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Contact and Attitudes towards International Students: Mediating Effects of Intergroup
Anxiety and Intercultural Communication Emotions

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Abstract

The current study investigated the impact of intercultural contact between domestic and international students on attitudes towards international students, and potential mediators of this relationship. Two hundred and forty-seven Australian-born domestic undergraduates completed a survey of the quantity and quality of their contact with international students, levels of intergroup anxiety and intercultural communication emotions (ICE), and their attitudes towards international students. Positive intercultural contact, less intergroup anxiety and more positive intercultural communication emotions were all related to more positive attitudes towards international students. In addition, intercultural communication emotions mediated the relationship between positive contact and attitudes, and between intergroup anxiety and attitudes. Results highlight the importance of addressing communication barriers and the emotions associated with these when promoting positive interactions between domestic and international students.

There has been a significant increase in the number of international students on university campuses worldwide, with the numbers of foreign tertiary education students enrolled outside their country of origin increasing 7.1% per year from 2000 to 2010, resulting in around 4.1 million such students in 2010 (OECD, 2012). The largest numbers of students studying abroad were from Asian countries, with 17.0% coming from China, 5.9% from India, and 3.7% from the Republic of Korea. The top three destinations were all English-speaking countries, with the United States receiving the most tertiary international students (16.6%), followed by the United Kingdom (13.0%), and Australia (6.6%). Among these three destination countries, Australia had the largest percentage (at over 21%) of international students as a proportion of its total onshore tertiary education enrolments (OECD, 2012).

Cultural and linguistic diversity in the social interactions between domestic and international students has thus become a prominent feature in the major receiving countries of international students. In 2010, students from Asia accounted for close to 80% of all the onshore tertiary international students in Australia (OECD, 2012). The majority of the international students on Australian university campuses are from non-English-speaking backgrounds (Department of Education, Employment and Workplace Relations, 2011). China alone provided 41% of the 225,250 onshore international students in Australian higher education in 2012 (Australian Education International, September, 2012).

Despite the increase in numbers of international students on Australian university campuses, research has documented generally low levels of interactions or “contact” between Australian domestic and (primarily Asian-born) international students (Battye & Mak, 2008; Mak, 2009; Mak & Neil, 2006; Summers & Volet, 2008; Volet & Ang, 2012). This reflects worldwide trends with recent research conducted in English-speaking countries indicating friendships between domestic students and culturally and linguistically different international

students are relatively rare; this is a recurrent finding in studies conducted in the United States (e.g., Williams & Johnson, 2011), in England (Harrison & Peacock, 2010), and in New Zealand (Ward, Masgoret, Newton, & Crabbe, 2005).

When positive contact does occur between domestic and international students, it has been shown to have beneficial effects for the psychological and educational outcomes of international students from culturally diverse backgrounds (Kashima & Loh, 2006; Ward & Masgoret, 2004). It is important to also consider the effects of such contact on domestic students, and how it may impact on their feelings about, and attitudes towards, international students. However, this line of research has received little attention worldwide (Ward et al., 2005), including Australia. The increased presence of international students on campus can be threatening to domestic students. Low levels of intercultural contact have been linked to increased levels of perceived threats (Dalglish & Chan, 2005; Stephan, Diaz-Loving, & Duran, 2000), and feelings of anxiety and apprehension (Ward et al., 2005). An additional threat faced in the context of relationships between domestic and international students from linguistically different backgrounds is connected to communication (Spencer-Rodgers & McGovern, 2002). Many domestic students are likely to find these interactions challenging and anxiety provoking. Spencer-Rodgers and McGovern (2002) refer to this threat as intercultural communication emotions (ICE), which are the negative affect associated with perceived linguistic and cultural barriers

Much research has been devoted to the relationship between contact and prejudice. Our study examines that relationship in the context of contact between international and domestic university students. Specifically, we examined the relationship between intercultural contact on an Australian university campus and domestic students' attitudes towards international students. We considered both the quantity and quality of intercultural contact as predictors of attitudes, and the importance of affective threats, such as intergroup

anxiety, as mediators of the contact-attitude relationship. Given that the majority of international students to Australia come from culturally and linguistically different backgrounds, we also examined intercultural communications emotions as an additional mediator of this relationship.

Intercultural Contact and Intergroup Anxiety

Allport's (1954) contact hypothesis proposes that contact with individuals from an outgroup should reduce prejudice and improve attitudes towards that group. It is not just the amount of contact that is important (*quantity* of contact); contact is likely to be more effective if the nature of that contact is positive (*quality* of contact) (Pettigrew & Tropp, 2006). The positive effects of contact have been found to be robust, with prejudice reduction occurring even without the presence of Allport's optimal conditions although effects are stronger when these conditions are present (Pettigrew & Tropp, 2006). Studies including measures of both quantity and quality of contact (e.g., Aberson & Haag, 2007; Islam & Hewstone, 1993) have tended to find stronger effects for quality versus quantity of contact.

Recently research has moved in the direction of examining *how* intergroup contact reduces prejudicial intergroup attitudes. Perceived threats from the outgroup have been found to mediate the relationship between contact and prejudice (Stephan & Stephan, 1985). Based in Integrated Threat Theory (ITT), Stephan and Stephan (1985) identified four threats that influence negative intergroup attitudes. These include *realistic threats* (threats to the welfare and prosperity of the ingroup), *symbolic threats* (threats to the norms and values of the ingroup), *negative stereotypes* (negative expectations about the outgroup) and *intergroup anxiety*. Intergroup anxiety refers to negative emotions experienced when anticipating interactions with outgroup members and can include feelings of uncertainty, awkwardness, embarrassment and rejection by the outgroup (Corenblum & Stephan, 2001; Curşeu, Stoop,

& Schalk, 2007; Riek, Mania, & Gaertner, 2006). Of the threats outlined above, it has been shown to be one of the stronger predictors of negative intergroup attitudes (Riek et al., 2006).

For majority groups, like domestic students, intergroup anxiety about interacting with international students may include feelings of uncertainty about how to interact, doubts about cross-cultural competency and anxiety about acting in a discriminatory or offensive manner. ITT suggests that negative contact between groups is an antecedent of intergroup anxiety and that the outcome of high intergroup anxiety is negative evaluation of the outgroup and prejudice (Stephan, Stephan & Gudykunst, 1999). There is substantial evidence for intergroup anxiety as a mediator of the contact-prejudice relationship (Aberson & Haag, 2007; Corenblum & Stephan, 2001; Tausch, Hewstone, & Roy, 2008; Stephan et al., 2000; Voci & Hewstone, 2003; Ward & Masgoret, 2006) and some studies have shown the effect to be stronger for majority groups (Binder et al., 2009). Pettigrew and Tropp's (2008) meta-analysis examined three proposed mediators of the contact-prejudice relationship: knowledge, intergroup anxiety and empathy/perspective taking. They found intergroup anxiety to be the strongest mediator, highlighting the importance of affective mediators in the contact-prejudice relationship.

Intercultural Communication Emotions

A unique and often overlooked aspect of intercultural contact is that it typically involves interactions between groups who do not share the same primary language. This is often the case for domestic and international students, especially those on English-speaking campuses. A recent study by Williams and Johnson (2010) found that US domestic students who had fewer friendships (or less contact) with international students had higher levels of intercultural communication apprehension. Spencer-Rodgers and McGovern (2002) have suggested that in order to achieve successful relations across cultural groups, individuals must overcome challenges of language barriers, cultural variations, and unfamiliar cultural

practices and customs. Cultural and linguistic barriers frequently carry judgmental and affective consequences for individuals in cross-cultural situations and are often correlated with undesirable emotional responses.

Intercultural communication emotions (ICE) are the negative affect associated with perceived linguistic and cultural barriers (Spencer-Rodgers & McGovern, 2002). Intercultural communication emotions can produce feelings of uncertainty and frustration when interacting with the culturally different due to communication obstacles (Chen, 2002; Spencer-Rodgers & McGovern, 2002; Wiseman, Hammer, & Nishida, 1989). Furthermore, negative emotions associated with cultural differences such as norms, values and customs may contribute to cultural misunderstandings and occasions of communication disruption that are viewed as unpleasant and stressful, in turn producing negative emotions towards the culturally different (Spencer-Rodgers & McGovern, 2002). In the context of Integrated Threat Theory, Spencer-Rodgers and McGovern propose that intercultural communication emotions represent an additional and unique form of threat and are related to attitudes towards those from linguistically different outgroups. They argue that this type of threat may be especially important in the context of interactions with international students, particularly those from linguistically different backgrounds. Thus, ICE may represent an additional type of intergroup threat that is particularly relevant in contexts where outgroups speak another language.

Spencer-Rodgers and McGovern (2002) found that American college students felt impatient, uncomfortable and frustrated when interacting with foreign students. Their study also measured threats derived from ITT (realistic threat, symbolic threat, stereotypes and intergroup anxiety) in addition to ICE, and found that ICE were the strongest unique predictor of attitudes towards international students and had a stronger relationship than general affect (intergroup anxiety).

Battye and Mak (2008) obtained similar results with Australian domestic students, with students experiencing negative ICE reporting less favourable attitudes towards international students. They also found evidence that ICE mediated the relationship between both the quality and quantity of intercultural contact and attitudes, with more positive contact related to more positive ICE.

Contact, Intergroup Anxiety and Communication Barriers

Like ITT, Anxiety/Uncertainty Management (AUM) theory (Gudykunst, 2005) also argues that intercultural encounters can produce both uncertainty and anxiety. AUM theory states that these need to be managed to allow for successful intercultural communication. The theory proposes a number of potential antecedents to anxiety and uncertainty, including the quality and quantity of contact with outgroup members (Stephan et al., 1999). The outcome of anxiety/uncertainty in this model is communication effectiveness. Studies have found a relationship between anxiety or uncertainty and communication effectiveness (Dumont, Nishida & Nakayama, 2005; Gudykunst, Nishida & Chua, 1986). AUM assumes that the effect of antecedent variables (like contact) on communication effectiveness is mediated via anxiety and uncertainty (Stephan et al., 1999).

Similarly, in ITT, anxiety is argued to play a key role in intergroup relations and prior contact is considered one of the antecedents of anxiety (Stephan & Stephan, 1985). In ITT, anxiety (termed intergroup anxiety) is measured in a way that also incorporates uncertainty (Stephan et al., 1999). However, unlike AUM, in ITT the outcome of anxiety is argued to be prejudice rather than communication effectiveness. As stated above, intergroup anxiety has been found to be a consistent mediator of the contact-prejudice relationship.

The Present Study

More research is needed to clarify the role of anxiety in determining attitudes towards people from linguistically different groups such as international students. In addition,

research is needed to consider additional affective threats, such as ICE, as mediators of the relationship between intercultural contact and attitudes towards international students.

In the current study we tested a model which proposed quality and quantity of prior intercultural contact with international students as predictor variables, perceived affective threats in the form of intergroup anxiety and ICE as mediating variables, and attitudes towards international students as the outcome variable. Research has shown consistent support for intergroup anxiety as a mediator of the contact-prejudice relationship. Our study expanded upon previous research by also considering the mediating role of ICE. There is limited evidence in this area to date, but some studies have found ICE to be a predictor of negative attitudes towards international students (Battye & Mak, 2008; Spencer-Rogers & McGovern, 2002) and have found a positive relationship between prior intercultural contact with international students and decreased intercultural communication apprehension (Williams & Johnson, 2010). Battye and Mak (2008) demonstrated that ICE mediates the relationship between intercultural contact and negative outgroup attitudes; however, their study did not include quantity and quality of contact within same model and did not consider ICE in a multiple mediation model with intergroup anxiety.

In line with previous research, we expected prior intercultural contact (both quantity and quality of contact) to be related to more positive attitudes towards international students. Consistent with ITT and with previous research, we expected that affective threats (intergroup anxiety and ICE) would mediate the relationship between prior intercultural contact and attitudes. We also examined whether the effect of intergroup anxiety on attitudes is indirect, via its effect on ICE. This prediction is in line with AUM theory which argues that anxiety mediates the relationship between contact and communication effectiveness. The model we tested is represented in Figure 1.

INSERT FIGURE 1 ABOUT HERE

Method

Participants and Procedure

Two hundred and forty-seven Australian-born domestic undergraduate students (65 per cent being female) enrolled at a mid-sized university in Canberra, Australia, participated in the study. In 2011, approximately one in five of the onshore students was an international student at this university; this proportion was comparable to the Australia-wide proportion of 21.3% (Australian Education International, August, 2012).

Participants' ages ranged from 17 to 61 years ($M = 21.13$, $SD = 6.01$), which reflect the wide age range of students on this campus. The majority of participants (95.5%) spoke English at home. Likewise, the majority of participants (82.6%) stated that their ethnic background was either Anglo-Australian or other European. Participants were recruited from undergraduate classes or via their course websites, and invited to complete a questionnaire at the end of their class or in group sessions. Participants either received course credit for their participation or were offered the opportunity to enter the draw for a music voucher.

Measures

For all measures, responses were averaged across items to form composite scores. Cronbach's alphas of the resultant scales ranged between .77 and .90 (see Table 1), indicating satisfactory internal consistency.

Predictor variables. *Intercultural contact quantity* was measured by eight items adapted from Ward et al. (2005). Participants indicated how often they took part in a variety of activities in both social and academic contexts with international students (e.g., "interacting during free time outside of class", "doing group assignments"). Responses were made on a 4-point scales from 1 (*never*) to 4 (*often*). *Intercultural contact quality* was assessed using six items adapted from Islam and Hewstone (1993). Participants were asked

to indicate the nature of their interactions with international students in terms of pairs of bipolar adjectives (e.g., *pleasant/unpleasant*, *cooperative/competitive*) on 7-point scales. For both these measures, a higher composite score indicated more or better quality contact respectively.

Mediator variables. *Intergroup anxiety* was assessed by eight items adapted from Stephan and Stephan (1985). Participants indicated how they would feel when interacting with international students (that is, confident, awkward, patient, uncertain, anxious, irritated, tense, uneasy) on 5-point scales, from 1 (*not at all*) to 5 (*extremely*). Higher composite scores indicated greater intergroup anxiety.

Seven items taken from Spencer-Rodgers and McGovern (2002) assessed the affective components of intercultural communication barriers or *intercultural communication emotions* (ICE). This measure assessed affect associated with communicating with international students, both with respect to language (e.g., “I find it unpleasant to listen to international students who speak with a strong accent”) and other cultural barriers to communication (e.g., “I am comfortable interacting with international students who have different ethnic customs and practices”). Respondents indicated their agreement with each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). After recoding positively worded items, higher scores on this variable represented more negative ICE. Spencer-Rodgers and McGovern (2002) found that all seven items in the scale represented a single factor and the scale demonstrated high internal consistency (Cronbach’s alpha = .76).

Outcome variable. *Attitudes to international students* were assessed via agreement with 12 statements, adapted from Ward et al. (2005) (e.g., “I like having international students in my class”, “There should be fewer international students in the country”). Responses were on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). After

recoding negatively worded items, higher scores on this measure represented more positive attitudes towards international students.

Results

Table 1 presents means, standard deviations and reliability coefficients for all variables, and their intercorrelations. Attitudes towards international students in this sample were relatively positive, with a mean score above the mid-point of the scale. There was a relatively low amount of contact with international students (below mid-point of scale) with the quality of contact perceived as relatively neutral. Intergroup anxiety and ICE were also relatively low on average. Both types of contact were positively correlated with attitudes, with quality of contact showing a stronger relationship. Both affective threats (intergroup anxiety and ICE) were negatively correlated with both contact and attitudes. Although the correlation between intergroup anxiety (IA) and intercultural communications emotions (ICE) was relatively strong, analyses showed no evidence of multicollinearity.

INSERT TABLE 1 ABOUT HERE

A hierarchical multiple regression analysis was conducted to assess the relative contributions of contact, IA, and ICE to the prediction of intergroup attitudes. In line with the model presented in Figure 1, quantity and quality of contact were entered at step one, while controlling for gender. IA was entered at step 2 and ICE at step 3. Table 2 presents a summary of the regression analysis. ICE contributed 3.3% of unique variance over and above the effects of the other variables. In the final model, intercultural contact quality was a stronger predictor of attitudes than quantity. IA was not a significant predictor in the final model, which suggests its effect on attitudes may be mediated by ICE. The final model explained 45.9% of the variance in attitudes ($adj. R^2 = .447, F(5, 234) = 39.65, p < .001$).

INSERT TABLE 2 ABOUT HERE

To further test the hypothesized relationships presented in Figure 1, we conducted a path analysis using Mplus version 6 software (Muthén & Muthén, 2010). We used the maximum likelihood estimation method and tested the fully saturated model to provide a more conservative test of proposed indirect pathways. Gender was included as a covariate. Five thousand bootstrap samples and 99% bias-corrected confidence intervals were used to test the significance of the hypothesized indirect paths.

Bootstrap bias-corrected estimates, standard errors and 99% confidence intervals for direct and indirect effects are shown in Table 3 and the model presented in Figure 2. As can be seen in Table 3 and Figure 2, the indirect effect from intercultural contact quality to attitudes via intergroup anxiety and ICE was significant, as was the indirect effect from intercultural contact quality to attitudes via ICE. This suggests that quality of contact, in addition to having a direct influence on attitudes, also influences attitudes indirectly via its effect on ICE, and via its effect on intergroup anxiety, which in turn influences ICE. All indirect effects from intercultural contact quantity to attitudes were non-significant.

INSERT TABLE 3 AND FIGURE 2 ABOUT HERE

Discussion

This study examined the effect of prior contact on the attitudes of a sample of Australian domestic students towards international students, and potential mediators of that relationship. The results of this study highlight the importance of considering threats associated with communication when considering relations between groups who do not share the same first language. Negative affect and anxiety associated with communication may be particularly relevant in understanding attitudes of domestic students towards international students.

We found that intercultural contact quality was a stronger predictor of attitudes than intercultural contact quantity, suggesting that the nature of intercultural interactions is

important. Meta-analysis by Davies, Tropp, Aron, Pettigrew, and Wright (2011) found that friendships between ingroup and outgroup members represent a particularly powerful form of positive or high quality contact. Given the generally low levels of friendships between domestic and international students, it is important to find ways to encourage this form of contact.

The quality of prior intercultural contact had a significant direct effect on intergroup attitudes and also significant indirect effects via ICE, and via both intergroup anxiety and ICE. Direct and indirect effects involving quantity of prior intercultural contact were non-significant. Of the proposed mediators, ICE had a direct relationship with attitudes. However, intergroup anxiety exerted its influence on attitudes indirectly via ICE. Our findings highlight the potential of intercultural communication emotions in explaining attitudes towards international students from culturally and linguistically diverse backgrounds. While previous research has found intergroup anxiety to be a mediator of the contact-prejudice relationship, our study found that when two types of affective threat (intergroup anxiety *and* ICE) were simultaneously considered, it is the latter that maintained the stronger unique relationship with attitudes. Also, the effects of intergroup anxiety on attitudes were indirect via their impact on intercultural communication emotions.

Based on these findings, we tentatively suggest a model of intergroup attitudes towards international students where positive intercultural contact may result in a reduction in intergroup anxiety (consistent with previous research). We further suggest that this reduced anxiety may in turn serve to remove barriers around intercultural communication by reducing negative emotions associated with actual and anticipated communication with international students. This is consistent with Gudykunst's (2005) Anxiety/Uncertainty Management Theory, which argues that intercultural encounters can produce both uncertainty and anxiety and that these need to be managed to allow for successful intercultural communication.

Reducing the negative emotions associated with communication may in turn produce more favourable attitudes towards international students and associated reductions in prejudice and discrimination.

The current study is limited by its cross-sectional nature in making causal inferences like those implied in the above proposed model. Previous research suggests that the contact-prejudice relationship is bi-directional (e.g., Binder et al., 2009). In terms of the above model, it is possible that in addition to producing more positive attitudes, a reduction in intercultural communication emotions is also likely to lead to increased communication and positive contact between host and international students.

This study is also limited by its focus on affective threats as mediators of the contact-prejudice relationship. Other threats (for example, realistic and symbolic threat as discussed in Stephan et al., 2000) have been found to mediate the effects of contact. These and other potential affective mediators (such as empathy and perspective taking) need to be explored in future research. Likewise, a number of antecedents to anxiety, in addition to contact, have been proposed by ITT including prior intergroup conflict, relative status of groups, and strength of ingroup identification (Stephan et al., 1999). These are all potentially relevant to relations between international and domestic students and could be included in future investigations.

This study is one of the few to examine the attitudes of domestic students towards international students and to consider the determinants of these attitudes. It is the first study to consider both intergroup anxiety and ICE simultaneously as mediators of the relationship between contact and prejudice. Our findings highlight the usefulness of affective threats, in particular ICE, in explaining negative attitudes towards outgroups who are linguistically and culturally different, like international students. Consistent with ITT, our findings suggest that different types of threats may become more important in explaining the contact-prejudice link

in the context of the relations between the groups being examined (Riek, et al., 2006; Tausch, et al., 2009). When the outgroup is culturally different and speaks another language, threats associated with communication become primary. These results suggest that the design and delivery of interventions aimed at promoting contact and friendships between domestic and international students should take into account the potential barriers posed by language and communication, and negative emotions associated with those barriers. Institutional strategies, including creating varied opportunities for positive intercultural contact and intercultural competence training that focuses on reducing these communication barriers, are needed for promoting more favourable intergroup attitudes towards international students from culturally and linguistically diverse backgrounds.

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Table 1

Descriptive Statistics and Correlations among Predictor Variables, Potential Mediators and Intergroup Attitudes

	<i>M</i>	<i>SD</i>	α	1	2	3	4
1. Quantity	2.11	0.64	.85				
2. Quality	4.20	0.87	.77	.26**			
3. IA	2.37	0.68	.84	-.20*	-.55**		
4. ICE	2.54	0.76	.82	-.27**	-.65**	.68**	
5. Attitudes	3.45	0.70	.90	.28**	.61**	-.47**	-.59**

Note. Quantity = intercultural contact quantity; Quality = intercultural contact quality; IA = intergroup anxiety; ICE = intercultural communication emotions.

* $p < .01$. ** $p < .001$.

Table 2

Summary of Hierarchical Multiple Regression Analysis Predicting Intergroup Attitudes from Contact, Intergroup Anxiety and ICE

Variable	B	SE	Beta	ΔR^2
Step 1				.402**
Gender	.19*	.07	.13	
Quantity	.14*	.06	.13	
Quality	.44**	.04	.56	
Step 2				.024*
Gender	.18*	.07	.13	
Quantity	.13*	.06	.12	
Quality	.36**	.05	.46	
IA	-.19*	.06	-.19	
Step 3				.033*
Gender	.17*	.07	.12	
Quantity	.11	.05	.10	
Quality	.28**	.05	.35	
IA	-.06	.07	-.06	
ICE	-.26**	.07	-.28	

Note. Quantity = intercultural contact quantity; Quality = intercultural contact quality; IA = intergroup anxiety; ICE = intercultural communication emotions.

* $p < .05$. ** $p < .001$.

Table 3

Direct and Indirect Effects on Intergroup Attitudes with Standard Errors and Confidence Intervals

	Effect	S. E.	99% CI
<i>Quantity of contact effects</i>			
Quantity → attitudes	.108	.063	[-.06, .27]
Quantity → ICE → attitudes	.025	.016	[-.02, .07]
Quantity → IA → attitudes	.004	.008	[-.02, .02]
Quantity → IA → ICE → attitudes	.008	.009	[-.01, .03]
<i>Quality of contact effects</i>			
Quality → attitudes	.280*	.061	[.12, .44]
Quality → ICE → attitudes	.085*	.027	[.02, .15]
Quality → IA → attitudes	.028	.030	[-.04, .10]
Quality → IA → ICE → attitudes	.051*	.017	[.01, .09]
<i>IA Effects</i>			
IA → attitudes	-.069	.071	[-.25, .16]
IA → ICE → attitudes	-.122*	.042	[-.23, -.01]
<i>ICE Effects</i>			
ICE → attitudes	-.250*	.039	[-.44, -.06]

Note. Quantity = intercultural contact quantity; Quality = intercultural contact quality; IA = intergroup anxiety; ICE = intercultural communication emotions; CI = confidence interval. 99% confidence intervals were used to minimize capitalization on chance associations.

* $p < .01$.

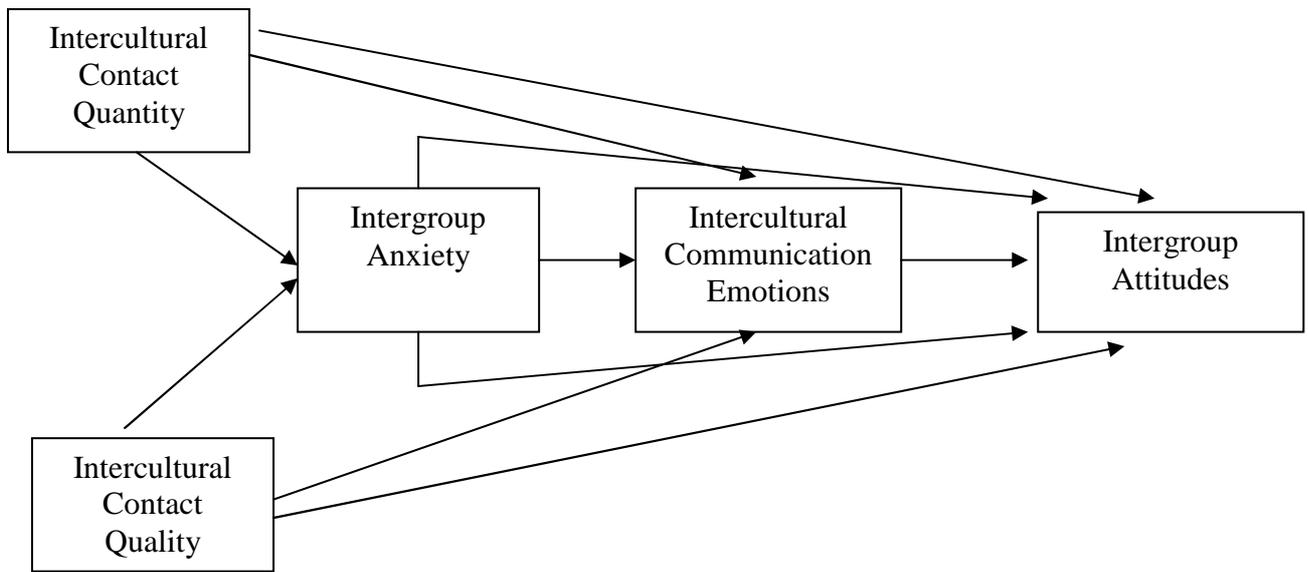


Figure 1. Hypothesized mediation pathways between intercultural contact and intergroup attitudes via the possible mediating roles of intergroup anxiety and intercultural communication emotions.

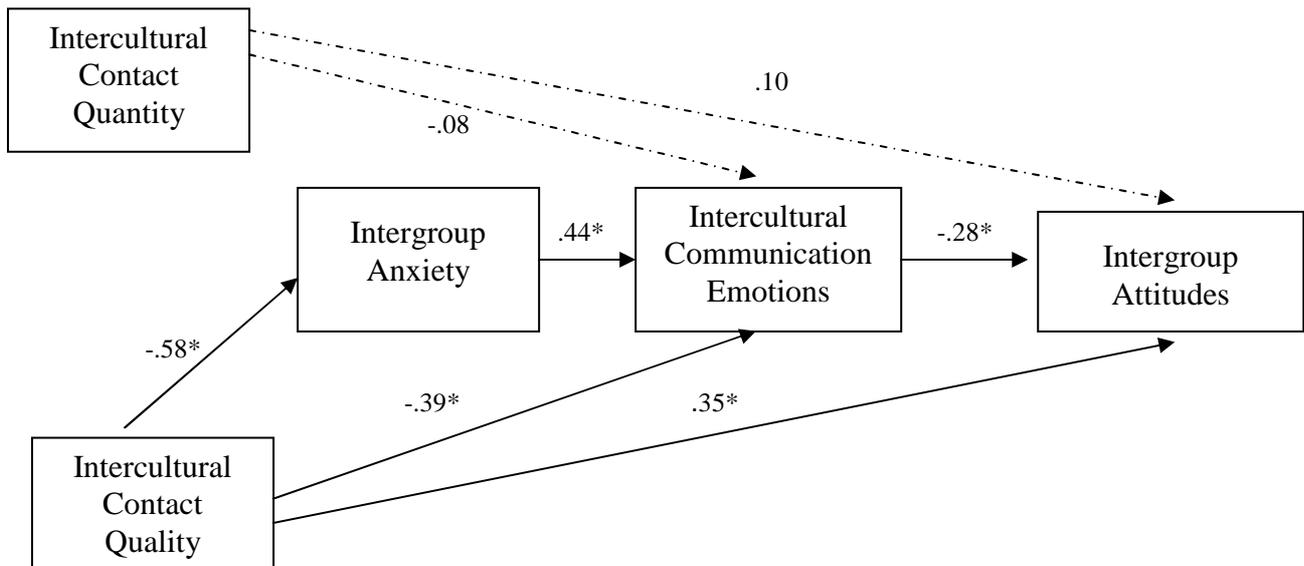


Figure 2. Path model predicting attitudes towards international students. Path coefficients are standardized regression coefficients. Unbroken lines represent significant pathways and broken lines represent marginally significant pathways ($p < .10$). R^2 (attitudes) = .46, $F(5, 234) = 39.65$, $p < .001$, R^2 (ICE) = .58, $F(4, 237) = 83.93$, $p < .001$, R^2 (IA) = .31, $F(3, 238) = 35.05$, $p < .001$.
* $p < .01$.