectives, including organizations, tribes or ethnicities, or nations. In the context of sojourners, culture mainly refers to national cultures (Hofstede, 1983). Thus, cultural distance (CD) has been defined as the extent of cultural differences between the home and host countries (Ambos et al., 2019; Engle & Nash, 2015; Sousa & Bradley, 2006).

Rather than the “objective” scores of nations’ cultures (Beugelsdijk, Kostova, Kunst, Spadafora & van Essen, 2018; De Santis et al., 2016), this study will focus on perceived cultural distance (PCD). Perceived cultural distance (PCD) is an individual’s perception of how much of the difference between their home and host countries’ cultures (Ambos et al., 2019; Babiker et al., 1980; Demes & Geeraert, 2014). It is mostly based on an individual’s self-assessment of cultural aspects directly associated with their life and experience in their immediate environment (Babiker et al., 1980; Galchenko & van de Vijver, 2007). By focusing on PCD, this study addresses what a previous study (Naumov & Puffer, 2000) found, that even people from the same nationality and who live in the same country could perceive their national culture differently.

Available studies on the relationship between PCD and adjustment of student show support to the Cultural Distance Hypothesis, that is, for a negative relationship between PCD and adjustment. Several studies empirically show PCD as a negative predictor of students’ psychological adjustment (Cetinkaya-Yildiz et al., 2011; Furukawa, 1997; Galchenko & van de Vijver, 2007; Suatnet & van de Vijver, 2009; Tausová et al., 2019), sociocultural adjustment (Searle & Ward, 1990; Swani, 2009; Ward & Kennedy, 1993), or their overall adjustment (Wilczewski et al., 2022). However, there are also studies that reveal no reliable relationship with students’ specific aspect of adjustment, including their psychological adjustment (Ladum & Burkholder, 2019; Searle & Ward, 1990; Ward & Kennedy, 1993) or academic adjustment (Babiker et al., 1980; Bastien et al., 2018; Selmer & Lauring, 2009). Therefore, the present study will examine more deeply the link between PCD and all three aspects of international students’ adjustment: SA, PA, and AA. More importantly, this study intends to further investigate the essential question about the relationship between PCD and international students’ adjustment in the presence of their ability to successfully encounter different culture(s): the cultural intelligence (CQ).

Cultural intelligence (CQ) and international students’ adjustment

Most literature on cultural intelligence (CQ) consistently defines it as an ability (Crowne, 2008; Earley & Ang, 2003; Fang et al., 2018; Mesidor & Sly, 2016; Thomas et al., 2008). Even though the definitions have been slightly varied between the available studies (Ang & Van Dyne, 2009; Earley, 2002; Earley & Ang, 2003; Thomas et al., 2008; Van Dyne, Ang, Ng, Rockstuhl, Tan & Koh, 2012), it can be concluded that CQ refers to the ability to deal with cultural diversity. It refers to an individual’s ability to recognize, manage, and perform effectively and appropriately when facing different cultures.

This study follows the conceptualization of CQ as a multi-dimensional construct. It comprises four dimensions: metacognitive, cognitive, motivational, and behavioral CQ (Ang et al., 2006, 2007; Ang & Van Dyne, 2009; Rockstuhl & Van Dyne, 2018; Van Dyne & Van Dyne, 2001).
international students. The hypothesis posits that CQ serves as a resource for students to actively comprehend and navigate different cultures, mitigating the negative impact of cultural differences on adjustment. This proposition aligns with findings from previous studies where CQ moderated the relationship between perceived cultural distance (PCD) and intercultural adjustment, especially in relation to international students (Cao & Meng, 2022; Gebregergis et al., 2019; Hu et al., 2020; Mesidor & Sfy, 2016; Wawrosz & Jurasek, 2023).

However, the relationship between CQ and adjustment does not happen without context. Further exploration of the relationship between cultural intelligence (CQ) and adjustment in the presence of cultural distance is essential, as emphasized in the present study. Existing research on the interplay among perceived cultural distance (PCD), CQ, and adjustment is limited, primarily focusing on expatriate and business contexts, and yielding inconsistent results. For instance, one hypothesis posits that country-based cultural distance is a moderator between CQ and intercultural adjustment (Zhang, 2013). However, the related empirical test has not supported this model (Zhang & Oczkowski, 2016). Other studies (Setti et al., 2022; Song et al., 2021) have only indicated support for motivational CQ as a moderator in specific context of expatriates’ adjustment. Therefore, this study seeks to investigate an alternative theoretical model that examines the relationship between PCD, CQ, and adjustment, especially in relation to international students’ adjustment.

According to the alternative model proposed by Malay and colleagues (2023), CQ moderates the relationship between PCD and international students’ adjustment. Drawing from the Culture Learning Theory approach (Pacheco, 2020; Shafaei & Razak, 2016), this hypothesis posits that CQ serves as a resource for students to actively comprehend and navigate different cultures, mitigating the negative impact of cultural differences on adjustment. This proposition aligns with findings from previous studies where CQ moderated the relationship between cultural factors and adaptation in different contexts. For example, CQ moderated the relationship between students’ culture shock and adaptation (Presbitero, 2016), between CD and students’ speaking up behavior (Ng et al., 2019), or between perceived minority status and acculturation (Volpone, Marquardt, Casper & Avery, 2018). Other studies in the business context revealed that motivational CQ moderated the relationship between PCD and marketing strategy adaptation (Magnusson et al., 2013) and metacognitive CQ moderated the relationship between PCD and service behaviors adaptation (Lorenz et al., 2017). Despite these findings, empirical evidence supporting the proposed model of CQ as a moderator between international students’ PCD and their adjustment remains limited, underscoring the importance of the current study in addressing this gap.

The present study: the dynamics of perceived cultural distance (PCD), cultural intelligence (CQ), and international students’ adjustment

As aforementioned, this study aims to explore the interplay between PCD, CQ, and international students’ adjustment (ISA). The recent study will test the theoretical model which places CQ as a moderator in the relationship between PCD and all aspects of students’ adjustment (Malay et al., 2023). Based on the model, higher level of CQ will weaken the negative effect of PCD on students’ socio-cultural, psychological, and academic adjustment. The main hypotheses of this study are illustrated in Fig. 1.

![Fig. 1. The hypothetical model of the relationship between PCD, CQ, and Adjustment.](image)
According to the literature review as summarized above, the first hypothesis is that there will be a negative effect of PDD on adjustment; PCD will negatively affect all aspects of adjustment (SA, PA, and AA) (Hypothesis 1). More specifically, the more students perceive differences between their home and host countries’ cultures, the poorer their sociocultural (H1a), psychological (H1b), or academic (H1c) adjustment will be. More importantly, the second hypothesis to be tested in this study is that CQ would moderate the relationship between PCD and adjustment (Hypothesis 2). A higher level of CQ should decrease the negative impact of PCD on students’ sociocultural (H2a), psychological (H2b), or academic (H2c) adjustment. Additionally, in line with the results of previous studies, CQ should also affect international students’ adjustment directly and positively (Hypothesis 3). The better students’ ability to function in different cultures, the easier it should be for them to adjust socially (H3a), psychologically (H3b), and academically (H3c).

**Exploratory analysis on the role of four dimensions of CQ on the PCD and Adjustment dynamics**

To even better understand the dynamics of PCD, CQ, and international students’ adjustment, this study will also explore the impact of each CQ dimension, separately. Previous studies (Engle & Nash, 2015; Rockstuhl & Van Dyne, 2018) have stated the importance of investigating individual dimensions of CQ, as it would provide a more comprehensive understanding than measuring only the overall CQ. Moreover, available studies still show diverse relationships between aspects of CQ and adjustment (Solomon & Steyn, 2017). While some studies support the positive relationship between all aspects of CQ and cross-cultural adjustment (Lin et al., 2012; Shu et al., 2017; Wawrosz & Jurasek, 2023), other studies showed that only the motivational or metacognitive aspects of CQ related to adjustment (Guðmundsdóttir, 2015; Huff et al., 2014; Iskhakova, 2018; Song et al., 2021; Ward et al., 2011). On top of that, previous studies also show different aspect of CQ that acts as a moderator in the relationship between PCD and adaptation-related behavior (Magnusson et al., 2013; Lorenz et al., 2017). The question remains which dimensions of CQ would moderate the relationship between PCD and students’ adjustment. Thus, this study will also address the following questions: (1) Which aspects of CQ affect students’ sociocultural, psychological, and academic adjustment? And: (2) Which aspects of CQ moderate the relationship between PCD and students’ adjustment?

**Method**

**Participants**

A priori power analysis using G*Power 3.1.9.4. (Faul, Erdfelder, Lang & Buchner, 2007; Kang, 2021) for linear multiple linear regression with a total of three predictors suggested a minimum sample size of 119 to yield a statistical power of at least 0.95 ($\alpha = .05$) with a medium effect size ($\Omega^2 = 0.15$). However, if the analysis would include the possible covariates (age, gender, and level of study), the needed sample size increases to 146 participants.

Initially, 377 international students studying in The Netherlands participated in the survey. However, only 341 of the data collected could be further analyzed after data cleansing. The 341 participants were diverse in age, sex, level of study they were undertaking, duration they have been staying in the host country (Netherlands), and their home country, as shown in Table 1 below. Overall, the average age of the participants was 22.91 years old (SD = 4.42), and the majority of them identified as female, undertaking undergraduate study, and coming from EU countries, especially Germany (22.6 %), which pretty much corresponds to the proportion of international students’ population in The Netherlands (Nuffic, 2023; Wijsenbeek, 2022).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Participants’ characteristics.</th>
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<tbody>
<tr>
<td>Age</td>
<td>17 – 49 y.o.; M = 22.91 (SD = 4.42)</td>
</tr>
<tr>
<td>Sex</td>
<td>68.6 % female</td>
</tr>
<tr>
<td>Level of study</td>
<td>69.8 % undergraduate study</td>
</tr>
<tr>
<td>Home country (Nationality/Country of origin)</td>
<td>22.6 % Germany</td>
</tr>
<tr>
<td></td>
<td>5.9 % Bulgaria</td>
</tr>
<tr>
<td></td>
<td>5.3 % Italy</td>
</tr>
<tr>
<td></td>
<td>3.5 % Romania</td>
</tr>
<tr>
<td></td>
<td>3.2 % Indonesia</td>
</tr>
<tr>
<td></td>
<td>2.1 % (@): China, France, Latvia, Spain, USA</td>
</tr>
<tr>
<td></td>
<td>1.8 % (@): Greece, Hungary, Lithuania, Poland</td>
</tr>
<tr>
<td></td>
<td>1.5 % (@): Croatia, India, UK</td>
</tr>
<tr>
<td></td>
<td>1.2 % (@): Austria, Brazil, Finland, Moldova, Russia, South Korea</td>
</tr>
<tr>
<td></td>
<td>21.9 % (@&lt;1 %): other countries (among others: Aruba, Bangladesh, Belgium, Cambodia, Cameroon, Canada, Chile, Colombia, Curacao, Cyprus, Czech Republic, Denmark, Estonia, Ghana, Iran, Ireland, Israel, Japan, Kosovo, Lebanon, Luxembourg, Madagascar, Malawi, Malaysia, Mexico, Mozambique, Norway, Oman, Pakistan, Peru, Portugal, Qatar, Singapore, Sweden, Turkey)</td>
</tr>
<tr>
<td></td>
<td>0.9 %: more than one country (Italy &amp; South Africa, Italy &amp; Spain, and Turkey &amp; Thailand)</td>
</tr>
<tr>
<td>Region of origin</td>
<td>61.0 % European Union (EU) countries</td>
</tr>
<tr>
<td></td>
<td>31.7 % Non-EU countries</td>
</tr>
<tr>
<td></td>
<td>7.3 % n.a.</td>
</tr>
</tbody>
</table>
Measures

This study chose measurement scales developed purposively for the international student population. The scales have shown good psychometric attributes in measuring the intended construct in the population of international students (Anderson et al., 2016; Ang et al., 2007; Demes & Geeraert, 2014; Fang et al., 2018).

Perceived cultural distance (PCD)

Students’ PCD was measured with the brief Perceived Cultural Distance scale (BPCDS) by Demes and Geeraert (2014). The scale consists of 12 items asking participants to share their perception of how different their host country is from their home country in several cultural aspects, such as the natural environment, foods, norms, or values. Participants were asked to rate on a 7-point Likert scale (1 = very similar to 7 = very different). Consistent with prior literature (Demes & Geeraert, 2014), the BPCDS in this study also showed a high-reliability index (Cronbach’s α = 0.94) and good factor loading (>0.6).

International students’ adjustment

The current study employed the short-form of three scales developed to measure each aspect of international students’ adjustment: The Brief Psychological Adaptation Scale/BPAS (Demes & Geeraert, 2014) for psychological adjustment/PA; the Brief Sociocultural Adaptation Scale/BSAS (Demes & Geeraert, 2014) for sociocultural adjustment/SA; and the Academic Adjustment Scale/AAS (Anderson et al., 2016) for academic adjustment/AA. This study utilized each measure’s short form to include only items with good factor loadings (>0.6).

In the BSAS, the participants were asked to indicate their perception of how difficult or easy it was for them to adapt to seven social and cultural aspects of their host country, such as “the values and beliefs” or “the social environment.” They must rate on a 7-point Likert scale (1 = very difficult to 7 = very easy). The short form of BSAS used in this study includes seven items and has good reliability index (α = 0.85).

The items in the BPAS ask individuals to report their emotion while living in the host country by indicating how often they experienced some feeling during the last two weeks on a 7-point Likert-type scale (1 = never to 7 = always). The example of feelings measured in the scale is “feeling out of place” or “feeling homesick.” In the current study, BPAS consists of three items with a good reliability index (α = 0.88).

Meanwhile, the AAS asks the student to rate on a 5-point Likert scale (1 = rarely applies to me to 5 = always applies to me) how true the statement is in its items compared to their experience as an international student. One example of the item is “I am satisfied with the level of my academic performance to date.” The short-form AAS used in this study only includes five items measuring AA directly (not through the theoretical sub-dimensions). The short form AAS also showed a good reliability index (α = 0.85).

Cultural intelligence

The current study measures students’ CQ with the 20-item Cultural Intelligence Scale (CQS) developed by Ang and Van Dyne (2009). The scale measures four dimensions of CQ: metacognitive (4 items), cognitive (6 items), motivational (5 items), and behavioral (5 items). Each item asks individuals to rate how agreeable the statement is with their ability on a 7-point Likert-type scale (1 = strongly disagree to 7 = strongly agree). An example of the CQS item is: “I change my nonverbal behavior when a cross-cultural situation requires it.” In this study, CQS showed a good reliability index, both in total (α = 0.88) and per dimension (α.metacognitive CQ=0.84; α.cognitive CQ=0.82; α.motivational CQ=0.83; α.behavioral CQ=0.84).

Demographic characteristics

The survey also inquired about some demographic characteristics of the students presumed to influence international students’ adjustment (Brunsting et al., 2018; Cao & Meng, 2022; Zhang & Goodson, 2011). The characteristics included age, gender, level of education (undergraduate or graduate students (master and doctoral students)), and region of origin (EU or non-EU countries). The categorization of origin on the basis of region of origin follows previous studies on students’ adjustment (Selmer & Lauring, 2009) as the number of students for every country of origin in the current study was not properly distributed. The effect of these characteristics on adjustment would be tested and would be included as covariates in the moderation analysis if their relationship with adjustment was significant.

Procedure

We recruited international students in four universities in The Netherlands by combining in-person and online approaches. Using convenience sampling, we announced the survey in classes and distributed flyers. We also asked lecturers to announce the survey to their students or ask students to broadcast it to their peers. In addition, we also published a survey announcement on several social media platforms (Facebook, Instagram, and LinkedIn). On the announcement (flyers), potential participants were provided with a link to an online survey on the Qualtrics website.

To reach the participants with the expected characteristics, we explicitly stated in the survey opening that the survey was aimed at
Table 2
Means, range, standard deviations, and correlations among variables.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>Range</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PCD</td>
<td>4.55</td>
<td>1.17-7.00</td>
<td>1.45</td>
<td>-</td>
<td>0.50 * *</td>
<td>-</td>
<td>(p &lt; 0.001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SA</td>
<td>5.01</td>
<td>1.00-7.00</td>
<td>1.16</td>
<td>-</td>
<td>0.31 * *</td>
<td>0.43 **</td>
<td>(p &lt; 0.001)</td>
<td>(p &lt; 0.001)</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>PA</td>
<td>4.13</td>
<td>1.00-7.00</td>
<td>1.46</td>
<td>-</td>
<td>0.23 * *</td>
<td>0.26 **</td>
<td>0.15 * *</td>
<td>(p &lt; 0.001)</td>
<td>(p &lt; 0.001)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>AA</td>
<td>3.81</td>
<td>1.00-5.00</td>
<td>0.79</td>
<td>-</td>
<td>0.17 **</td>
<td>0.28 **</td>
<td>0.15 * *</td>
<td>(p &lt; 0.001)</td>
<td>(p = 0.006)</td>
<td>(p = 0.007)</td>
<td>(p = 0.007)</td>
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<tr>
<td>5</td>
<td>CQ</td>
<td>5.01</td>
<td>2.12-6.73</td>
<td>0.74</td>
<td>-</td>
<td>0.17 **</td>
<td>0.28 **</td>
<td>0.15 * *</td>
<td>0.15 * *</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>MetaCQ</td>
<td>5.46</td>
<td>1.00-7.00</td>
<td>1.03</td>
<td>-</td>
<td>0.16 **</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.04</td>
<td>0.73 * *</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>CogCQ</td>
<td>4.19</td>
<td>1.00-7.00</td>
<td>1.06</td>
<td>-</td>
<td>0.15 * *</td>
<td>0.14 **</td>
<td>0.05</td>
<td>0.11 *</td>
<td>0.69 **</td>
<td>0.31 * *</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>MotCQ</td>
<td>5.63</td>
<td>1.60-7.00</td>
<td>0.95</td>
<td>-</td>
<td>0.17 **</td>
<td>0.43 **</td>
<td>0.25 **</td>
<td>0.27 **</td>
<td>0.67 **</td>
<td>0.41 **</td>
<td>0.26 * *</td>
</tr>
<tr>
<td>9</td>
<td>BehvCQ</td>
<td>4.77</td>
<td>1.00-7.00</td>
<td>1.14</td>
<td>-</td>
<td>-0.09</td>
<td>0.11 **</td>
<td>0.13 **</td>
<td>0.02</td>
<td>0.73 **</td>
<td>0.37 **</td>
<td>0.36 * *</td>
</tr>
<tr>
<td>10</td>
<td>Age</td>
<td>22.91</td>
<td>17-49</td>
<td>4.42</td>
<td>0.12 *</td>
<td>0.02</td>
<td>0.05</td>
<td>-0.07</td>
<td>-0.02</td>
<td>-0.04</td>
<td>-0.04</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Note. MetaCQ = Metacognitive CQ; CogCQ = Cognitive CQ; MotCQ = Motivational CQ; BehvCQ = Behavioral CQ; LoE = level of education
* = p < 0.05;
** = p < 0.01
Table 3
Hayes moderation analysis for the relationship between PCD, CQ, and Adjustment.

<table>
<thead>
<tr>
<th>IV</th>
<th>SA</th>
<th></th>
<th></th>
<th></th>
<th>PA</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>AA</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>SE</td>
<td>t</td>
<td>p</td>
<td>95 %CI</td>
<td>β</td>
<td>SE</td>
<td>t</td>
<td>p</td>
<td>95 %CI</td>
<td>β</td>
<td>SE</td>
<td>t</td>
<td>p</td>
</tr>
<tr>
<td>Constant</td>
<td>4.98</td>
<td>0.18</td>
<td>27.89</td>
<td>0.00</td>
<td>4.62, 5.33</td>
<td>3.95</td>
<td>0.32</td>
<td>12.45</td>
<td>0.00</td>
<td>3.32, 4.57</td>
<td>3.88</td>
<td>0.14</td>
<td>27.12</td>
<td>0.00</td>
</tr>
<tr>
<td>PCD</td>
<td>-0.41</td>
<td>0.04</td>
<td>-9.56</td>
<td>0.00</td>
<td>-0.49, -0.32</td>
<td>-0.28</td>
<td>0.06</td>
<td>-4.71</td>
<td>0.00</td>
<td>-0.40, -0.16</td>
<td>-0.08</td>
<td>0.03</td>
<td>-2.48</td>
<td>0.01</td>
</tr>
<tr>
<td>CQ</td>
<td>0.26</td>
<td>0.08</td>
<td>3.42</td>
<td>0.00</td>
<td>0.11, 0.41</td>
<td>0.20</td>
<td>0.11</td>
<td>1.85</td>
<td>0.06</td>
<td>-0.01, 0.41</td>
<td>0.13</td>
<td>0.06</td>
<td>2.12</td>
<td>0.03</td>
</tr>
<tr>
<td>PCD*CQ</td>
<td>0.11</td>
<td>0.05</td>
<td>2.13</td>
<td>0.03</td>
<td>0.01, 0.22</td>
<td>0.05</td>
<td>0.07</td>
<td>0.66</td>
<td>0.51</td>
<td>-0.09, 0.20</td>
<td>-0.07</td>
<td>0.04</td>
<td>-1.62</td>
<td>0.11</td>
</tr>
<tr>
<td>RoO</td>
<td>0.06</td>
<td>0.13</td>
<td>0.51</td>
<td>0.61</td>
<td>-0.18, 0.31</td>
<td>-0.41</td>
<td>0.18</td>
<td>-2.28</td>
<td>0.02</td>
<td>-0.76, -0.06</td>
<td>-0.04</td>
<td>0.10</td>
<td>-0.43</td>
<td>0.67</td>
</tr>
<tr>
<td>LoE</td>
<td>0.59</td>
<td>0.17</td>
<td>3.47</td>
<td>0.00</td>
<td>0.26, 0.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Sex= male (1) and female (2); RoO/region of origin= EU countries (1) and non-EU countries (2); LoE/level of education= undergraduate study (1) and graduate study (2)

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full-time university students with non-Dutch nationality who did not live in The Netherlands permanently before their study. In the survey, we also included questions on students’ nationality/home country, whether they identified as international students, and the other demographic characteristics we aimed to measure (age, gender, and level of study (undergraduate or graduate levels)).

The survey also included a cover letter explaining the purpose of the study, the ethical approval, the policies on confidentiality, data safety, and participants’ rights, and the main researcher’s contact. It also asked for consent before the participants were presented with the survey items. After completion, participants were offered a ticket for an online seminar on intercultural skills and a chocolate bar (only for participants who were approached in person).

Data analysis

The analyses were conducted in IBM SPSS version 28. After the data cleansing, descriptive statistics and Pearson’s product-moment correlations between all continuous variables were calculated. To examine the potential confounding effect of the categorical demographic characteristics (gender and level of study), mean comparison using t-test analysis were also performed. To conduct the analysis of moderation and predictive associations (linear regression) between the estimated predictors and the dependent variables, model 1 from the PROCESS Macro 4.0 of the SPSS plugin was utilized. To probe any potential moderation, which is indicated by a significant contribution of the interaction of predictor and moderator variable, we used the pick-a-point and the Johnson-Neyman technique available in the PROCESS 4.0 plugin. In the pick-a-point technique, we examined the relation of the predictor with the criterion at high (+1 SD), average (0), and low (−1 SD) values of the moderator. Meanwhile, we examined the cut-off scores for the moderation effects in the Johnson-Neyman technique.

Results

Descriptive, correlational, and t-test analyses were conducted first to examine the dynamics of the variables involved in this study. Afterwards, Hayes’ moderation analysis was conducted to test the proposed hypothesis and exploratory analysis.

Descriptive and correlational analyses of variables

As shown in Table 2, in general, participants in this study show quite high levels of adjustment, especially in their sociocultural aspect (M=5.04, SD=1.16). On average, their level of CQ is also high (M=5.02, SD=0.74), especially on metacognitive (M=5.46, SD=1.03) and motivational (M=5.64, SD=0.95) aspects.

The results of the correlation analyses, also presented in Table 2, indicate that PCD correlate negatively and moderately with sociocultural/SA (r = −0.50) or psychological/PA (r = −0.32) aspects, but to a lower degree with academic adjustment/AA (r = −0.23). Conversely, CQ shows a positive, but weaker relationship with all aspects of adjustment, (r-CQ.SA=0.29; r-CQ.PA=0.14; r-CQ-AA=0.15). Even though all aspects of CQ are significantly related to SA, PA is only significantly related with motivational and behavioral CQ and AA shows significant relationship only with motivational CQ. Furthermore, CQ shows a significant and negative correlation with PCD, especially two of its aspects (cognitive CQ and motivational CQ). However, these relationships can be considered too weak (r < 0.2) to cause multicollinearity between the two predicting variables. Therefore, the moderation analysis with PCD and

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Fig. 2. Interaction effect of Cultural Intelligence (CQ) and Perceived Cultural Distance (PCD) on Sociocultural Adjustment (SA).
CQ as predictors could be conducted.

Additional analyses with the demographic characteristics show that there is no connection between age or gender and students’ adjustment. Age does not have a significant relationship with any aspect of adjustment. Likewise, there is no significant difference between male and female students on all of their adjustment aspects. On the other hand, there are differences in the adjustment levels between students coming from different regions of origin. The independent-samples t-test indicates a significant difference in psychological adjustment between undergraduate and graduate (master and doctorate) students (t(314) = 4.41, p < 0.001), and AA (t(314) = 1.95, p = 0.05) between students from EU and non-EU countries, with students from EU countries showing higher scores, in SA (graduate (master and doctorate) students (MEU—5.22, SD—1.09; Mnon-EU—4.70, SD—1.17), PA (MEU—4.40, SD—1.45; Mnon-EU—3.66, SD—1.36), and AA (MEU—3.90, SD—0.80; Mnon-EU—3.72, SD—0.75). Level of education is only significantly related with PA. The independent-samples t-test indicates a significant difference in psychological adjustment between undergraduate and graduate (master and doctorate) students (t(242) = −2.59, p = 0.01), with bachelor students reporting lower PA (M—4.43, SD—1.24). Given these results, the region of origin will be controlled in the moderation analyses between PCD, CQ, and international students’ adjustment by involving it as a covariate. Level of education will also be included as a covariate in the moderation analysis for PA.

Hypothesis testing: the direct effects of the predictors (PCD and CQ) and the moderation effect of CQ

As shown in Table 3, the moderation analysis results indicate that PCD, CQ, and their interaction explained 31% of the variance in social adjustment/SA (R^2 = 0.31, p = 0.00). While every one unit increase of PCD would be followed by a 0.40-unit decrease of SA (β = −0.40, t = −9.56, p = 0.00), every one unit increase of CQ would lead to a 0.26-unit increase in SA (β = 0.26, t = 3.42, p = 0.00). Simultaneously, the interaction between PCD and CQ would increase SA by 0.11-unit (β = 0.11, t = 2.13, p = 0.03).

Fig. 2. illustrates how students’ level of CQ influences the effect of PCD on SA. An increase in PCD would be followed by a lower decrease in SA when the students have higher levels of CQ. For students with a lower level of CQ (<−1 SD), every one unit increase of PCD would lower their SA by 0.49 unit (β = −0.49, t = −7.86, p < 0.001). However, when their CQ score is average (−1 SD < x < +1 SD), one unit increase of PCD will decrease their SA by 0.41 (β = −0.41, t = −9.56, p < 0.001). Meanwhile, for students with higher CQ score (>1 SD), every one unit increase of PCD would only lower their SA by 0.33 unit (β = −0.33, t = −6.13, p < 0.001). To sum up, the higher the students’ level of CQ, the weaker negative impact of PCD on ISA would be.

Table 3, also shows that similar to its negative effect on sociocultural adjustment/SA, PCD also negatively influence psychological adjustment (PA) and academic adjustment (AA). The increase of every one-unit PCD would be followed by a 0.33 unit decrease of PA (β = −0.33, t = −6.39, p = 0.00) and a 0.11-unit decrease of AA (β = −0.11, t = −3.65, p < 0.001). However, only AA will increase for a 0.14 unit when there is an increase of a-unit in cultural intelligence/CQ (β = 0.14, t = 2.50, p = 0.01). The variation in CQ is not followed by any change in PA. The interaction between PCD and CQ also does not affect PA and AA significantly.

Overall, the results show that PCD is a significant predictor of students’ sociocultural, psychological, and academic adjustment. Thus, Hypotheses 1 and its respective subcomponents (H1a, H1b, and H1c) are supported. Meanwhile, CQ significantly predicts students’ sociocultural and academic, but not their psychological adjustment. Accordingly, hypothesis 3 is partially supported (H3a and H3c). Finally, the interaction between PCD and CQ significantly predicts only sociocultural adjustment. Hence, while H2a (CQ moderates the relationship between PCD and SA) is supported, H2b and H2c are not.
Exploratory analysis: differentiating the four dimensions of CQ

In regard to the first exploratory question of whether all, or only specific, aspects of CQ affect students’ adjustment, the earlier part of the results statistical analysis shows that only some aspects of CQ are related to certain aspects of international students’ adjustment; see Table 2. Regression analysis suggested that, after controlling PCD, region of origin, and level of education, when all CQ aspects measured together, only motivational CQ shows direct influence to all aspects of students’ adjustment: sociocultural/SA ($\beta = 0.45$, $t = 7.10$, $p < 0.001$), psychological/PA ($\beta = 0.37$, $t = 3.99$, $p < 0.001$), and academic/AA ($\beta = 0.18$, $t = 3.48$, $p < 0.001$).

Further analysis on the moderation effect of the CQ aspect(s) on the relationship between PCD and international students’ adjustment shows that among the four aspects of CQ, only motivational CQ moderated the relationship between PCD and SA ($\beta = 0.38$, $t = 6.78$, $p < 0.001$). As illustrated in Fig. 3, the differences in SA between students with higher and lower levels of motivational CQ looks even more prominent than between higher and lower levels of general CQ (Fig. 2). Students’ SA will drop as much as 0.53, 0.41, or only 0.28-unit for every one-unit increase in PCD if their CQ score is low ($< -1$ SD), average ($-1$ SD $< x < +1$ SD), or high ($> +1$ SD), respectively.

Discussion

This study provides empirical evidence for how cultural intelligence (CQ) moderates the relationship between perceived cultural distance (PCD) and sociocultural adjustment among international students. The findings suggest that a higher level of CQ weakens the negative impact of PCD on students’ adjustment to the challenges of their daily lives in the host country. This result offers partial support for the hypothesis on the dynamics between perceived cultural distance, cultural intelligence, and adjustment (Malay et al., 2023), such that one of the possible mechanisms in which CQ supports international students’ adjustment is by acting as a buffer to the negative impact of different cultures on international students’ ability to manage their daily lives and to fit into their social environment in the host country.

Specifically, our analysis revealed that motivational CQ is a reliable moderator of the relationship between PCD and sociocultural adjustment. It plays a significant role in mitigating the adverse effects of cultural differences on sociocultural adjustment. The more students are interested in other culture(s), and the more they take the initiative to learn about the other culture(s), the less their sociocultural adjustment would be negatively affected by the cultural differences they perceive. Therefore, rather than just focusing on providing knowledge about the host country’s culture or the host institution to the students, future interventions in international education might be advised to spend more effort on fostering students’ curiosity and initiatives toward cultural diversity. Even if students do not know about certain aspects of their new environment, if they have a higher interest in different cultures (thus, high motivational CQ), they can direct themselves to interact and learn about their new environment. Consequently, they can deal with different cultures better, enhancing their adjustment.

Furthermore, this study reveals a negative relationship between PCD and both psychological as well as academic aspects of international students’ adjustment. However, CQ had no moderation effect on their relationships. Despite their level of CQ, students who perceive more cultural differences also tend to feel a lower level of positive emotions or efficacy in managing their academic challenges. These results underscore the complexity of adjustment dynamics. Although they do not fully support the hypotheses of this study, they corroborate some previous findings on the Cultural Distance Hypothesis (Furukawa, 1997; Galchenko & van de Vijver, 2007; Searle & Ward, 1990; Suáñet & van de Vijver, 2009; Swami, 2009; Tausová et al., 2019). Moreover, the present study extends the work by incorporating the academic aspects of students’ adjustment. Unlike previous studies that contradict the relationship between PCD and academic adjustment (Babiker et al., 1980; Bastien et al., 2018; Selmer & Lauring, 2009), this study shows that PCD negatively influenced academic adjustment. Not only do these results add more support to the existing body of knowledge on the relationship between PCD and adjustment, but they also expand it in the context of international students.

However, the question remains: Why CQ did not equally affect the link between PCD and all three aspects of students’ adjustment? We propose that the variability in the strength of the relationship between PCD and different adjustment aspects may offer insight. Particularly, CQ has exerted a more pronounced influence on the relationship between PCD and sociocultural adjustment, given its stronger association with PCD compared to the other aspects. As CQ reflects students’ ability to function in diverse cultural settings, it may be more relevant to be utilized in contexts when cultural differences have a more significant impact, just like in daily life or social interactions. Consequently, when students perceive adverse effects of cultural differences on their sociocultural adjustment, they may also rely more on their CQ to mitigate these challenges.

Another potential influence on this study’s results is the variability in students’ CQ scores. This variability could stem from the method of CQ measurement used in the present study, which employed a continuous variable as a moderator. This approach may produce different results than using a categorical variables (Babiker et al., 1980; Bastien et al., 2018; Selmer & Lauring, 2009). Moreover, the average CQ scores obtained in the present study were relatively high, which may have limited the discernibility between students categorized as having high, moderate, or low CQ levels; in fact, there were only very few participants with notably low CQ scores. This lack of variance might have impacted the moderation effects observed for two of the three students’ adjustment dimensions. Future research with more extensive and more diverse samples across the CQ spectrum might shed more light on this issue.

This study also uncovers intriguing findings regarding the direct relationship between CQ and international students’ adjustment. The positive correlation between overall CQ and adjustment aspects was relatively low. Moreover, after accounting for PCD and other controlled variables, CQ impacted only students’ sociocultural and academic adjustment. It did not exert a significant effect on psychological adjustment. These results resonate with prior research indicating CQ’s positive contribution to sociocultural adjustment (Cao & Meng, 2022; Lin et al., 2012; Mesidor & Sly, 2016) and a positive role in academic adjustment (Hu et al., 2020; Shu et al., 2017;
predict all aspects of adjustment, while CQ positively predicted sociocultural and academic adjustment. Therefore, this study provides 
research is the utilization of a cross-sectional study design and convenient sampling method, which restricted our ability to capture the 
full spectrum of international students.

Besides the limitation of being based on a sample of international students in only one European country, another limitation of this 
study is the non-inclusion of students from all countries of origin. Differ from some previous findings (Brunsting et al., 2018; Zhang 
& Goodson, 2011), the recent results indicated that only educational level and region of origin influenced students’ adjustment. Notably, the psychological adjustment between undergraduate and graduate students differed, with graduate students showing higher psychological adjustment. Whilst this result diverges from a prior study suggesting that the two groups did not differ in their adjustment (Huo et al., 2020), it aligns with other research indicating lower levels of depression or stress among graduate students compared to undergraduate students (Kim & Ra, 2015; Li, Liu, Wei & Lan, 2013). One may speculate that this difference may be attributed to differences in life experiences. Even though a direct effect of age on students’ adjustment was not supported, it is undeniable that graduate students are usually older and potentially have more life experiences, including transitioning from high school to university or exposure to international environments (Mesidor & Sly, 2016), which could aid in their current adjustment.

The present study also reveals a relationship between adjustment and students’ region of origin. The sociocultural, psychological, and academic adjustment of EU students differed significantly from that of non-EU students. Unlike a previous study suggesting similarities in general, interaction, and work (academic work) adjustment between EU and non-EU students (Selmer & Lauring, 2009), the current study indicates that EU students exhibited higher scores across all three adjustment aspects measured. Additionally, consistent with The Cultural Distance Hypothesis, EU students from countries with presumed more cultural similarities also demonstrated lower perceived cultural distance (PCD) scores. While further analysis is warranted, these initial findings offer preliminary support for the relationship between country-based and perceived cultural distance. Thus, future research endeavors could enhance these insights by incorporating both kinds of CD and a larger sample size to represent diverse countries of origin equally.

More importantly, our study demonstrates the robustness of the statistical analysis results for the moderation model testing, even after controlling for the influential variables: the level of education and region of origin. Notably, both CQ and motivational CQ moderated the relationship between PCD and the sociocultural adjustment of international students. PCD was found to negatively predict all aspects of adjustment, while CQ positively predicted sociocultural and academic adjustment. Therefore, this study provides the needed empirical evidence on the relationship between PCD, CQ, and adjustment for international students from different levels of education (undergraduate and graduate students) and from different regions of origin.

Nevertheless, it would be important to replicate this study with different and/or more diverse samples to provide further validation of the current results and contribute to valuable insights whether the current findings generalize across various student populations. Besides the limitation of being based on a sample of international students in only one European country, another limitation of this research is the utilization of a cross-sectional study design and convenient sampling method, which restricted our ability to capture the full spectrum of international students’ experiences over time. Consequently, our findings may only reflect certain groups of students at a particular point during their prolonged stays in the host country. Thus, besides including a more diverse range of students from various countries of origin, and studying in different host countries, future exploration of the dynamics between the main variables could include other presumably influential variables (e.g., personality or social support), or diverse conditions of the relevant variables (e.g., students from a country with, on average, very high or very low cultural distance), or even different contexts (e.g. full-degree students and short-term exchange students), or more. By doing so, we can better understand the conditions or contexts under...
which PCD has various impacts on students’ adjustment. Additionally, given that adjustment also refers to a process taking place over a long period of time, the subjective feelings and evaluations of students may vary over time. Therefore, future research should employ a longitudinal study design or, at least, include the duration of stay in the host country as a covariate. Utilizing different study designs could offer valuable further insights into the dynamics between perceived cultural distance, cultural intelligence, and international students’ adjustment.

Conclusion

In sum, this study’s results show that cultural intelligence (CQ) moderates the relationship between perceived cultural distance (PCD) and sociocultural adjustment (SA). Furthermore, out of four aspects of CQ, only Motivational CQ moderates the relationship between PCD and SA. PCD negatively predicts the adjustment of international students regarding all three aspects: sociocultural, psychological, and academic. However, overall CQ positively predicts only the sociocultural and academic aspects of their adjustment. The more fine-grained analysis indicates that only Motivational CQ contributes to all aspects of students’ adjustment significantly.

CReditT authorship contribution statement

Sabine Otten: Writing – review & editing, Supervision, Methodology, Conceptualization. Robert J. Coelen: Writing – review & editing, Validation, Supervision, Methodology. Elok D. Malay: Writing – review & editing, Writing – original draft, Visualization, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

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References


