

## Testing a Model of Intercultural Willingness to Communicate based on Ethnocentrism, Ambiguity Tolerance and Sensation Seeking: The Role of Learning English in Iran

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### ABSTRACT

The present study aimed at testing a model of intercultural willingness to communicate based on ethnocentrism, ambiguity tolerance and sensation seeking between English and non-English major university students in Iran. A significant difference was found between the two groups on ethnocentrism and the results showed that the model fit the data adequately. Ethnocentrism was the strongest predictor of intercultural willingness to communicate for both groups. Sensation seeking was a significant predictor of intercultural willingness to communicate only for the non-English major university students. Moreover, sensation seeking and ambiguity tolerance were significant predictors of ethnocentrism.

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Intercultural willingness to communicate; ethnocentrism; sensation seeking; ambiguity tolerance

## Introduction

As interaction and communication with people from diverse cultures and ethnicities have increased considerably in society, understanding the nature of intercultural communication is of significant importance. Although different conceptual models of intercultural communication have been proposed (e.g. Arasaratnam & Doerfel, 2005; Gudykunst, 1993), more theoretical and empirical models are needed from different cultures, considering the culture-specificity of communication (Arasaratnam, 2006). Previous studies have indicated there are several factors that impact one's intercultural willingness to communicate. The most important factors involved in intercultural communication have been theoretically proposed and empirically tested in several studies. While ethnocentrism has been found to hinder effective intercultural communication (Arasaratnam, 2006; Arasaratnam & Banerjee, 2007, 2011; Goldstein & Kim, 2006), sensation seeking fosters intercultural communication (Arasaratnam, 2006; Arasaratnam & Banerjee, 2007, 2011). Although ethnocentrism and sensation seeking have been examined in relation to intercultural communication models (e.g. Arasaratnam & Banerjee, 2007, 2011), further analysis is still needed to understand intercultural communication in relation to other relevant variables. A highly important variable, which has been related to intercultural communication, is ambiguity tolerance

(Leong & Ward, 2000; Yashima, 2010). There is evidence to suggest that individuals with high levels of ambiguity tolerance are more willing to communicate with people from other ethnicities and cultures. Moreover, the possible relations between ambiguity tolerance with sensation seeking and ethnocentrism may affect the relation between these variables with intercultural communication. While some studies investigate the separate relationships between these variables and intercultural willingness to communicate, to the best of our knowledge, no study has explored the simultaneous effects from a more holistic approach. Analyzing this phenomenon through modelling can offer additional insight into the direct and indirect path relationships.

Moreover, the role of a foreign language academic major is considered. Within this context, students choosing to study a foreign language as a major should exhibit a greater willingness towards intercultural interactions. Mirzaei and Forouzandeh (2013) found that the motivation to learn a second language was significantly correlated with intercultural communication competence. The authors go on to suggest that this more developed skill set translates into a greater willingness to engage in intercultural communication. In the present study, students who are studying English as an academic major (second language acquisition) are compared with non-English major (i.e. engineering and science) university students. The study aims at exploring the role of ethnocentrism, ambiguity tolerance and sensation seeking in intercultural willingness to communicate with regard to the academic major of university students in Iran. The proposed hypothesized model with positive and negative paths can be seen in Figure 1.

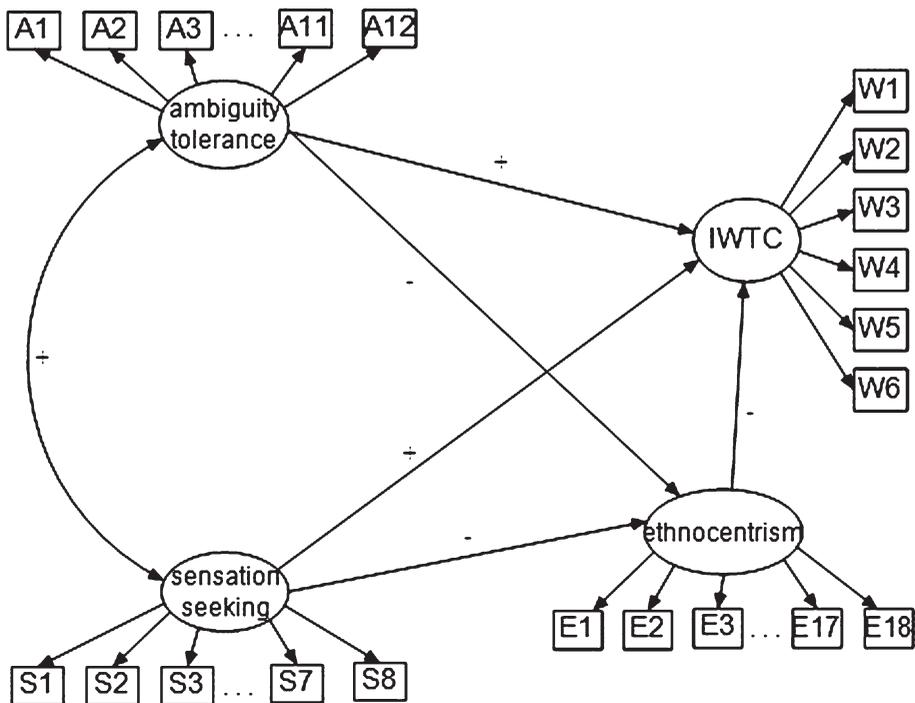


Figure 1. The proposed model of intercultural communication.

Arasaratnam and Banerjee (2007, 2011) propose a model where different factors are involved in intercultural communicative competence. In their model, ethnocentrism and sensation seeking are considered predictors of motivation to engage in intercultural communication, and this motivation in turn affects efficiency within this intercultural setting. It should be mentioned that in the present study, instead of intercultural communicative competence, the emphasis here is on one's intercultural willingness to communicate. While some may have the competence, this ability may not be useful when they are unwilling to communicate with people from other cultures (Khajavy, Ghonsooly, Hosseini Fatemi, & Choi, 2016). Therefore, the concept of intercultural willingness to communicate can be a better fit in understanding ethnocentric attitudes, as it shows individuals' desire to communicate with people from other cultures.

In the last century, Iran has undergone many societal, political, economic and cultural changes that has significantly influenced an entire generation and has increased exposure to intercultural interactions. Such changes include the Iranian Revolution, the establishment of an Islamic government and the Iraq–Iran war, (Yazdani & Ghaderi, 2011). These transformations from traditionalism to modernism, although not yet having received much empirical scrutiny, are likely to have shaped different communicative practices. For these reasons, a comparative study on IWTC in Iran seems timely. The purpose of this study is to see whether a similar model and path analysis tested by Arasaratnam and Banerjee (2007, 2011) are applicable in the context of Iran, and whether studying a second language affects these relations. Considering the imperative of understanding intercultural interactions in today's world, identifying the contributing factors in intercultural communication seems necessary. Therefore, the tested model in this study will give us a deeper understanding of the nature of intercultural communication among Iranian university students and also examine the contribution of sensation seeking, ethnocentrism and ambiguity tolerance in university student's willingness to communicate in an intercultural setting.

### ***Intercultural Willingness to Communicate***

The concept of willingness to communicate (WTC) was first developed by McCroskey and Baer (1985). It is defined as the individual's tendency to start communication with other people when he/she is free to do so (McCroskey & Richmond, 1990). The impact of this concept has been examined extensively in first and second language contexts (Ghonsooly, Khajavy, & Asadpour, 2012; Hsu, 2007; MacIntyre, 1994; Peng, 2012; Peng & Woodrow, 2010) however, the phenomenon can exhibit unique characteristics in an intercultural interaction where people from various ethnicities and cultures are taken into account. Within intercultural encounters communication brings with itself attitudes, beliefs and ethnocentric ideas about the specific cross-cultural group, thus impacting one's willingness to communicate beyond the restriction of language proficiency.

Due to this, intercultural willingness to communicate (IWTC) was conceptualized by Kassing (1997) as "one's predisposition to initiate intercultural communication encounters" (p. 400). WTC is concerned with the initiation of interaction with friends, acquaintances and strangers from the same culture or ethnicity, while IWTC is concerned with interactions with people from different cultures and ethnicities (Kassing, 1997). Furthermore, Kassing (1997) distinguishes between WTC and IWTC by indicating that a person with high levels of WTC may not be necessarily high in IWTC.

### **English as An Academic Major**

A comparison between those studying a foreign language (e.g. English) as an academic major is an important factor to one's IWTC. Those who take the time and effort to learn a foreign language can be considerably different in their attitudes towards intercultural communication. Yu and Chia-Fang (2008) found that those studying abroad possessed higher rates of IWTC than their counterparts back home. It is the exposure to a culture and language, other than one's own, which influences how those from other cultures are perceived. English major university students, who are learning English academically, are given the opportunity to become familiar with the culture, norms and traditions of foreign English speaking countries. Learning a new language is in essence learning a new culture, as it includes historical and cultural backgrounds (Jiang, 2000), and the exposure itself may have long-term impacts on IWTC. There may be a significant difference in individuals' IWTC based on the academic major they choose. Students who are learning English as an academic major already have a keen interest in intercultural communication and therefore, may form a deeper understanding of other cultures in the process (Hinenoya & Gatbonton, 2000).

### **Ethnocentrism**

Ethnocentrism is considered one of the central issues in understanding people's attitudes towards other cultures or ethnicities (Neuliep & McCroskey, 1997). The concept was first proposed by Sumner (1906) and was defined as the "view of things in which one's own group is the center of everything, and all others are scaled and rated with reference to it" (p. 13). Ethnocentrism causes people to see their own culture as "right" and that of others as "wrong" (Gudykunst & Kim, 2003), and is considered as a natural phenomenon that is experienced in all cultures (Rushton, 1989). According to Neuliep and McCroskey (1997), ethnocentrism shows itself in attitudes and behaviours of individuals towards ingroups and outgroups. They state that "ethnocentric groups see themselves as virtuous and superior ... outgroups are seen as contemptible, immoral, inferior, and weak" (Neuliep & McCroskey, 1997, p. 386). Behaviourally, ethnocentric people further their cooperative relations with ingroup members while competing with outgroup members (Neuliep & McCroskey, 1997).

Neuliep (2010, 2012) explains that ethnocentrism should be considered along a continuum from low to high levels of ethnocentrism with both positive and negative outcomes. Ethnocentrism is considered to be positive when it forms the concepts of patriotism and sacrifice for one's central group (i.e. low ethnocentrism), and is considered to be negative when people see their own way as the only right way, leading to prejudice and discrimination (i.e. high ethnocentrism, Neuliep, 2012; Neuliep & McCroskey, 1997). Research has shown that in intercultural communication, high levels of ethnocentrism has a negative influence on people's perception of other cultures and can be dysfunctional (Arasaratnam & Banerjee, 2007; Gudykunst & Kim, 2003; Lin & Rancer, 2003; Neuliep, 2012; Neuliep & McCroskey, 1997). Moreover, as highly ethnocentric people see themselves as being superior to outgroups, they lack the motivation to communicate and interact with outgroup members (Gudykunst & Kim, 2003; Neuliep, 2012). Ethnocentrism influences the way individuals approach people from other cultures and their tendency to interact with them. Relatedly, research has shown that learning a second language makes individuals familiar with norms

and cultures of the target language and this familiarity may reduce ethnocentric attitudes (Yu & Chia-Fang, 2008). Therefore the following hypotheses are proposed:

H1: English majors will have lower ethnocentrism than non-English majors.

H2: Ethnocentrism will be negatively related to intercultural willingness to communicate.

### **Ambiguity Tolerance**

When people from different cultures and ethnicities interact with each other, ambiguity exists among them, and many factors such as language and personality cause ambiguous situations for interlocutors. Ambiguity tolerance has been defined as “the tendency to perceive ambiguous situations as desirable” (Budner, 1962, p. 29). Furnham and Ribchester (1995), in their review of ambiguity tolerance, define it as “the way an individual (or group) perceives and processes information about ambiguous situations when confronted by an array of unfamiliar, complex or incongruent cues” (p. 179). They state that people with low levels of ambiguity tolerance feel anxious and avoid ambiguous situations, while people with high levels of ambiguity tolerance perceive ambiguous situations interesting and challenging. It has been proposed that ambiguity tolerance has a particular influence on cross-cultural communication (Abbe, Gulick, & Herman, 2007; Herman, Stevens, Bird, Mendenhall, & Oddou, 2010; Miller & Samp, 2007).

Interactions with foreigners and strangers contain several ambiguities and uncertainties (Lee & Boster, 1991). Previous studies indicate that individuals with higher levels of ambiguity tolerance are more likely to ask others about information and are more open to receiving other people’s ideas (Gudykunst, 1993). Ambiguity tolerance is considered a major factor influencing one’s intercultural communication (Leong & Ward, 2000; Yashima, 2010), and it can be inferred that individuals who have high levels of ambiguity tolerance are more willing to communicate with people from other ethnicities and cultures. In addition, previous studies found that ambiguity tolerance is negatively related to ethnocentrism (Block & Block, 1952; O’Connor, 1952). In other words, individuals who cannot tolerate ambiguous situations while communicating with strangers may develop more ethnocentric ideas than others.

Therefore, we predict the following:

H3: Ambiguity tolerance will be positively related to intercultural willingness to communicate.

H4: Ambiguity tolerance will be negatively related to ethnocentrism.

### **Sensation Seeking**

Sensation seeking is a personality variable that is characterized as the need for novel, exciting and adventurous experiences; sensation seeking is also associated with low attention span (Arasaratnam & Banerjee, 2007; Zuckerman, 1994). Sensation seeking was first examined with relation to high-risk behaviours such as smoking and alcohol use (see Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002), but recent research (Arasaratnam, 2004; Arasaratnam & Banerjee, 2007, 2011) has found that while sensation seeking is considered as a factor for different problem behaviours (Hoyle et al., 2002), it can also have a positive impact in intercultural relations. High sensation seekers are more susceptible to seeking

contact and interaction with people from various cultures (Arasaratnam & Banerjee, 2007, 2011).

Arasaratnam (2004, 2005) explains that the reason for high sensation seekers' willingness towards interaction with people from other cultures is due to the excitement and pleasure they experience. Moreover, previous research has indicated a negative relation between sensation seeking and ethnocentrism (Arasaratnam & Banerjee, 2007, 2011), and a positive relation between sensation seeking and motivation to engage in intercultural contact (Arasaratnam & Banerjee, 2011). A relationship has also been seen between sensation seeking and intercultural communicative competence in a way that high sensation seekers, who are motivated to interact with people from other cultures, have more opportunities for intercultural communication (Arasaratnam & Banerjee, 2011). As a result, this increased exposure to intercultural encounters should impact both ethnocentrism and ambiguity tolerance. The literature offers support for the following hypotheses:

H5: Sensation seeking will be positively related to intercultural willingness to communicate.

H6: Ethnocentrism will be negatively related to sensation seeking.

H7: Ambiguity tolerance will be positively related to sensation seeking.

## Methodology

### Ethics Statement

The present study was conducted in accordance with ethical standards provided by American Psychological Association (American Psychological Association, 2010). Based on this, when a study has no potential harm for the participants, no informed consent is given to them. In this study, participants were informed that their participation is voluntary. Moreover, data collection and analyses were done on anonymous data.

### Participants

The questionnaire was administrated to 245 undergraduate university students (115 females, 121 males, 9 unknown) at 2 universities in the North-East of Iran. The participants included 119 English majors (61 females, 54 males, 4 unknown) and 126 non-English majors (58 females, 63 males, 5 unknown). English-major university students were studying English language and literature, while non-English major university students were studying physics, geology, mechanical, electrical and civil engineering. English-major university students rated their English proficiency as 9.1% advanced, 35.4% upper-intermediate, 43.6% intermediate and 11.9% lower intermediate. Non-English major university students rated their English proficiency as 2.3% advanced, 26.8% upper intermediate, 37.4% intermediate, 28.6% lower intermediate and 4.9% elementary. The age range of the participants was between 17 and 26 ( $M = 21.25$ ,  $SD = 3.36$ ). The reason for choosing university students was that the university environment is a place where students are exposed to people from different cultures and ethnicities (Arasaratnam & Banerjee, 2007; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996). The participants identified themselves as 61.1% Persian, 8.3% Kurd, 7.7% Turk, 4.3% Afghan, 1.9% Tajik and 16.7% indicated other or no ethnical identification.

## **Instrumentation**

The questionnaires used in this study measure intercultural willingness to communicate, ethnocentrism, ambiguity tolerance and sensation seeking. All four scales were translated into Persian by two researchers in order to increase the return rate. For this purpose, semantic, syntactic and discursal relations of words were taken into account to find the best Persian equivalents based on the same relations for the English words (see Khodadady & Khajavy, 2013). Then, the Persian scales were translated to English by two different translators. Finally, the original English scales and the back-translated English scales were compared by another language expert, and the mismatches were removed. Finally, Kappa coefficient was calculated for each instrument to ensure the content validity of the scales. A brief description of each scale is given in the following sections.

### **Intercultural Willingness to Communicate**

In order to assess participants' intercultural willingness to communicate, Kassing's (1997) intercultural willingness to communicate (IWTC) scale was used. It includes 12 items, 6 of them are fillers, and participants showed their willingness to communicate with people from other cultures on a five-point Likert type scale ranging from 1 (highly willing) to 5 (highly unwilling). A sample item is, "Talking with someone from another country". Internal consistency of the scale assessed through Cronbach's alpha was .81. The Kappa coefficient was .83.

### **Ethnocentrism**

In order to assess participants' ethnocentrism, Neuliep and McCroskey's (1997) Generalized Ethnocentrism Scale (GENE) was used. The scale includes 18 items which measures ethnocentrism regardless of cultural background. The participants showed their agreement with the items on a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is, "I'm not interested in the values and customs of other cultures". Internal consistency of the scale assessed through Cronbach's alpha was .78. The Kappa coefficient was .76.

### **Ambiguity Tolerance**

Ambiguity tolerance was measured using *The Tolerance for Ambiguity Scale* developed by Herman et al. (2010). The scale includes 12 items and participants showed their agreement with the items on a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is, "I would like to live in a foreign country for a while". Internal consistency of the scale assessed through Cronbach's alpha was .80. The Kappa coefficient was .79.

### **Sensation Seeking**

Sensation seeking was assessed using a brief sensation seeking scale developed by Hoyle et al. (2002). It includes eight items, and participants showed their agreement with the items on a five-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is, "I would like to explore strange places". Internal consistency of the scale assessed through Cronbach's alpha was .83. The Kappa coefficient was .81.

## Procedure

Participants were all enrolled at an Iranian university and were asked for their cooperation in taking the questionnaire during class. Three different classes were given the questionnaire during a two-week period. Participants completed the questionnaire in Persian. Researchers were present during the data collection sessions to explain the procedure for filling in the questionnaire.

## Results

Before the statistical analyses, data screening was performed using SPSS 17. To deal with missing data, Expectation-Maximization (EM) algorithm was utilized (Kline, 2011). Normal distribution was checked using skewness and kurtosis indices. Values outside the range of  $-2.0$  and  $+2.0$  indicate non-normal distribution (Kunnan, 1998), and they were removed. Finally, both univariate and multivariate outliers were examined. Standard scores and Mahalanobis  $D^2$  were used for detecting univariate and multivariate outliers, respectively (Tabachnick & Fidell, 2007). After identifying them, all of the outliers were removed. Table 1 shows all the outliers and valid cases for CFA and SEM.

Following this, a measurement invariance test using Multiple-Group Confirmatory Factor Analysis (MG-CFA) was used to examine whether the items of different measures mean the same thing for either English major participants or non-English major participants. For this purpose, three levels of measurement invariance were tested in the following order: configural invariance, metric invariance and scalar invariance (Cheung & Rensvold, 2002). A significant  $\chi^2$  difference between two nested models shows noninvariance. In addition to  $\chi^2$ , a change in CFI ( $\Delta$ CFI) was also used where the cut-off point of .010 or less shows invariance between groups (Cheung & Rensvold, 2002).

As Table 2 indicates, configural, metric and scalar invariance were demonstrated in all measures of the study (IWTC, ethnocentrism, ambiguity tolerance and sensation seeking). This implies that both English majors and non-English major university students had the same conceptualization of the measures.

Descriptive statistics and correlations among the variables for the English and non-English major university students are provided in Tables 3 and 4, respectively.

An independent samples  $t$ -test was used to see whether English and non-English major university students differ in ethnocentrism. Results of the  $t$ -test indicated that there is a significant difference between the two groups in ethnocentrism ( $t = 3.15$ ,  $df = 242$ ,  $p < .01$ ). As the mean score of the non-English major group ( $M = 2.64$ ) was higher than that of the English-major group ( $M = 2.36$ ), it can be concluded that non-English majors have more ethnocentric attitudes.

**Table 1.** Valid cases and outliers for all variables.

Variable	No. of original cases	No. of outliers	No. of valid cases	No. of valid cases for CFA and SEM
IWTC	245	2	240	234
Ethnocentrism	245	1	239	234
Ambiguity tolerance	245	5	236	234
Sensation seeking	245	3	240	234

**Table 2.** Fit statistics for testing measurement invariance.

Model	$\chi^2$	df	CFI	RMSEA	$\Delta$ df	$\Delta\chi^2$	$\Delta$ CFI
IWTC							
Configural model	84.15	29	.941	.05			
Metric model	95.68	35	.940	.06	6	11.53	.001
Scalar model	102.34	43	.938	.07	8	6.66	.002
Ethnocentrism							
Configural model	126.53	45	.938	.04			
Metric model	132.21	52	.929	.05	7	5.68	.009
Scalar model	134.09	61	.922	.05	9	1.88	.007
Sensation seeking							
Configural model	88.18	32	.968	.04			
Metric model	91.24	35	.962	.05	3	3.06	.006
Scalar model	95.36	40	.970	.04	5	4.12	.008
Ambiguity tolerance							
Configural model	92.19	37	.958	.06			
Metric model	98.43	42	.956	.06	5	6.24	.002
Scalar model	99.07	49	.956	.05	7	.640	.000

**Table 3.** Descriptive statistics and correlations for English major students.

	<i>M</i> ( <i>SD</i> )	1	2	3	4
1. IWTC	3.86 (.80)	1.00			
2. Sensation seeking	3.51 (.84)	.23*	1.00		
3. Ethnocentrism	2.36 (.56)	-.53**	-.26**	1.00	
4. Ambiguity tolerance	3.03 (.44)	.29**	.35**	-.31**	1.00

\* $p < .05$ ; \*\* $p < .01$ .

**Table 4.** Descriptive statistics and correlations for non-English major students.

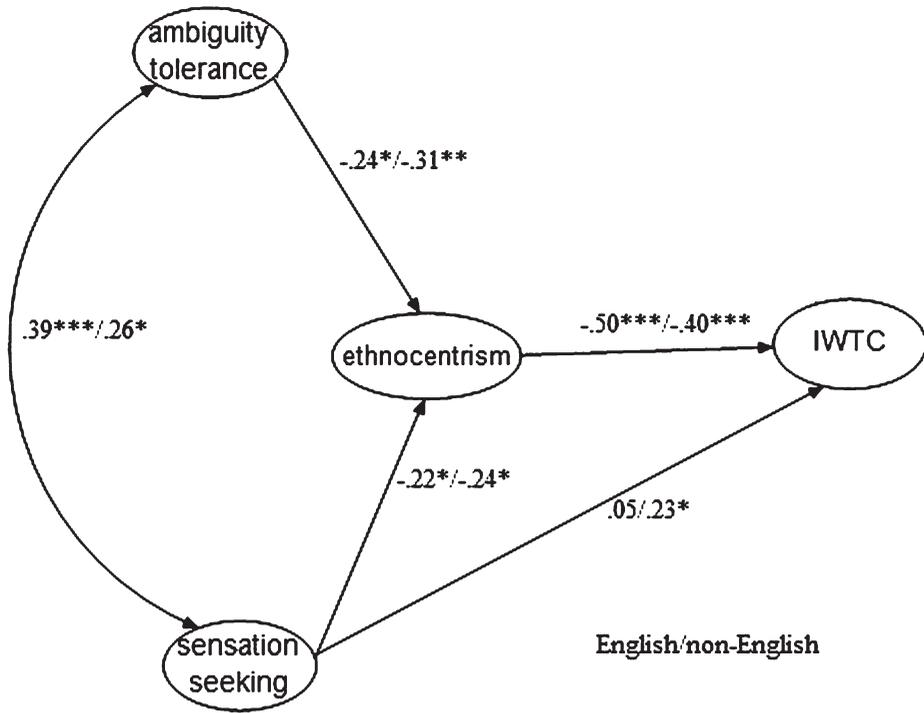
	<i>M</i> ( <i>SD</i> )	1	2	3	4
1. IWTC	3.72 (.80)	1.00			
2. Sensation seeking	3.64 (.84)	.26*	1.00		
3. Ethnocentrism	2.64 (.47)	-.32**	-.20*	1.00	
4. Ambiguity tolerance	2.99 (.45)	.28**	.29**	-.40**	1.00

\* $p < .05$ ; \*\* $p < .01$ .

Structural equation modelling (SEM) was utilized to examine the proposed intercultural model for English and non-English major university students. The initial model showed a somewhat acceptable fit to the data; however, as one path (ambiguity tolerance  $\rightarrow$  IWTC) was not significant for both samples, this path was removed and the revised model was analyzed again. The final model showed a very good fit to the data ( $\chi^2 = 219.72$ ,  $df = 111$ ,  $\chi^2/df = 1.97$ ,  $GFI = .96$ ,  $CFI = .95$ ,  $TLI = .97$ ,  $RMSEA = .05$ ). Therefore, this model can be considered as an adequate model of intercultural communication (Figure 2).

The final model of intercultural communication (Figure 2) showed an adequate fit to the data that lends support for the interrelationships between intercultural willingness to communicate, ethnocentrism, ambiguity tolerance and sensation seeking. Results of SEM revealed that among the three variables, ethnocentrism ( $\beta_{\text{English}} = -.50$ ,  $p < .001$ ,  $f^2 = .33$ , medium ES;  $\beta_{\text{non-English}} = -.40$ ,  $p < .001$ ,  $f^2 = .19$ , medium ES) was the strongest predictor of IWTC for both groups (H2). Therefore, holding negative attitudes towards other ethnicities and cultures is a significant intercultural obstacle.

Ambiguity tolerance was not a significant predictor of IWTC for both groups (H3). However, ambiguity tolerance did exert a small direct negative influence on ethnocentrism



**Figure 2.** Final model of intercultural communication for English and non-English students. \* $p < .05$ , \*\* $p < .01$  and \*\*\* $p < .001$ .

for both groups ( $\beta_{\text{English}} = -.24, p < .05, f^2 = .06$ , small ES;  $\beta_{\text{non-English}} = -.31, p < .01, f^2 = .10$ , small ES) as predicted in H4. When evaluated all together through SEM, in both groups, ambiguity tolerance did influence IWTC indirectly through ethnocentrism as a mediating variable (i.e.  $\beta_{\text{English}} = -.24 \times -.50, f^2 = .01$ , small ES;  $\beta_{\text{non-English}} = -.31 \times -.40, f^2 = .01$ , small ES).

Sensation seeking was found to be a small significant predictor of IWTC only for non-English major students ( $\beta_{\text{non-English}} = .23, p < .05, f^2 = .05$ , small ES), and therefore H5 only received partial support. Relatedly, the results of SEM indicated that sensation seeking was a small negative predictor of ethnocentrism for both groups ( $\beta_{\text{English}} = -.22, p < .05, f^2 = .05$ , small ES;  $\beta_{\text{non-English}} = -.24, p < .05, f^2 = .06$ , small ES; H6). In both groups, sensation seeking was also a small indirect predictor of IWTC only when mediated by ethnocentrism (i.e.  $\beta_{\text{English}} = -.22 \times -.50, f^2 = .12$ , small ES;  $\beta_{\text{non-English}} = -.24 \times -.40, f^2 = .10$ , small ES).

The predicted path between ambiguity tolerance and sensation seeking (H7) was significant for both groups ( $\beta_{\text{English}} = .39, p < .001, f^2 = .18$ , medium ES;  $\beta_{\text{non-English}} = .26, p < .05, f^2 = .07$ , small ES). The positive correlation implies that high sensation seekers are more tolerant of ambiguities thereby supporting the positive track toward IWTC.

## Discussion

The present study explored the interrelations among intercultural willingness to communicate, ethnocentrism, ambiguity tolerance and sensation seeking. Within the Iranian context, a difference between English majors and non-English majors was predicted (H1), and based

on previous studies, a model of intercultural communication was proposed (Figure 1) and tested. The results of the study are consistent with the principles that ethnocentrism hinders intercultural communication (Arasaratnam & Banerjee, 2011; Goldstein & Kim, 2006), ambiguity tolerance is negatively related to ethnocentrism (Block & Block, 1952; O'Connor, 1952), and when considering IWTC, both ambiguity tolerance and sensation seeking are mediated by ethnocentrism (Arasaratnam & Banerjee, 2007, 2011).

Addressing the impact of second language acquisition, English major students were seen to be less ethnocentric than the non-English major students. While English major students may already be predisposed towards diversity (Yu & Chia-Fang, 2008), it is likely that learning a foreign or second language allows for familiarity with a new culture, thereby decreasing ethnocentric tendencies. Jiang (2000) states, "language is the mirror of culture" (p. 328), and one cannot separate these two from each other. The exposure to a culture, other than one's own, seems to have an important impact on cultural attitudes.

Three paths were drawn from ethnocentrism, ambiguity tolerance and sensation seeking to intercultural willingness to communicate, with the justification that all these variables affect communication with people from other cultures. Ethnocentrism was found to be the strongest predictor of IWTC for both groups (H2). While previous studies describe the negative influence of ethnocentrism on intercultural communicative competence (Arasaratnam & Banerjee, 2007, 2011), the results here offer additional insight into the dynamics of intercultural communication, and highlight the relationship between ethnocentric attitudes and one's willingness toward intercultural interactions.

Regarding the importance of ambiguity tolerance, the results showed support for the path between ambiguity tolerance and ethnocentrism, and those who had higher levels of ambiguity tolerance were less ethnocentric (H4). The finding is consistent with Block and Block (1952) and O'Connor (1952) where ambiguity tolerance and ethnocentrism were negatively related, and individuals who see ambiguous situations desirable and not threatening, have less ethnocentric attitudes towards people from other cultures.

In addition, the statistical modelling offered support for an indirect relationship between ambiguity tolerance and IWTC, when mediated by ethnocentrism (H3). This finding shows that individuals who are more tolerant of ambiguous situations have lower levels of ethnocentrism, and in turn are more willing to communicate with people from other cultures. The indirect relationship implies that although ambiguity tolerance does not directly influence individuals' IWTC, when their ethnocentric ideas are taken into account, it can still have an effect on IWTC. Therefore, when individuals perceive an ambiguous situation desirable, it does not necessarily mean that they are willing to communicate with other people in that ambiguous situation. As mentioned earlier, it is a person's level of ethnocentrism that plays the strongest factor in intercultural interactions.

Sensation seeking was significantly related to IWTC for the non-English majors in this study (H5). A reason for not finding this relationship among English major students may lie in the definition of sensation seeking: the need for novel, exciting and adventurous experiences. Contact with people from other cultures may seem more exciting and novel for non-English major students than for English major students. As English major students become familiar with the culture of the target language through their courses, and may have more experience interacting with people from other cultures because of their higher proficiency in English, the novelty of intercultural interactions may not be as exciting, as it is

for non-English major students. However, it should be mentioned that we did not measure the frequency of intercultural interactions among the participants.

However, sensation seeking was related to ethnocentrism, and also then indirectly related with IWTC. Arasaratnam and Banerjee (2007, 2011) indicate an imperative to consider the role of ethnocentrism when examining the relation between sensation seeking and intercultural communication. The researchers state that individuals' tendency for experiencing new situations and contact with different types of people is a reason for their positive attitudes toward other ethnicities. High sensation seekers possess an affinity toward novelty and this may result in a more positive attitude towards other cultures.

The results of this study should be interpreted in light of some limitations. First, this study is limited by participant self-reports, and used questionnaires to examine the intercultural communication between the two groups. Using qualitative techniques like interviews and observations can support the quantitative findings of this study, and additional factors that contribute to IWTC may arise through open-ended data collection. Second, the results can only be generalized to the limited setting of this study. The Iranian context and the influence of this particular historical/cultural paradigm can cause differences in how individuals engage in intercultural settings, and further research needs to be done in other regional contexts to confirm the results of this study. Finally, the present study did not take into account the experiences of different ethnicities. Belonging to minor and/or major ethnic groups in a given context can influence ethnocentrism and overall intercultural interaction (Ouellet, 2007).

In spite of these limitations, this study provided unique empirical data from an understudied population in intercultural communication research, and the proposed model of intercultural communication by Arasaratnam and Banerjee (2007, 2011), was expanded upon in the Iranian context. The acquisition of English as a second language proved to be a significant factor and confirms that the exposure to other cultures encourage more curiosity and enthusiasm towards cross-cultural engagement (Mirzaei & Forouzandeh, 2013). In addition, more support has been offered here on the significance of ambiguity tolerance in intercultural communication (Leong & Ward, 2000; Yashima, 2010). The results suggest that individuals with higher levels of ambiguity tolerance are more willing to communicate with people from other ethnicities and cultures. This analysis explored the simultaneous effects of ethnocentrism, sensation seeking and ambiguity tolerance from a more holistic approach, and offered additional insight into the direct and indirect path relationships.

Overall, the findings provide further insight on the nature of ethnocentric attitudes and its impact on one's willingness to engage in an intercultural context.

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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## References

- Abbe, A., Gulick, L. M. V., & Herman, J. L. (2007). *Developing cross-cultural competence in military leaders: A conceptual and empirical foundation*. Arlington, VA: US Army Research Institute for the Behavioral and Social Sciences.
- American Psychological Association. (2010). *Publication manual of the American Psychological Association*. Washington, DC: Author.
- Arasaratnam, L. A. (2004). Sensation seeking as predictor of social initiative in intercultural interactions. *Journal of Intercultural Communication Research*, 33, 215–222. doi:<http://dx.doi.org/10.1080/17475759.2010.526312>
- Arasaratnam, L. A. (2005). Sensation seeking and international students' satisfaction of experiences in the United States. *Journal of Intercultural Communication Research*, 34, 184–194.
- Arasaratnam, L. A. (2006). Further testing of a new model of intercultural communication competence. *Communication Research Reports*, 23, 93–99. doi:<http://dx.doi.org/10.1080/08824090600668923>
- Arasaratnam, L. A., & Banerjee, S. C. (2007). Ethnocentrism and sensation seeking as variables that influence intercultural contact-seeking behavior: A path analysis. *Communication Research Reports*, 24, 303–310. doi:<http://dx.doi.org/10.1080/08824090701624197>
- Arasaratnam, L. A., & Banerjee, S. C. (2011). Sensation seeking and intercultural communication competence: A model test. *International Journal of Intercultural Relations*, 35, 226–233. doi:<http://dx.doi.org/10.1016/j.ijintrel.2010.07.003>
- Arasaratnam, L. A., & Doerfel, M. L. (2005). Intercultural communication competence: Identifying key components from multicultural perspectives. *International Journal of Intercultural Relations*, 29, 137–163. doi:<http://dx.doi.org/10.1016/j.ijintrel.2004.04.001>
- Block, J., & Block, J. H. (1952). An interpersonal experiment on reactions to authority. *Human Relations*, 5, 91–98. doi:<http://dx.doi.org/10.1177/001872675200500105>
- Budner, S. (1962). Intolerance of ambiguity as a personality variable. *Journal of Personality*, 30, 29–50. doi:<http://dx.doi.org/10.1111/j.1467-6494.1962.tb02303.x>
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9, 233–255. doi:[http://dx.doi.org/10.1207/s15328007sem0902\\_5](http://dx.doi.org/10.1207/s15328007sem0902_5)
- Furnham, A., & Ribchester, T. (1995). Tolerance of ambiguity: A review of the concept, its measurement and applications. *Current Psychology*, 14, 179–199. doi:<http://dx.doi.org/10.1007/bf02686907>
- Ghonsooly, B., Khajavy, G. H., & Asadpour, S. F. (2012). Willingness to communicate in English among Iranian non-English major university students. *Journal of Language and Social Psychology*, 31, 197–211. doi:<http://dx.doi.org/10.1177/0261927x12438538>

- Goldstein, S. B., & Kim, R. I. (2006). Predictors of US college students' participation in study abroad programs: A longitudinal study. *International Journal of Intercultural Relations*, 30, 507–521. doi:<http://dx.doi.org/10.1016/j.ijintrel.2005.10.001>
- Gudykunst, W. B. (1993). Toward a theory of effective interpersonal and intergroup communication: An anxiety uncertainty management (AUM) perspective. In R. L. Wiseman & J. Koester (Eds.), *Intercultural communication competence* (pp. 33–71). Newbury Park, CA: Sage.
- Gudykunst, W. B., & Kim, Y. Y. (2003). *Communicating with strangers: An approach to intercultural communication*. New York, NY: McGraw Hill.
- Herman, J. L., Stevens, M. J., Bird, A., Mendenhall, M., & Oddou, G. (2010). The tolerance for ambiguity scale: Towards a more refined measure for international management research. *International Journal of Intercultural Relations*, 34, 58–65. doi:<http://dx.doi.org/10.1016/j.ijintrel.2009.09.004>
- Hinenoya, K., & Gatbonton, E. (2000). Ethnocentrism, cultural traits, beliefs, and English proficiency: A Japanese sample. *The Modern Language Journal*, 84, 225–240. doi:<http://dx.doi.org/10.1111/0026-7902.00064>
- Hoyle, R. H., Stephenson, M. T., Palmgreen, P., Lorch, E. P., & Donohew, L. (2002). Reliability and validity of scores on a brief measure of sensation seeking. *Personality and Individual Differences*, 32, 401–414. doi:[http://dx.doi.org/10.1016/s0191-8869\(01\)00032-0](http://dx.doi.org/10.1016/s0191-8869(01)00032-0)
- Hsu, C.-F. (2007). A cross-cultural comparison of communication orientations between Americans and Taiwanese. *Communication Quarterly*, 55, 359–374. doi:<http://dx.doi.org/10.1080/01463370701497831>
- Jiang, W. (2000). The relationship between culture and language. *ELT Journal*, 54, 328–334. doi:<http://dx.doi.org/10.1093/elt/54.4.328>
- Kassing, J. W. (1997). Development of the intercultural willingness to communicate scale. *Communication Research Reports*, 14, 399–407. doi:<http://dx.doi.org/10.1080/08824099709388683>
- Khajavy, G. H., Ghonsooly, B., Hosseini Fatemi, A., & Choi, C. W. (2016). Willingness to communicate in English: A microsystem model in the Iranian EFL classroom context. *TESOL Quarterly*, 50, 154–180. doi:<http://dx.doi.org/10.1002/tesq.204>
- Khodadady, E., & Khajavy, G. H. (2013). Exploring the role of anxiety and motivation in foreign language achievement: A structural equation modeling approach. *Porta Linguarum*, 20, 269–286.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford Press.
- Kunnan, A. J. (1998). An introduction to structural equation modeling for language assessment research. *Language Testing*, 15, 295–332. doi:<http://dx.doi.org/10.1177/026553229801500302>
- Lee, H., & Boster, F. (1991). Social information for uncertainty reduction during initial interactions. In S. Ting-Toomey & F. Korzeny (Eds.), *Cross-cultural interpersonal communication* (pp. 189–212). Newbury Park, CA: Sage.
- Leong, C. H., & Ward, C. (2000). Identity conflict in sojourners. *International Journal of Intercultural Relations*, 24, 763–776. doi:[http://dx.doi.org/10.1016/s0147-1767\(00\)00030-4](http://dx.doi.org/10.1016/s0147-1767(00)00030-4)
- Lin, Y., & Rancer, A. S. (2003). Ethnocentrism, intercultural communication apprehension, intercultural willingness-to-communicate, and intentions to participate in and intercultural dialogue program: Testing a proposed model. *Communication Research Reports*, 20, 62–72. doi:<http://dx.doi.org/10.1080/08824090309388800>
- MacIntyre, P. (1994). Variables underlying willingness to communicate: A casual analysis. *Communication Research Reports*, 11, 135–142. doi:<http://dx.doi.org/10.1080/08824099409359951>
- McCroskey, J. C., & Baer, J. E. (1985). *Willingness to communicate: The construct and its measurement*. Paper presented at the annual meeting of the Speech Communication Association, Denver, CO: (ERIC Document Reproduction Service No. E.d. 265-604).
- McCroskey, J. C., & Richmond, V. P. (1990). Willingness to communicate: Differing cultural perspective. *Southern Communication Journal*, 56, 72–77. doi:<http://dx.doi.org/10.1080/10417949009372817>
- Miller, A. N., & Samp, J. A. (2007). Planning intercultural interaction: Extending anxiety/uncertainty management theory. *Communication Research Reports*, 24, 87–95. doi:<http://dx.doi.org/10.1080/08824090701304717>

- Mirzaei, A., & Forouzandeh, F. (2013). Relationship between intercultural communicative competence and L2-learning motivation of Iranian EFL learners. *Journal of Intercultural Communication Research, 42*, 300–318. doi:<http://dx.doi.org/10.1080/17475759.2013.816867>
- Neuliep, J. W. (2010). A contemporary conceptualization of ethnocentrism. In M. B. Hinner (Ed.), *Freiberger beitraege: A forum for general and intercultural business communication* (pp. 7–21). Bern: Peter Lang.
- Neuliep, J. W. (2012). The relationship among intercultural communication apprehension, ethnocentrism, uncertainty reduction, and communication satisfaction during initial intercultural interaction: An extension of Anxiety and Uncertainty Management (AUM) theory. *Journal of Intercultural Communication Research, 41*, 1–16. doi:<http://dx.doi.org/10.1080/17475759.2011.623239>
- Neuliep, J. W., & McCroskey, J. C. (1997). The development of a U.S. and generalized ethnocentrism scale. *Communication Research Reports, 14*, 385–398. doi:<http://dx.doi.org/10.1080/08824099709388682>
- O'Connor, P. (1952). Ethnocentrism, "intolerance of ambiguity" and abstract reasoning ability. *Journal of Abnormal and Social Psychology, 47*, 526–530. doi:<http://dx.doi.org/10.1037/h0056142>
- Ouellet, J. (2007). Consumer racism and its effects on domestic cross-ethnic product purchase: An empirical test in the United States, Canada, and France. *Journal of Marketing, 71*, 113–128. doi:<http://dx.doi.org/10.1509/jmkg.71.1.113>
- Pascarella, E. T., Edison, M., Nora, A., Hagedorn, L. S., & Terenzini, P. T. (1996). Influences on students' openness to diversity and challenge in the first year of college. *The Journal of Higher Education, 67*, 174–195. doi:<http://dx.doi.org/10.2307/2943979>
- Peng, J. (2012). Towards an ecological understanding of willingness to communicate in EFL classrooms in China. *System, 40*, 203–213. doi:<http://dx.doi.org/10.1016/j.system.2012.02.002>
- Peng, J., & Woodrow, L. (2010). Willingness to communicate in English: A model in the Chinese EFL classroom context. *Language Learning, 60*, 834–876. doi:<http://dx.doi.org/10.1111/j.1467-9922.2010.00576.x>
- Rushton, J. P. (1989). Genetic similarity, human altruism, and group selection. *Behavioral and Brain Sciences, 12*, 503–559. doi:<http://dx.doi.org/10.1017/s0140525x00057320>
- Sumner, W. G. (1906). *Folkways*. Boston, MA: Ginn.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Pearson/Allyn & Bacon.
- Yashima, T. (2010). The effects of international volunteer work experiences on intercultural competence of Japanese youth. *International Journal of Intercultural Relations, 34*, 268–282. doi:<http://dx.doi.org/10.1016/j.ijintrel.2009.12.003>
- Yazdani, E., & Ghaderi, A. (1390/2011). Shekaf-e naslha; barresiye jamee shenakhtiy-e faseleye naslha az enghelabe eslami ta konun [Generation gap; sociological investigation of generation distance from Islamic revolution to the present]. *Motaleate enghelabe eslami [Islamic Revolution Studies], 8*, 207–238.
- Yu, L., & Chia-Fang, H. (2008). Willingness to communicate in intercultural interactions between Chinese and Americans. *Journal of Intercultural Communication Research, 37*, 75–88. doi:<http://dx.doi.org/10.1080/17475750802533356>
- Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. New York, NY: Cambridge University Press.