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Communication Apprehension, Self-Perceived Communication Competence, and Willingness to Communication in Singapore

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Abstract

Based in the assertion that different cultures value aspects of communication differently, this study explored the position of Singapore on the continuum of communication apprehension (CA), self-perceived communication competence (SPCC), and willingness to communicate (WTC). Responses were obtained from 209 self-identified ethnic-Chinese born in Singapore and 105 Malay immigrants. The results revealed ethnic-Chinese to have low self-reported CA, while Malays had high CA in comparison to regional neighbors. Malays and ethnic-Chinese both had low WTC and low SPCC levels in comparison to regional neighbors. The findings show a potential "immigrant effect," as Malay immigrants had much higher CA than ethnic-Chinese. Moreover, further studies on these communication traits should explore ingroup differences in CA, SPCC, and WTC.

Keywords: *Communication apprehension, Self-perceived communication competence, Willingness to communicate, Singapore*

Introduction

A body of research has developed exploring communication differences across national cultures, with emphasis on communication apprehension (CA), willingness to communicate (WTC), and self-perceived communication competence (SPCC). Research shows Americans, particularly university students, are more willing to communicate than East Asians (Hsu, 2007; Mansson & Myers, 2009), have higher SPCC (Hsu, 2007), and are less apprehensive communicators (Hsu, 2004; Zhang, Butler, & Pryor, 1996). The focus of this research has been to better understand communication competence, or the ability to communicatively complete one's goals (McCroskey & McCroskey, 1988). Individuals make choices based on their perceived communicative competence, which is influenced by their willingness and/or fear of communication. Self-report measures of competence are used to assess an individual's perception of their communicative competence (McCroskey & McCroskey, 1988).

Communication competence differs culturally, and the exploration of these differences is needed. Dilbeck, McCroskey, Richmond, and McCroskey (2009) asserted an understanding of Thai SPCC offered an understanding of how and why people communicate. In a similar study of SPCC, Zarrinabadi (2012) analyzed Iranians to provide a greater understanding of the how and why people communicate. In both studies the authors asserted the goal of these studies was to understand the communicative world around us. The current study takes this approach further.

Previous research shows self-reports of communication competence "vary as a function of the sample tested in the U.S. (typical college students, African American students, Hispanic students, Euro-

American students, at-risk students, and gifted students) (Dilbeck et al., 2009, p. 2). Samples also differ from different national cultures. While studies of CA, WTC, and SPCC have been conducted in many national cultures (e.g., the US and Puerto Rico, England, Germany, Finland, France, Sweden, Japan, Korea, China, Thailand, Israel, India, Iran, the Philippines, Taiwan, Malaysia, Australia, and Micronesia (Barraclough, Christophel, & McCroskey, 1988; Burroughs & Marie, 1990; Croucher, 2013; Dilbeck et al., 2009; Hsu, 2004; Neuliep, Chadoir, McCroskey, 2003; Sallinen-Kuparinen, McCroskey, & Richmond, 1991; Yook & Ahn, 1999; Zarrinabadi, 2012), many have been ignored.

This study adds to previous research by exploring these traits in Singapore. Singapore has been chosen for the following reasons. First, Singapore is an ethnically diverse nation with an ethnic-Chinese majority and many minority groups (Malay, Indonesian, and Indian). This diversity provides group-level comparisons. Second, research shows levels of CA, SPCC, and WTC differ based on an individual's status within society (Croucher, 2013; Richmond, McCroskey, McCroskey, & Fayer, 2008). Thus, it is advantageous to explore these traits in Singapore as it has dominant majority and minority groups. Third, Singapore is politically and culturally different from US, European, and Southeast Asian national cultures (Mutalib, 2005), who make up the bulk of the cultures studied in CA, WTC, and SPCC research. Exploring CA, WTC, and SPCC in Singapore will expand our understanding of communication, and further answer how and why people communicate. Therefore, the current study assesses the overall position of Singapore on the CA, WTC, and SPCC continuums.

Communication Traits

The Personal Report of Communication Apprehension (PRCA) (McCroskey, 1982) measures communication apprehension, or "a broad-based fear or anxiety associated with either real or anticipated [oral] communication with another person or persons" (McCroskey, 1997, p. 78). The PRCA has 24-items measuring trait-like CA across four contexts: dyadic, meetings, public, and small groups. CA studies have been conducted in the US, Puerto Rico, Europe, South Africa, the Pacific Rim (China, the Philippines, Japan, Taiwan, Malaysia, Korea), Micronesia, Thailand, India, Iran, and Australia (Barraclough et al., 1988; Burroughs & Marie, 1990; Croucher, 2013; Hsu, 2004; Mansson & Myers, 2009; Neuliep et al., 2003; Sallinen-Kuparinen et al., 1991; Yook & Ahn, 1999). In such studies, US participants have reported lower levels of CA than international participants. Research has shown significant differences between US and international participants. One study explored CA in Singapore (Lee, Detenber, Willnat, Aday, & Graf, 2004); the study considered CA as a predictor of spiral of silence. The authors found Singaporeans to be more apprehensive than Americans. However, as the study was not about CA, no analysis of CA in Singapore was provided. Moreover, the place of Singapore on the CA continuum is unknown. While it would be possible to compare the results from Singapore to nations studied, the focus of this study is to compare Singapore with regional neighbors for a cultural understanding of the region. Thus, the following is put forth:

RQ1: What is the position of Singapore on the continuum of communication apprehension (CA) scores?

A trait linked to CA is willingness to communicate (WTC), or an individual's readiness to initiate communication with others (McCroskey & Richmond, 1987). This kind of communication can take place in interpersonal, small group, and public speaking contexts, and with acquaintances, friends, and/or with strangers. The Willingness to Communicate Scale (McCroskey, 1992) is a 20-item measure that assesses an individual's willingness to initiate communication. WTC studies have been conducted in the US, Puerto Rico, Europe, South Africa, the Pacific Rim, Micronesia, Micronesia, Thailand, and Australia. In these studies, US participants have regularly reported higher levels of WTC than international participants. As no research has been conducted on WTC in Singapore, to better understand WTC in the Singaporean context, the following is put forth:

RQ2: What is the position of Singapore on the continuum of willingness to communicate (WTC) scores?

The third variable is self-perceived communication competence (SPCC), or a person's belief in his/her ability to adequately perform communication activities (McCroskey & MCCroskey, 1988). SPCC focuses

on communication with acquaintances, friends and/or strangers in interpersonal, small group and public speaking contexts. The Self-Perceived Communication Competence (SPCC) instrument (McCroskey & McCroskey, 1988) is a 12-item scale used to measure SPCC. In addition to the nations analyzed for WTC, Iran has been studied for SPCC (Zarrinabadi, 2012). US participants regularly are shown to have higher levels of SPCC than international participants; SPCC is positively correlated with WTC, and negatively with CA (Croucher, 2013). As no research has been conducted on SPCC in Singapore, to better understand SPCC in the Singaporean context, the following is put forth:

RQ3: What is the position of Singapore on the continuum of self-perceived communication competence (SPCC) scores?

Relationship between Ethnic Chinese and Malay Immigrants

Malays are marginalized in Singapore. Malays have higher unemployment rates than Chinese. The Chinese dominate professional and managerial occupations (Lyons & Ford, 2009). Malays experience higher divorce rates, larger numbers of single parent households, and larger family sizes (Mutalib, 2005). Such social problems attract government and public attention, and reinforce a variety of negative stereotypes toward Malays (Lyons & Ford, 2009). The Malay immigrant population continues to grow. However, many ethnic Chinese are not happy with this growth. In fact, the growing Malay population faces growing resentment and prejudice. While the government tries to integrate the groups, the long-standing differences between the groups often lead to a lack of communication, which is not spoken about openly in Singapore (Lyons & Ford, 2009). Ultimately, the differences between these two groups may attribute to differences in levels of CA, SPCC, and WTC. Based on the assertion that majority group members will feel more comfortable communicating than minority group members (Croucher, 2013; Richmond et al., 2008) the following is posed:

H1a: Chinese Singaporeans report lower CA levels than Malay immigrants to Singapore.

H1b: Chinese Singaporeans report higher WTC levels than Malay immigrants to Singapore.

H1c: Chinese Singaporeans report higher SPCC levels than Malay immigrants to Singapore.

Method

Participants

The sample included 314 individuals (51.3% female and 48.7% male). Participants ranged in age from 18 to 60 ($M = 28.14$, $SD = 7.17$). Of the participants, 209 were ethnic-Chinese born in Singapore (66.6%), and 105 were Malay (33.4%). All data were collected after institutional review board approval in 2013. The principal investigator contacted participants through established social and professional networks; thus, this is a convenience sample. Participants did not receive financial incentives for their participation. The instrument was delivered in English and Malay. The instrument was first prepared in English and then back-translated from Malay to English. The reliability was high (k = .83). English was used for the majority of the participants as English has been one of the official languages of Singapore since the 1980s.

Instruments

The PRCA is a 24-item scale measuring trait-like communication apprehension in four contexts: dyadic, meeting, small group, and public (McCroskey, 1982). It uses a 5-point Likert scale ranging from (1) *strongly agree* to (5) *strongly disagree*. The scale is reliable, with alpha reliabilities ranging from .80 to

.95 (Croucher, 2013; Hsu, 2007). In the current study, the alphas were: .87 for dyadic, .86 for meeting, .88 for small group, and .90 for public.[1]

The Willingness to Communicate scale is a 20-item measure of one's willingness to initiate communication among acquaintances, friends and strangers. The scale items range from (0) *never* to (100) *always*. McCroskey (1992) asserted that while the scale has seven dimensions, it could be scored as unidimensional. Previous alpha reliabilities have ranged from .81 to .89 (Mansson & Myers, 2009). The alpha for WTC in the current study was .84.[2]

The Self-Perceived Communication Competence scale is a 12-item scale measuring an individual's perceptions of their own communicative competence among acquaintances, friends and strangers (McCroskey & McCroskey, 1988). The scale items range from (0) *not at all competent* to (100) *completely competent*. While there are three types of receivers, and four contexts for competence (public, meeting, group, and dyad), often the combined score is only reported. Previous reliabilities have ranged from .81 to .93 (Hsu, 2007). The alpha in the current study was .91[3]. For the sake of comparability with literature on these topics, and in view of the acceptable Cronbach's alphas, we decided to use standard procedures involving summed or averaged items in the analyses to follow. We discuss the CFA results in the Discussion. Table 1 shows the correlations among the study variables.

Table 1: *Pearson Correlation Results*

Ethnic Chinese

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
(1) Group CA	-						
(2) Meeting CA	-.18**	-					
(3) Dyadic CA	-.37**	.08	-				
(4) Public CA	-.01	.02	-.11	-			
(5) Total CA	.01	-.02	.03	.06	-		
(6) WTC	-.04	-.09	.17*	.09	-.36**	-	
(7) SPCC	.07	-.01	.01	-.01	.04	-.10*	-

Malay Immigrants

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
(1) Group CA	-						
(2) Meeting CA	.18*	-					
(3) Dyadic CA	.01	.29**	-				
(4) Public CA	.08	-.09	.23**	-			
(5) Total CA	.08	.06	.01	.05	-		

(6) WTC	.01	.05	-.05	.10	.09	-	
(7) SPCC	-.02	.03	-.02	.02	.16*	.41**	-

Note: * $p < .05$, ** $p < .01$.

Results

The position of Singapore on the continuum of CA scores is in Table 2 (*RQ1*). The table is divided between the ethnic-Chinese sample and the Malay immigrant sample, in conjunction with the CA scores of other Asian "neighbor" nations to Singapore. As illustrated in Table 2, there is a wide range of scores. As all of the studies from neighboring countries combined the four contexts of CA in their data reporting[4], the four contexts of CA in this study are combined for data comparison with other studies on this region. The scores range from a Malaysian study with an undergraduate sample of 31 (Devi & Shahnaz Feroz, 2008) with the lowest CA scores, to the current study where the Malay immigrant population in Singapore was the highest on the combined CA score ($M = 85$, $SD = 6.22$). Ethnic Chinese in Singapore scored next to the bottom of the range with a fairly low combined CA score ($M = 53.17$, $SD = 11.02$). In support of *H1a*, Chinese Singaporeans scored significantly lower on two of the CA contexts: dyadicCA ($M_C = 16.23$, $SD_C = 1.57$; $M_M = 17.12$, $SD_M = 2.21$) $t(312) = -4.11$, $p < .001$; and publicCA ($M_C = 16.76$, $SD_C = 2.51$; $M_M = 17.60$, $SD_M = 2.75$) $t(191.81) = -2.64$, $p < .01$.

Table 2: *Communication Apprehension Scores: Southeast Asian Studies*

Nation	**Sample *N***	***M***	***SD***
Singapore (Present Study Malay immigrants)	105	85	6.22
China (Zhang et al., 1996)	688	79.8	11.5
Thailand (Knutson et al., 1995)	640	71.05	N/A
Malaysia (Sarriff & Gillani, >2011)	130	71.03	12.2
Singapore (Waipeng et al., 2004)	688 (no separation between groups)	62.68	16.32
Taiwan (Hsu, 2007)	311	70.92	10.84
Philippines (Rojo-Laurilla, 2007)	24	66.62	13.16
Singapore (Present Study Ethnic-Chinese)	209	53.17	11.02
Malaysia (Devi & Shahnaz Feroz, 2008)	31	36.13	5.16

The position of Singapore on the continuum of WTC scores (*RQ2*) is in Table 3. The table is divided between the ethnic-Chinese sample and the Malay immigrant sample, in conjunction with the WTC scores of other Asian "neighbor" nations to Singapore. As illustrated, there is a large range of scores. The WTC scores range from Del Villar's (2012) analysis of 385 employees in multi-national corporations, to ethnic-Chinese ($M = 60.57$, $SD = 8.12$) and Malay immigrants ($M = 54.52$, $SD = 5.19$) in Singapore in the current study. In support of *H1b,* Chinese Singaporeans scored significant Insert tly higher on WTC: ($M_C = 60.57$, $SD_C = 8.12$; $M_M = 54.52$, $SD_M = 5.19$) $t(312) = 6.96$, $p < .001$.

Table 3: *Willingness to Communicate Scores: Southeast Asian Studies*

Nation	Sample *N*	*M*	*SD*
Philippines (Del Villar)	385	74.06	18.62
Taiwan (Hsu, 2007)	311	63.38[5]	13.95
Thailand (Knutson et al., 2002)	315		
Strangers		19.82	
Acquaintances		72.49	
Friends		88.49	
Singapore (Present Study Ethnic-Chinese)	209	60.57	8.12
Singapore (Present Study Malay immigrants)	105	54.52	5.19

The position of Singapore on the continuum of SPCC scores (*RQ3*) is provided in Table 4. The table is divided between the ethnic-Chinese sample and the Malay immigrant sample, in conjunction with the SPCC scores of other Asian "neighbor" nations to Singapore. As shown, there is a wide range of scores. The SPCC scores range from Hsu's (2007) analysis of 311 Taiwanese undergraduates to, ethnic-Chinese ($M = 61.6$, $SD = 7.09$) and Malay immigrants ($M = 60.79$, $SD = 6.23$) in Singapore in the current study. Chinese Singaporeans did not score significantly higher on SPCC: ($M_C = 61.60$, $SD_C = 7.09$; $M_M = 60.79$, $SD_M = 6.23$) $t(312) = .99$, $p = .99$, thus *H1c* is not supported.

Table 4: *Self-Perceived Communication Competence Scores: Southeast Asian Studies*

Nation	Sample *N*	*M*	*SD*
Taiwan (Hsu, 2007)	311	70.26[6]	13.56
Thailand (Dilbeck et al., 2009)	346	68.4	13.0
Malaysia (Devi & Shanaz Feroz, 2008)	31	67.26	12.01
Philippines (Rojo-Laurilla, 2007)	24	64.15/79.46[7]	17.82/11.84
Singapore (Present Study Ethnic-Chinese)	209	61.60	7.09
Singapore (Present Study Malay Immigrants)	105	60.79	6.23

Discussion

Dilbeck et al. (2009) argued to understand communication we must explore the communicative traits and behaviors of individuals in different national cultures. This study explored CA, WTC, and SPCC in Singapore. Based on these results, the following conclusions are drawn. First, Malay immigrants have the

highest levels of CA in comparison to other respondents in the region while ethnic-Chinese born in Singapore have the lowest CA levels in the region. This could be linked to what Croucher (2013) called the immigrant effect. Immigrant status had a significant effect on CA, and WTC levels; immigrants had higher levels. Individuals born into a group with more economic, political, or social power are more likely to be enculturated/socialized to develop more communicative competence (Croucher, 2013). He hypothesized this was because they had less economic, political, and cultural power in society.

Previous research has also shown social status is related to level of CA among communicators. A study of Japanese, Hawaiian, and American undergraduate students revealed the level of CA is higher when students are communicating to a higher social status (professor) than a lower social status (classmate) (Kim, Tasaki, Kim, & Lee, 2007). Among the Asian cultures such as China and Japan, people with higher social ranks, for example the elderly and people of great authority are high respected (Sue & Kitano, 1973), so it is usually avoided to oppose them. According to Kim et al. (2007) preventing getting negative comments and punishment are other reasons that make Asians avoid or be cautious communicating with individuals of higher social position. Thus, they are less likely to feel communicatively comfortable, or secure, which in turn will increase apprehension levels. However, minority groups could be communicatively uncomfortable for a variety of different reasons. Racism and discrimination, and interracial stress are different kinds of stress caused by being in the position of a minority (Jones, Castellanos, & Cole, 2002). More research should explore these links between an individual's place in society and communication traits.

Second, the PRCA, WTC, and the SPCC scales are primarily used to measure CA, SPCC, and/or WTC among ingroup members. However, as nations diversify it is advantageous to include other variables in studies that explore issues related to power. The results show Malay immigrants who are often discriminated against in Singapore (Rubdy & McKay, 2013) differed statistically from the majority ethnic-Chinese in levels of CA and WTC. As this group lacks economic, social, and political power it is likely they are less likely to want to or perceive themselves as communicatively competent. The out-group status of the Malays in Singapore might well result in their communication being less welcome than messages from the majority ethnic Chinese. Consequently, the various indicants of apprehension on the part of Malays reflect an accurate perception of their social worlds, rather than following from personality orientations, which is the ordinary interpretation.

Level of communication apprehension is significantly related to whether or not an individual decides to begin communication or not. Based on an individual's socio-economic situation and previous experiences, an individual in a minority group may feel less or more anxious to begin communication in a specific context. This also affects individual's willingness to communicate and the situations in which the person chooses to establish communication. Higher levels of communication apprehension indicate less willingness to communicate. However, the decision to communicate does not affect self-perceived communication competence. It seems that when the decision to communicate is set, individuals perceive themselves to be competent to communicate regardless of the party they are communicating with. Previous research showed among individuals with high CA from either high or low context cultures, the decision to communicate is influenced by cultural expectations and previous experiences, but their certainty and interpersonal solidarity is not affected (Allen et al., 2014). This might explain why Chinese and Malays differed on CA and WTC, but not on SPCC. In other studies (that do not compare majority and minority status), the three measures used tended to result in a more consistent pattern than discovered in the current study. Malays seemed to feel they were just as able to communicate as the Chinese, but were less eager to participate. Research that uses paired instruments to compare in-group versus out-group scores within each ethnic sample might be illuminating.

Third, in comparison to its regional neighbors, Singapore scored lower on WTC and SPCC. Aside from the Malay immigrant WTC score, the other scores are representative of this region when compared to US and/or European scores. In previous research US and European samples have scored higher on WTC and SPCC (Mansson & Myers, 2009). Thus the majority of the WTC and SPCC scores in Singapore are in line with previous "Asian" trait research. This body of research posited Asian cultures such as China, which are perceived to be more collectivist, show higher CA, lower WTC, and lower SPCC in comparison to their more individualist European and American counterparts (Gudykunst, 2001). Previous research showed higher CA and lower WTC and SPCC among Asian cultures such as China and Taiwan

could be explained by collectivist cultural values, and personality traits such as neuroticism and extroversion (Hsu, 2010). Due to the push toward being harmonious with the in-group, holding social duties and being obedient, people in collectivist cultures are more likely to be sensitive about peers' evaluation of them than people in individualistic cultures (Hsu, 2004). However, there is not enough available data to relate cultural identity to communication traits (Hsu, 2010), and the WTC score among Malay immigrants supports the need to conduct more research on the significance of group dynamics between dominant and minority groups. These particular results demonstrate how the Malay immigrant community has low WTC in Singapore. While the Singaporean government takes steps to integrate immigrant populations into Singapore, the results from this study suggest differences in the communicative traits and behaviors of the immigrant and dominant groups. More open dialogue should take place about the similarities and differences between these groups to better understand the changing demographics of Singapore.

Confirmatory factor analysis (CFAs) did not produce an acceptable solution for the well-established PRCA, WTC, or SPCC scales. While frustrating in one sense, these are substantive results, indicating these Western-developed scales did not resonate with our respondents in Singapore. Prior research has not for the most part reported CFAs, relying instead on Cronbach's alphas (Levine, Hullett, Turner, & Lapinski, 2006; Schmitt, 1996). The results of the current study bring earlier results into question, and suggest the need to statistically re-examine the idea of communication apprehension in its local cultural context.

Little research has considered such traits in other parts of the world. As Dilbeck et al. (2009) stated, "if we are to generate truly human communication theories, it is incumbent on communication scholars to pay attention to the traits of humans in other cultures" (p. 6). This study attempted to answer this call by exploring these traits in Singapore. As the results show, more work is needed to understand the potential influence of an individual's position in society on communication traits before we can generate "truly human communication theories."

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[1]We conducted several confirmatory factor analyses of the scale, using LISREL 8.8 and maximum likelihood estimation, as was true for all the CFAs reported here. The PRCA results were unsatisfactory. The initial CFA divided the items into the usual four scales and produced poor fit: chi-squared= 4559.10, $df = 246$, $p < .001$; RMSEA = .21 (90% CI .21 - .22), CFI = .86, SRMR = .11. A second order CFA that assigned each of the four latent subscales to a second order factor failed to run because the key matrix was not positive definite. Inspection revealed a very high likelihood of multicollinearity, with many zero-order correlations exceeding .90, especially among group and meetings items. A third CFA assigned all 24 items to a single factor, and this was also unsatisfactory: chi-squared = 9254.09, $df = 252$, $p < .001$; RMSEA = .31 (90% CI .30 - .31), CFI = .79, and SRMR = .21. Inspection of the R-squared for loadings of items to the latent variable indicated the group and meeting items often had R-squared exceeding .90 but those for the dyadic and public speaking items rarely exceeded .20, and were often below. 10. In short, the group and meeting items behaved so similarly they approached perfect mutlicollinearity, and the dyadic and public speaking items barely loaded at all.

[2] We also performed a CFA on this instrument. The WTC scale was unidimensional, dropping the final item due to missing data. The CFA produced poor results: chi-squared = 1018.16, $df = 152$, $p < .001$; RSMEA = .12 (90% CI .11 - .13), CFI = .31, and SRMR = .11. Many items had R-squared of less than .10 on the latent variable.

[3] We conducted a CFA on the SPCC scale, and treated it as a single scale. The CFA of all 12 items gave poor fit: chi-squared = 334.17, $df = 54$, $p < .001$; RMSEA = .11 (90% CI .10 - .12), CFI = .43, and SRMR = .09. Inspection of the R-squared between the items and the latent variables revealed many loadings below .10.

[4] In numerous studies of CA researchers report totalCA and to use totalCA as a dependent or independent variable (e.g., Allen, O'Mara, & Long, 2014; Beatty, Heisel, Lewis, Pence, Reinhart, & Tian, 2011; Burroughs, Marie, & McCroskey, 2003; Hsu, 2010; McCroskey, Fayer, & Richmond, 1985; Neuliep et al., 2003).

[5] Originally Hsu (2007) reported the WTC mean as 1267.53; to standardize the mean for comparison purposes, the *M* and *SD* were both divided by 20, the number of questions in the Willingness to Communicate Scale.

[6]Originally Hsu (2007) reported the SPCC mean as 843.19; to standardize the mean for comparison purposes, the *M* and *SD* were both divided by 12, the number of questions in the Self-Perceived Communication Competence Scale.

[7]Two values are provided because the authors conducted an experiment and thus had two values for SPCC.

[8] Originally Hsu (2007) reported the WTC mean as 1267.53; to standardize the mean for comparison purposes, the *M* and *SD* were both divided by 20, the number of questions in the Willingness to Communicate Scale.

[9]Originally Hsu (2007) reported the SPCC mean as 843.19; to standardize the mean for comparison purposes, the *M* and *SD* were both divided by 12, the number of questions in the Self-Perceived Communication Competence Scale.

[10]Two values are provided because the authors conducted an experiment and thus had two values for SPCC.

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