Polyculturalism and cultural adjustment of international students: Exploring the moderating role of cultural distance in a quantitative cross-sectional survey study

Su Ling Xiao¹, Zi Xuan Yang¹ and Allan B. I. Bernardo¹,²*

Abstract: For international students, adjusting to the culture of their host country is an essential and challenging task, and previous research has inquired into factors that relate to better adjustment of such students. The current study investigates the possible role of intergroup ideology of polyculturalism in international students’ cultural adjustment, and the effect of cultural distance to this relationship in international students in the University of Macau using a quantitative cross-sectional survey approach. We surveyed 319 international students from different countries that varied in cultural distance from Macau and asked about their endorsement of polyculturalism and their current cultural adjustment. Results showed that who have the greater endorsement of polyculturalism adjusted to the host culture (Macau) better. Multiple regression analysis showed that who had greater endorsement of polyculturalism and came from lower cultural distance societies adjusted to the host culture (Macau) better. Moreover, cultural distance acted as a moderator between polyculturalism and cultural adjustment; specifically,
the positive association between polyculturalism and cultural adjustment was observed only when the cultural distance was low. Implications and future directions for theory and practice are discussed.

Subjects: Social Psychology; Counseling Psychology; Educational Psychology

Keywords: polyculturalism; cultural adjustment; cultural distance; international students; intergroup ideologies; lay theories

Globalization has intensified student mobility in many parts of the world, creating more ethnically and culturally diverse student populations in many universities. Although international student inflow rates are highest in North American, Western European, and Australasian countries, there is also increasing diversity in the student populations in some Asian cities. Once these international students arrive in their host country, they are faced with the challenge of adjusting to the new environment, of fitting in another culture that may differ a little bit or quite a lot from their own. Previous research has investigated the environmental factors that affect adjustment, such as local language proficiency (Constantine, Anderson, Berkel, Caldwell, & Utsey, 2005; Hechanova, Beehr, & Christiansen, 2003), but several other studies also indicate the important role of personal characteristics of the student such as, travel experience and level of education (Mustaffa & Ilias, 2013), academic self-efficacy (Lee & Ciftci, 2014), and bicultural identity (Chen, Benet-Martínez, & Harris Bond, 2008) in international students' adjustment to a new culture. In this study, we explore the possible role of a relatively new social psychological construct—the intergroup ideology of polyculturalism—in international students' adjustments to a new culture. Polyculturalism is the intergroup ideology that cultures are connected and mutually influencing each other (Rosenthal & Levy, 2012), implying that cultural boundaries are not rigid (Morris, Chiu, & Liu, 2015). We hypothesize that endorsement of this intergroup ideology will be associated with better cultural adjustment of international students in Macau, an autonomous region in China. We also explore the possible role of cultural distance as a moderator of this relationship. We briefly elaborate on our key constructs in the following sections.

1. Cultural adjustment

Cultural adjustment is defined as the degree to which human beings are psychologically comfortable with diverse facets of a new culture (Black, 1990; Kraimer, Takeuchi, & Frese, 2014). Individuals who are better adjusted to a novel culture have greater acceptance of the new norms and behaviors in the host culture. They tend to possess higher openness to the host culture and be open to people when contacting with the host nationals, interpreting a positive impact that they possess a better interaction with host nationals (Caligiuri, 2000). On the other hand, maladjusted individuals may have a hard time to accept the new behaviors and norms of the host culture, and they may be troublesome to build the relationship with local people in the host culture (Major, 2005).

In terms of international students going to a university in a different country or culture, better cultural adjustment affords multiple benefits. For example, stronger adaptation to the new culture can help international students successfully engage in group or community activities, which could help to reduce the feeling of social isolation and help them to get along well with schoolmates (Wu, Garza, & Guzman, 2015). International students who are culturally adjusted also communicate with professors to fully understand the lecture and requirements of the assignments (Major, 2005), and tend to adapt better to the academic-related work and make academic achievement to a greater degree (Constantine et al., 2005). In contrast, international students' maladjustment is associated with experiencing homesickness, language difficulties, academic concerns, alienation, and discrimination (Constantine et al., 2005; Crockett et al., 2007). These maladjusted students may encounter some social, physical, psychological problems with continuous acculturative stress, such as depression, anger, low self-esteem, physical illness, and no communication with others (Constantine et al., 2005; Constantine, Okazaki, & Utsey, 2004). As such, psychologists and
education researchers have inquired into the factors that relate to international students’ cultural adjustment.

Although research has shown that environmental factors have a strong influence in international students’ cultural adjustment (see, e.g. Schachner, He, Heizmann, & Van de Vijver, 2017), much of the research has focused on individual difference factors that are associated with better cultural adjustment. The assumption is that if we understand the individual factors and characteristics that are associated with better adjustment, those factors could be the target of interventions to support international students’ adjustment or of policy and program reforms that will facilitate international students’ adjustment. Moreover, knowing the individual difference factors, could also provide guides for identifying students who are vulnerable to maladjustment and who are more likely to need support in the process.

We will not attempt to report all the individual difference factors that have been found to be associated with the cultural adjustment of international students in this section; instead, we highlight a representative sample of such factors. For example, personality traits such as assertiveness (Lee & Ciftci, 2014), openness to experience (Hua et al., 2019), extraversion, and conscientiousness (Shu, McAbee, & Ayman, 2017) have been associated with adjustment of international students, as are academic self-efficacy (Lee & Ciftci, 2014), individual adaptability (Hua et al., 2019), and coping strategies (Akhtar & Kroener-Herwig, 2019; Cao, Zhu, & Meng, 2018). But many of the individual difference factors that seemed important in international students’ adjustment are associated with experiences and individual factors that relate to engagement with other cultures. For example, international students who have more travel experiences and higher levels of education (Mustaffa & Ilias, 2013), and better language proficiencies in the host country’s language (Cao & Meng, 2017; Major, 2005). Similarly, the international students’ cultural intelligence or the ability to modify behaviors in intercultural contexts (Shu et al., 2017), their acculturation orientations (Schachner et al., 2017) and acculturation strategies (Pan & Wong, 2011) are all associated with better adjustment. Also importantly, cultural identity (Hua et al., 2019), even bicultural identity (Chen et al., 2008), and multicultural personality (Lee & Ciftci, 2014) play vital roles in international students’ adjustment to a new culture. These studies underscore how the international students’ personal abilities, dispositions, beliefs, and strategies related to positively engaging other cultures may be critical to their cultural adjustment in their host countries.

2. Polyculturalism
We explore another individual difference variable that relates to a system of beliefs about cultures and how they relate to each other. Polyculturalism is an intergroup ideology (Morris et al., 2015; Rosenthal & Levy, 2012) that is emerging to be an important predictor of positive intergroup processes and outcomes (Rosenthal & Levy, 2013). This concept was first developed by historians Kelley (1999) and Prashad (2001, 2003) who noted extensive examples of the interactions and mutual connections between cultures throughout history. Learning from the insights of previous historians, psychologists studied polyculturalism as an intergroup or diversity ideology that assumes that cultures are connected and mutually influencing each other through historical and contemporary interactions (Rosenthal & Levy, 2010, 2012). The intergroup ideology implies that cultures and cultural boundaries are not rigid, and instead, they are dynamic and constantly changing (Morris et al., 2015). There’s a growing body of empirical evidence that shows the positive relationship between polyculturalism and attitudes towards cultural minorities (Healy, Thomas, & Pedersen, 2017; Rosenthal & Levy, 2012; Rosenthal, Levy, Katser, & Bazile, 2015), people from other countries and cultures (Bernardo, Rosenthal, & Levy, 2013), including migrants and refugees (Healy et al., 2017; Rosenthal, Ramirez, Levy, & Bernardo, 2019). Polyculturalism is also associated with more positive affect and cognitions in intercultural interactions (Bernardo & Presbitero, 2017; Cho, Morris, & Dow, 2018; Salanga & Bernardo, 2019), and more positive attitudes towards social phenomena that involve intercultural contact such as globalization (Bernardo, 2019), post-colonial interactions (Bernardo et al., 2019), and cultural fusion or culturally mixed experiences (Cho, Morris, Slepian, & Tadmor, 2017).
But more pertinent to this study, research shows that in an ethnically diverse university context in the United States, endorsement of polyculturalism was positively associated with various indicators of adjustment and well-being, including academic self-efficacy, sense of belonging, lower intergroup anxiety, and less use of alcohol to cope with intergroup anxiety (Rosenthal, Levy, London, & Lewis, 2016). Although not specifically focused on international students, the study points to how the endorsement of polyculturalism is related to the well-being of students in a university environment with culturally diverse experiences. According to the authors, the endorsement of polyculturalism helped the university students “to be more comfortable with interacting with diverse others, and thereby to have more positive experiences in diverse institutions” (Rosenthal et al., 2016, p. 196). Presumably, the requirements of adjusting to a new country and culture are more fraught for international students compared to the requirements of adjusting to an ethnically diverse academic environment in one’s own country, so it is important to test whether polyculturalism will have similar positive consequences in the more challenging situation faced by international students. But we can assume that polyculturalism should also make the international student be more comfortable with interacting with people from different cultures and with engaging culturally diverse experiences.

3. Cultural distance and the limits of polyculturalism

Although there is growing evidence on the positive intergroup outcomes of polyculturalism, there are also cases when these positive outcomes are not observed. In particular, several studies found no positive intergroup consequences of polyculturalism in samples that are in culturally homogenous societies (Bernardo et al., 2019; Tjipto & Bernardo, 2019). The authors of those studies suggest that in culturally homogenous societies the notion of cultural connections is an isolated abstract idea that is not associated with actual intercultural experiences, and does not function like an intergroup ideology.

In this study, we consider another possible limiting factor that could moderate the positive correlates of polyculturalism in international students: cultural distance. When individuals leave their home country and face new and diverse cultures, they experience contrasts between their home culture and the other cultures. People experience different food, lifestyle, transportation, and education mode in the culture diverse from the home culture. Aside from the practical aspects of day-to-day life, there are more shared meanings and rituals that are important aspects of one’s home culture and that of the new culture. The term cultural distance is used to indicate the degree of differences between different cultures (Sousa & Bradley, 2008) and although there are many dimensions to these cultural differences, cultural distance is typically holistically assessed as a continuous variable that indicates distinctions between cultures in a national level (Shenkar, 2001).

Research shows that individuals have greater difficulties to adjust to a culture where there is greater cultural distance compare to one where cultural distance is lower (Furukawa, 1997; Parker & McEvoy, 1993). In high cultural distance environment, people tend to face more difficulties and feel more stressed because it is difficult for them to feel the connection with it, and they have anxieties about being an outsider or about being changed by the new environment (Pan & Wong, 2011; Spradley & Phillips, 1972). High cultural distance also increases the difficulty of daily communication for international sojourners, which exacerbates challenges in understanding the new culture and environment (Peltokorpi, 2008). In contrast, when experiencing a low cultural distance novel environment, international students tend to have better intercultural communication competence even if under heavy stress (Redmond, 2000). We consider whether polyculturalism’s association with the adjustment of international students varies between students who come from cultures with high cultural distance compared to those who come from low cultural distance cultures. We propose that when the cultural differences faced by the international students are too intense, polyculturalism may not be as potent. That is, when the social and cultural interactions are so fraught by deep and profound disparities from what one is used to in one’s home culture, the endorsement of the idea that cultures are interconnected and being comfortable with people from different cultures may only help a bit and not contribute as much to international students’
adjustment. In this regard, high cultural distance might weaken the positive relationship between polyculturalism and adjustment.

4. The current study

The primary goal of the study is to investigate whether the endorsement of polyculturalism will be associated with the adjustment of international students. Previous studies (Rosenthal et al., 2016) have found the endorsement of polyculturalism is associated with positive well-being of students in an ethnically diverse community, and we hypothesize that a similar positive association would be found between endorsement of polyculturalism and cultural adjustment of international students. We test this hypothesis in a sample of international students in a university in Macau, where international students come from countries and territories that have either high or low cultural distance from Macau’s southern Chinese culture. Cultural distance is a continuous variable, however, for purposes of exploring how cultural distance may be moderating the relationship between polyculturalism and cultural adjustment of international students, we classify students into two groups. The international students who come from other predominantly ethnic Chinese societies (e.g., different provinces of Mainland China, and territories such as Hong Kong and Taiwan) were classified as coming from low cultural distance cultures. Those who come from other Asian countries (e.g., Japan, Malaysia, Philippines), African countries (e.g., Cape Verde, Guinea, Mozambique), European countries (e.g., Belgium, France, Italy), American countries (e.g., Brazil, USA) were classified as coming from high cultural distance cultures. We hypothesize that cultural distance will affect the processes of adjusting to the host culture, and that those from high cultural distance societies would have lower adjustment compared to those from low cultural distance societies. We further hypothesize that cultural distance would moderate the relationship between polyculturalism and adjustment. In particular, we hypothesize that the relationship between polyculturalism and adjustment will be stronger among those from low cultural distance societies, and weaker but still positive among those from high cultural distance societies. We propose that challenges faced by those from high cultural distance societies will be too strong that the positive influence of the intergroup ideology of polyculturalism might be tempered by the differences that need to be overcome by the international students.

We summarize the research hypotheses as follows:

H1: Endorsement of polyculturalism will be positively associated with adjustment of international students,

H2: International students from low cultural distance societies will have better adjustment compared to those from high cultural distance societies, and

H3: The positive relationship between polyculturalism and adjustment will be stronger for students from low cultural distance societies compared to those from high cultural distance societies.

5. Method

5.1. Participants

Participants were 324 international students (102 men, 222 women) studying in a government-funded university in Macau. The students included undergraduate, graduate, and exchange students in various faculties, and whose ages ranged from 18 to 39 years (M = 21.02 years, SD = 3.07). We inquired about the participants’ mother language, and only 45 participants indicated Cantonese (the language in Macau) as their mother language; the other 279 participants reported different mother languages (e.g., Mandarin, English, Portuguese, etc.). The mean length of stay in Macau for the participants was 2.39 years (SD = 2.59), and only 62 participants reported that they have relatives in Macau.

The participants were classified into two groups based on the country/territory they came from. One group is the low cultural distance group consisting of 219 (67.6%) students coming from
predominantly Chinese culture (193 from different provinces in Mainland China, 15 from Hong Kong, 11 from Taiwan). Note that although Macau is a predominantly ethnic Chinese society, it is still considered to have cultural differences with other Chinese societies. Indeed, a previous study identified that non-Macau Chinese students in Macau experience acculturative stress in Macau because of cultural differences (Dong, Bernardo, & Zaroff, 2016). The second group is the high cultural distance group which consists of 105 (32.4%) students coming from non-Chinese societies (44 from Asia, 39 from Europe, 2 from North America, 4 from South America, 16 from Africa). We acknowledge that the cultural distance between the specific countries of the 105 participants in this group may vary a lot; however, further dividing this group into smaller groups (e.g., Asian, European, etc.) would make the subsample sizes too small for the statistical analysis.

5.2. Instruments

5.2.1. Cultural adjustment
A 10-item scale measuring adjustment to Macau culture was adapted from an 11-item adjustment scale which consists of six items measuring adjustment to general everyday life, two items measuring adjustment to interacting with local people, and three items measuring adjustment to work responsibilities (Black, 1988). The goal of the study was to measure the adjustment of international students in the university, so the items about work were changed to refer to study, and one item that cannot adopted properly was removed (“How adjusted are you to supervising Japanese subordinates”). Sample items included “How adjusted are you to your study in Macau?” and “How adjusted are you to the weather in Macau?” (please see appendix for complete list of items). Participants responded using a scale from 1 (not adjusted at all) to 7 (very well-adjusted). The scale had an acceptable reliability ($\alpha = .88$).

5.2.2. Polyculturalism
The five-item scale developed by Rosenthal and Levy (2012) was used in the study. The items in the scale referred to connections among cultures, and did not refer to positive or negative aspects of these connections. Sample items included, “Different racial, ethnic, and cultural groups influence each other,” and “There are many connections between different cultures.” Participants answered on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale had an acceptable reliability ($\alpha = .84$).

5.3. Recruitment and data gathering procedure
The participants were purposively sampled using different strategies. Some students were recruited from the university’s psychology research participants’ pool, and the students received partial credit for their course requirements. Other students were recruited by recruiting online, by word of mouth, and by recruitment booths in different parts of campus, and these students were entered in a raffle draw for a dozen vouchers for a local supermarket. The survey questionnaire for the participants was administered online. The first part of the questionnaire was the consent form and some demographic information (gender, age, major, nationality, the city they usually live in, mother language, Cantonese proficiency, years in university, years staying in Macau, relatives in Macau, times traveled to Macau). Only participants who gave their informed consent in writing were given the main questionnaire, which contained adjustment and polyculturalism scales.

6. Results
Data from five outliers (scores were 2.5 standard deviations below the mean) were not included in the analysis, resulting in a final sample of 319 international students. Table 1 summarizes the adjustment and polyculturalism scores for the total sample and the two groups. As a preliminary analysis, we compared the scores of the low and high cultural distance groups using independent-samples t-tests. There was a statistically significant difference in the adjustment scores of low and high cultural distance groups ($t(317) = 2.25, p = .03, d = .27$), but not in their polyculturalism scores ($t(317) = 0.44, p = .66, d = .05$). Although not relevant to the research hypotheses, the preliminary
analysis also found that there was no significant difference in the adjustment scores for men ($M = 46.62, SD = 10.18$) and women ($M = 45.83, SD = 9.48$); $t(317) = 0.67, p = .50, d = .08$.

To test the main research hypotheses, we conducted hierarchical multiple regression analysis consistent with the procedures defined by Frazier, Tix, and Barron (2004). For this analysis, cultural distance was represented as a coding variable, with 1 = low cultural distance and 2 = high cultural distance. As polyculturalism was a continuous variable, the scores were centered to reduce the problems associated with multicollinearity between polyculturalism and the other variables in the regression model. The cross-product term representing the moderating effect of cultural distance on the relationship between polyculturalism and adjustment was computed by multiplying the coding variable for cultural distance with the centered scores for polyculturalism. For the hierarchical regression analysis, a host of potentially related variables were entered as control variables; these included, age, gender, having Cantonese as mother tongue, years living in Macau, presence of relatives in Macau, and previous travel to Macau before studying at university. In the second step of the regression analysis, polyculturalism and cultural distance were added to the regression model, and in the third step, the cross-product moderation term was added. The results of the regression analysis are summarized in Table 2.

As shown in Table 2, none of the control variables were significantly associated with adjustment, and the regression model was not significant. However, both polyculturalism and cultural distance were significant predictors of cultural adjustment. Consistent with Hypothesis 1, endorsement of polyculturalism was positively associated with adjustment, and consistent with Hypothesis 2, cultural distance was negatively associated with adjustment. In the third step of the regression analysis, we see that moderation term was significantly associated with adjustment (and that cultural distance became a nonsignificant predictor) consistent with Hypothesis 3. To better understand the nature of the moderation effect, we first plotted the interaction using the unstandardized coefficients and then we computed for the simple slopes for the regression lines representing the low and high cultural distance groups. The moderation effect is shown in Figure 1.

The plot in Figure 1 shows that the positive relationship between polyculturalism and cultural adjustment is observed only in the low cultural distance group. For that group, the simple slopes test indicated a gradient of slope = .59, $t = 3.80, p < .001$. But there was no such positive relationship between the two variables in the high cultural distance group. The corresponding simple slopes test indicated a gradient of slope = -.06, $t = −0.25, p = .800$, suggesting that the relationship was not significantly different from zero. Although we hypothesized that the
relationship between polyculturalism and cultural adjustment would be weaker in the high cultural distance group, we did not anticipate that this relationship would be non-significant. We consider this point in the discussion below.

7. Discussion
The current study documented the positive relationship between polyculturalism and cultural adjustment, and the moderating effect of cultural distance on this relationship. The results showed that international students in Macau who believed that cultures are connected and mutually influencing each other report better cultural adjustment in their study and stay in Macau. But in particular, this positive relationship was observed only among the international students from other Chinese societies,

Table 2. Results of the multiple regression analysis

|                          | Cultural adjustment |
|--------------------------|---------------------|
|                          | Model 1 | Model 2 | Model 3 |
| β                        | β       | β       | 95% CI  |
| Gendera                  | −.04    | −.08    | −.09    | (−4.23, 0.40) |
| Age                      | .02     | .02     | .02     | (−0.28, 0.42) |
| Mother languageb         | −.07    | −.10    | −.10    | (−6.20, 0.80) |
| Years living in Macau    | .03     | .03     | .03     | (−0.35, 0.57) |
| Relativec                | .07     | .09     | .08     | (−0.87, 4.93) |
| Times traveled to Macau  | .05     | .02     | .02     | (−0.15, 0.22) |
| Polyculturalism          | .17**   | .53**   |         | [0.47, 1.96] |
| Cultural distanced       | −.16*   | .63     |         | (−1.14, 27.26) |
| Polyculturalism X cultural distance | −.87*   |         | (−1.17, −0.09) |
| R²                       | .01     | .06     | .08     |
| F                        | 0.54    | 2.59**  | 2.92**  |
| ΔR²                      | .05     | .02     |
| ΔF                       | 8.67**  | 5.27*   |

*Male = 1, Female = 2
bNon-Cantonese language = 1, Cantonese = 2
cNo relative in Macau = 1, with a relative in Macau = 2
dLow cultural distance = 1, high cultural distance = 2
*p < .05, **p < .01

Figure 1. Graph plotting of the moderating effect of cultural distance on the relationship between polyculturalism and cultural adjustment.
but not those who come from more culturally distant societies. We first note that although the Chinese international students in Macau who are not from Macau are more well-adjusted than their non-Chinese counterparts, their level of adjustment is by no means perfect; indeed, the mean adjustment scores of the Chinese international students were in the same magnitude as that of the non-Chinese counterparts. This result is consistent with previous studies (Dong et al., 2016) that noted how non-Macau Chinese students in Macau still experience acculturative stress in Macau, even if it is also a Chinese society.

But the more important contribution of this study relates to the two focal variables: cultural adjustment of international students and polyculturalism. Many previous studies have identified the factors that predict better cultural adjustment of international students, and several of those variables relate to the students’ orientations, strategies, and abilities to adjust in intercultural context (Pan & Wong, 2011; Schachner et al., 2017; Shu et al., 2017). Culture-related identities are also important predictors of cultural adjustment of international students (Chen et al., 2008; Hua et al., 2019; Lee & Ciftci, 2014). Beyond these culture-related individual difference factors, we can add the intergroup ideology of polyculturalism to the network of factors that help international students in their adjustment. Thus, it is not just cultural identity, intercultural coping strategies and abilities that help the international students, but their basic assumptions about the nature of cultures, cultural differences and connections might also help them in the process. To the extent that these culture-related individual difference variables are likely to be related, it might be worth exploring which of these variables are stronger or more primary predictors. For example, are intergroup ideologies about culture the antecedents of acculturation strategies? Or are multicultural identities antecedents of the endorsement of polyculturalism or intergroup ideologies about culture? Such theoretical question can be explored in previous studies, and the answers will have important guides for interventions to help international students in their adjustment in the host countries.

As regards this theoretical contribution, there is a practical implication, as well. Programs to help prepare international students for their host countries could consider shaping the students’ views about cultures and nudge to see connections and similarities among cultures. In theory, seeing such connections are supposed to help students be more welcoming of interactions with people from different cultures and of engaging culturally diverse experiences, which should help international students (Brown, 2009; Geeraert, Demoulin, & Demes, 2014). In a sense, being mindful of cultural connections are likely to prepare them when faced with the actual differences; international students with greater endorsement of polyculturalism could more easily make friends from the local community, who can help them know the local customs and practices, introduce and recommend local cuisine for them, and help them follow local lifestyles and practices. Endorsement of polyculturalism could also help the international student make friends with other international students, who can be sources of support in their cultural adjustment. In these ways, the individual can adjust to their new host culture more effectively. Interestingly, however, the results of the study showed that this intergroup ideology of polyculturalism may not be enough to prepare students who come from cultures that are too different from the host culture of Macau. Although future studies will need to inquire into how cultural distance seems to moderate the positive outcomes of polyculturalism, we could consider the second important theoretical contribution of the study.

There is growing evidence on the theoretical importance of the intergroup ideology of polyculturalism in intergroup relations (Morris et al., 2015; Rosenthal & Levy, 2013), but ours is the first study that actually documents its positive correlates with cultural adjustment of international students. One study in the USA previously documented how polyculturalism relates to adjustment, well-being, and academic outcomes of students in a racially/ethnically diverse university environment (Rosenthal et al., 2016), but the current study shows the positive correlates to polyculturalism in a more challenging intercultural environment where international students move to a new country or culture for their studies. We note that the students in the USA study are all American citizens and as such their level of cultural adjustment does not compare to the level of adjustment of international students who move to a different country or territory, as they are mainly dealing with cultural diversity and not actual cultural distance (which is
defined at the cross-country level). Thus, our results expand the empirical evidence on the positive intercultural experiences associated with the intergroup ideology of polyculturalism.

Moreover, an unexpected aspect of our study points to a possible limiting factor to the positive impact of polyculturalism. Previous studies have suggested limiting conditions on the influence of polyculturalism; that is that the positive influence of polyculturalism is limited among people in culturally homogeneous societies (Bernardo et al., 2019; Tjipto & Bernardo, 2019). Our results suggest that polyculturalism may not have positive consequences when the cultural differences faced by the individual are too much. Earlier we hypothesized that greater cultural distance makes that the goal of adjusting more difficult because of the range of differences that need to be dealt with, thus weakening the possible impact of polyculturalism. However, our results showed that in the case of our sample of non-Chinese students in Macau, the positive relationship between polyculturalism and cultural adjustment was not observed altogether. We explore possible theoretical explanations for this unexpected finding in the next paragraph.

In the previous USA study that showed how the endorsement of polyculturalism was positively associated with students’ well-being in racially/ethnically diverse universities, the authors also showed that the benefits of polyculturalism are mediated by lower intergroup anxiety (Rosenthal et al., 2016). We speculate that intergroup anxiety is not lowered by the endorsement of polyculturalism in cases when the cultural distance is too great. Previous research shows that migrants experience more difficulties (Peltokorpi, 2008) and higher levels of stress and anxiety in high cultural distance contexts (Pan & Wong, 2011). It is possible that if the intergroup anxiety is too high in a high cultural distance context, the influence of polyculturalism reaches its limits. Another alternative explanation could be derived from research on reactions to foreign cultures (Chiu, Mallorie, Keh, & Law, 2009), particularity on the tendency for exclusionary reactions. Exclusionary reactions to foreign cultures are evoked when foreign cultures are perceived as threats to one’s cultural heritage and identity, and involve motivations and behaviors directed to preserve cultural integrity instead of integrating with other cultures. Polyculturalism also seems to be negatively related to these exclusionary reactions in the context of globalization (Bernardo, 2019), but it is possible that when the cultural distance is too high, the exclusionary reactions are strengthened also limiting the influence of polyculturalist ideas. This possible explanation could be verified in future studies that also measure intergroup anxiety or exclusionary reactions to foreign cultures in international students. If our theoretical speculation is correct, we should see a mediating effect of intergroup anxiety or exclusionary reactions in the low cultural distance group, but not in the high cultural distance group. We will limit our speculation to these factor that are implicated in the polyculturalism literature, but it is possible that there are a range of other factors that limit the influence of polyculturalism on cultural adjustment in high cultural distance groups. Indeed, cultural adjustment is known to be influenced by a wide range of factors, and polyculturalism is just one of these.

But if this pattern of the moderating effect of cultural distance is replicated and the mediating factors are identified in future studies, then these boundary conditions and their mediators will be important components of mapping the full theory of polyculturalism. Interestingly, the boundary conditions identified in the research thus far refer to factors external to the individual (i.e., cultural homogeneity in society, the cultural distance between host culture and culture of origin). It is possible that there may be other external and internal individual difference factors that further constrain (or possibly enhance) the consequences of polyculturalism.

We should acknowledge some important limitations in the study that should be considered in appreciating the findings. First, we note that the overall variance explained by the regression model was rather small, suggesting that there are many other more powerful factors that are likely to predict international students’ adjustment. But in these regression models, we should note that the regression coefficient for polyculturalism was sizable and significant. In terms of studying the effects of cultural distance, we note that there was rather lopsided distribution, with less than a third of the participants from the high cultural distance group. A larger and more equal sample
size for this group might produce more stable data within which to test the role of polyculturalism among high cultural distance international students. Related to this limitation is the fact that the countries of origin in the high cultural distance group were very diverse and could also vary significantly in terms of the actual cultural distance and which specific aspects of cultural distance might be large. Consider, for example, that the international student from Korea and from Denmark were put together in the same high-cultural distance group. Even among Asian countries, the nature of the cultural distance are likely to be complex; for example, the climate in the Philippines might be more similar to Macau than that of Japan, but some language and cultural norms in Japan might be more similar to Macau than that of the Philippines. These finer dimensions of cultural distance could be explored in future studies with larger samples of international students. But as a first attempt to explore the moderating role of cultural distance, the results are nevertheless compelling enough that they need to be replicated in future studies.

The limitations of the study notwithstanding, our study makes contributions to two areas of study that have not been explicitly connected. Our results contribute to broadening the range of culture-related individual difference factors that could facilitate cultural adjustment of international students, and also broaden the intergroup consequences of polyculturalism as an intergroup ideology, even as there might be limitations to the specific associations documents in the study. These steps we take in this study would hopefully help in developing a fuller understanding of the experiences of an increasing number of students in the intensifying global phenomenon of international student mobility.

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Author details
Su Ling Xiao
E-mail: sb52355@connect.um.edu.mo
ORCID ID: http://orcid.org/0000-0002-9355-8788
Zi Xuan Yang
E-mail: sb52320@connect.um.edu.mo
ORCID ID: http://orcid.org/0000-0002-1419-9802
Allan B. I. Bernardo
E-mail: allan.bernardo@dlsu.edu.ph
ORCID ID: http://orcid.org/0000-0003-3938-266X
1 Department of Psychology, E21-3060 Humanities and Social Sciences Building, University of Macau, Taipa, Macau SAR China.
2 Psychology Department, De La Salle University, 2401 Taft Avenue, Manila 1004, Philippines.

Supplementary material
Supplemental data for this article can be accessed here.

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Note
1. Table 1 suggests that the two groups differ in proportion of participants who speak Cantonese and mother tongue and in number of previous trips to Macau. We conducted a supplementary analysis that explored the possible interaction effects between these two demographic variables with cultural distance, in an additional fourth step in the hierarchical regression analysis. We report these results in Supplementary Table 2a, which shows that these two interaction effects were both nonsignificant, and that the addition of these two interaction effects did not result in significant increase in variance explained by the regression model. Moreover, the main effect of polyculturalism and cultural distance remained significant.

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Appendix

Instruction and items in the adapted cultural adjustment scale

Please indicate the degree to which you are adjusted or not on the following items on a scale from 1 to 7 (1 = not adjusted at all; 7 = very well-adjusted).

1. How adjusted are you to your study in Macau?
2. How adjusted are you to studying with Macau students?
3. How adjusted are you to the transportation system in Macau?
4. How adjusted are you to the food in Macau?
5. How adjusted are you to the weather in Macau?
6. How adjusted are you to interacting with Macau people in general?
7. How adjusted are you to shopping in Macau?
8. How adjusted are you to generally living in Macau?
9. How adjusted are you to the entertainment available in Macau?
10. How adjusted are you to working with Macau people outside the university?
