

# The Protective Function of Meaning of Life on Life Satisfaction Among Chinese Students in Australia and Hong Kong: A Cross-Cultural Comparative Study

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**Abstract. Objective:** The authors compared the predictive effects of acculturative stressors and meaning of life on life satisfaction between Chinese students in Australia and in Hong Kong. **Participants:** In 2006, the researchers recruited 606 Chinese students studying abroad at the University of Melbourne in Australia and at 6 universities in Hong Kong. **Methods:** Participants completed a questionnaire that included measures of acculturative stressors, meaning of life, life satisfaction, and demographic information. **Results:** The Australian sample experienced a significantly higher level of acculturative stressors than did the Hong Kong sample, but life satisfaction did not differ significantly between the 2 samples. Meaning of life had a strong positive contribution and acculturative stressors had a negative contribution in predicting life satisfaction in both samples. Meaning of life partially mediated the relationship between acculturative stressors and life satisfaction in both samples. **Conclusions:** The authors discuss the theoretical and practical implications for Chinese students studying abroad.

**Keywords:** acculturation, college health, international students, life satisfaction, meaning of life

Study-abroad students are considered a population at high risk for psychopathology or poor mental health.<sup>1,2</sup> This is thought to result from the various acculturative stressors that they experience in their host societies.<sup>3</sup> *Acculturative stressors* are the conflicts and difficulties that arise from cross-cultural contact.<sup>4</sup> For Chinese students studying abroad, these acculturative stressors can be classified into 5 major domains. The first is language-related issues, such as the difficulty of listening to and

speaking English<sup>5</sup>; the difficulty in understanding slang, jokes, idioms, common vocabulary, and topics of conversation<sup>6</sup>; and a lack of confidence in using English in daily life.<sup>7</sup> The second is academic issues, such as difficulties with course work, research, and teaching assistance<sup>8</sup>; becoming involved in class discussions<sup>9</sup>; making oral presentations and taking exams<sup>10</sup>; becoming accustomed to different classroom communication styles and types of interaction from those of the origin country<sup>11</sup>; and adjusting to changes in curriculum in the multicultural classroom.<sup>12</sup> The third domain comprises psychosociocultural issues, such as the lack of social support networks,<sup>13</sup> the low frequency of social interaction with domestic students,<sup>12</sup> difficulties in intercultural communication,<sup>14</sup> racial discrimination,<sup>15</sup> and homesickness.<sup>16</sup> The fourth is the financial issues, such as competition for financial assistantship<sup>8</sup> and sharing financial aid with a spouse or children.<sup>17</sup> The fifth includes other issues, such as political concerns<sup>18</sup>; a lack of information on services and facilities<sup>10</sup>; and concerns about food, health, housing, transportation, security, religion, and taxes.<sup>17</sup>

Berry's<sup>19</sup> model of acculturative stress illustrates the way in which such stressors may result in varying levels of acculturative stress and diverse positive and negative psychological adaptation outcomes, which depend on various moderating factors. In the past few decades, however, researchers of migration and mental health have intensively focused on negative health outcomes. Hovey and King<sup>20</sup> extended Berry's model to demonstrate that a high level of acculturative stress can result in significantly high levels of depressive symptoms and suicide ideation among immigrant populations. Studies of international students have also shown that various domains of acculturative stressors significantly affect students' psychological adjustment. For example, low English-language proficiency is a significant predictor of depressive symptoms among Chinese students

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attending school in Australia<sup>21</sup> and a major determinant of sociocultural adjustment, as indexed by intercultural-social self-efficacy.<sup>22</sup> Contact with host nationals is also related to academic, social, and psychological adjustment outcomes for international students.<sup>1,10,23</sup> In addition, researchers have also found that perceived racial discrimination exerts a negative influence on the psychological and social adaptation of migrants.<sup>1,15,24</sup>

Resilience research in the past 3 decades has demonstrated that a subgroup of a high-risk population can experience positive health outcomes despite adverse life circumstances.<sup>25</sup> Acculturation experiences sometimes enhance mental health.<sup>26</sup> Recent studies have found that the majority of Chinese students have settled successfully in Australia, in spite of the difficulties and emotional troubles that accompany acculturation.<sup>27</sup> Other research has shown that the majority of study-abroad students in Australia and New Zealand have experienced positive affect and life satisfaction.<sup>10,28</sup> Similar findings have also been reported for Chinese American college students.<sup>29</sup>

Many factors contribute to the life satisfaction of international students in a host society. Ward and Masgoret<sup>10</sup> cite such factors as greater language proficiency, more cultural inclusiveness, more contact with host nationals, a positive attitude in the host community toward international students, more available social support, and less discrimination. Laubscher<sup>30</sup> also found that low levels of acculturative stress were associated with a higher level of general satisfaction with the travel experience. Similarly, Neto<sup>31</sup> found that social adaptation difficulties were negatively correlated with life satisfaction among Portuguese immigrants in France.

Resilience researchers have identified numerous protective factors—such as meaning of life<sup>25</sup>—that mitigate the negative effects of risk factors and promote positive adaptation outcomes.<sup>32</sup> *Meaning of life* is “the cognizance of order, coherence, and purpose in one’s existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment.”<sup>33(p221)</sup> Meaning comes from various sources in the lives of individuals<sup>34</sup>; Wong<sup>35</sup> developed the Personal Meaning Profile (PMP) to measure the sources of a meaningful life, which include achievement, religion, relationships, self-transcendence (ie, focus on the value of serving others), self-acceptance, intimacy, and fair treatment. An individual’s concept of meaning of life includes both culturally specific and universal elements.<sup>36</sup> Researchers in one cross-cultural comparative study<sup>37</sup> showed that the most important sources of meaning of life for Australians were participation in personal relationships and leisure activities, personal growth, and meeting basic needs, which is consistent with findings among Canadians.<sup>38</sup> In contrast, investigators of Asian populations have identified certain cultural factors that are related to meaning of life. Lin<sup>39</sup> found that in addition to the 7 factors included in Wong’s PMP, Chinese people also seek personal meaning from family, self-development, and being close to nature and authenticity (ie, to understand nature, follow it, and flow with it). Meaning of life in Chinese culture appears to be framed in relation to others, society, and nature.

The link between meaning of life and positive psychological well-being is generally established.<sup>40</sup> Several researchers have found that the attainment of meaning in life is significantly associated with life satisfaction.<sup>39,41–43</sup> Furthermore, meaning of life is more strongly associated with the positive dimensions of well-being (life satisfaction and positive affect) than with negative dimensions (psychological distress and negative affect).<sup>42</sup> Zika and Chamberlain<sup>41</sup> examined 3 personal variables (locus of control, assertiveness, and meaning in life) in relation to psychological well-being and found that meaning in life was the most consistent predictor of positive well-being among college students. Wallace and Lahti<sup>44</sup> further found that meaning of life partially mediated the link between perceived stress and life satisfaction in a sample of older adults. Although investigators have found evidence that supports a relationship between meaning of life and positive psychological well-being, few have investigated this relationship in the context of acculturation for migrant populations. Because the application of the resilience framework in acculturation research is still in its infancy, researchers must begin to identify the protective factors that promote positive adaptation in the context of acculturation. By identifying and investigating the more positive contributions to mental health, we can examine preventive strategies that may improve the mental health of migrant student populations.<sup>45</sup> Moreover, the acculturation process for migrants in different countries appears to be contextualized rather than homogeneous. Thus, further comparative studies are needed to understand the various acculturation phenomena across host societies.<sup>27</sup>

In this study, we examined and compared the predictors of life satisfaction between Chinese international students attending a university in Australia and students from mainland China in Hong Kong universities. We also compared and attempted to identify the protective mechanism of meaning of life in relation to acculturative stressors and life satisfaction between the 2 groups. We generated 3 hypotheses.

1. Chinese students in Australia will experience a higher level of acculturative stressors and a lower level of global life satisfaction than will mainland students in Hong Kong.
2. Meaning of life will positively predict life satisfaction, whereas acculturative stressors will negatively predict life satisfaction among Chinese students attending school in Australia and Hong Kong.
3. Meaning of life will mediate the relationship between acculturative stress and life satisfaction.

## METHODS

### Procedure

We obtained ethical approval from the human research ethics committees of the University of Hong Kong and

the University of Melbourne. We sent students an invitation letter with a Web address linking to an online questionnaire designed for the study to elaborate the study's purpose and explain its confidential and voluntary nature. In Hong Kong, we distributed an electronic invitation letter via university Web mail to mainland Chinese graduate students who were studying at 6 Hong Kong universities. In Australia, we sent the invitation letter by e-mail, with the help of the international student office, to international students at the University of Melbourne who came from mainland China, Hong Kong, Taiwan, and Macau. We mailed hard copies of the questionnaire to student residential halls in Hong Kong and posted hard copies on notice boards across the University of Melbourne campus. The questionnaire was in Chinese. Participants wrote their university e-mail address on a separate sheet of the questionnaire to avoid duplicate responses. We sent a souvenir to each student who completed the questionnaire.

**Participants**

A total of 606 participants completed the questionnaire. Four hundred participants were Chinese students studying in 6 Hong Kong universities, and 206 were mainland Chinese students studying at the University of Melbourne (see Table 1).

**Measures**

**Acculturative Stressor Scale for Chinese Students**

We developed the Acculturative Stressor Scale for Chinese Students (ASSCS) to measure the acculturative stressors that Chinese students experience in their daily lives in their host country or region. We interviewed 14 mainland Chinese graduate students regarding the adjustment problems they encountered in Hong Kong. We generated 100 items from the in-depth interviews and after expert and wording checks, retained 84, which we then pilot-tested for item analysis in a sample of 189 mainland Chinese students in 4 universities in Hong Kong. We selected the items according to the criteria in the following sequence: (1) less than 60% of the participants reported experiencing the item as either "not at all" or "not applicable"; (2) the inter-item correlation was less than .80; (3) the corrected item-total correlation was greater than .40; and (4) the pattern coefficient in exploratory factor analysis was greater than .50. Last, we retained 18 items to form the final version of the ASSCS, which we validated in a sample of 400 mainland Chinese students in 6 universities in Hong Kong. The exploratory factor analysis that we conducted in this sample suggested 4 factors: language deficiency, cultural difference, academic work, and social interaction. In the Australian sample, we added 9 items to represent the other 2 acculturative stressors that Chinese students commonly experience

**TABLE 1. Participants' Demographic Characteristics**

Characteristic	Hong Kong sample		Australian sample	
	<i>n</i>	%	<i>n</i>	%
Sex				
Male	200	50	68	33
Female	200	50	138	67
Duration of residence in host society (y)				
≤ 0.5	155	38.8	38	18.4
0.5–1	27	6.8	25	12.1
1–2	79	19.8	39	18.9
2–3	72	18.0	37	18.0
> 3	67	16.8	67	32.6
Level of education				
PhD	256	64.0	95	46.1
Master's	144	36.0	97	47.1
Other	0	0	14	6.8
Age (y)				
≤ 23	72	18.0	128	62.1
24–30	269	76.3	74	35.9
> 30	59	14.8	4	1.9
Marital status				
Single	299	74.8	190	92.2
Married	97	24.3	12	5.8
Other	4	1.0	4	1.9
Religiously active				
No	357	89.3	152	73.8
Yes	43	10.8	54	26.2
Total	400	100	206	100

in Western countries: discrimination and financial problems. We adopted these 9 items from the Acculturative Stress Scale for International Students,<sup>46</sup> the Index of Life Stress for Asian Students,<sup>47</sup> and the Juarez International Student Stress Test.<sup>48</sup> The discrimination factor comprises 4 items, one of which is “many opportunities are denied to me because I am not a local student or resident.” The factor of financial problems comprises 5 items, including “my financial situation makes my life here very hard.” Participants indicate the degree to which they have experienced or are experiencing the adjustment problems listed on the scale. The responses, rated on a 4-point Likert scale, were 0 (*not at all*), 1 (*a little*), 2 (*moderate*), and 3 (*a lot*). A higher score indicates a greater level of the acculturative stressor. The validation of the ASSCS in the sample illustrated its sound psychometric properties: the Cronbach alpha coefficient and Guttman split-half reliability were .89 and .85 in the Hong Kong sample and .91 and .90 in the Australian sample. The Cronbach alpha coefficient of the subscales ranged from .74 to .84 in the Hong Kong sample and from .64 to .81 in the Australian sample. The Guttman split-half reliability of the subscales ranged from .66 to .81 in the Hong Kong sample and from .53 to .78 in the Australian sample. The average interitem correlation of the ASSCS was .31 and .27 in the Hong Kong and Australian samples, respectively. The overall ASSCS score had a statistically significant positive correlation with negative affect in the Hong Kong sample ( $r[400] = .44, p < .001$ ) and in the Australian sample ( $r[202] = .32, p < .001$ ), and had significant negative correlations with positive affect ( $r[400] = -.31, p < .001; r[202] = -.17, p < .05$ ) and life satisfaction ( $r[400] = -.28, p < .001; r[202] = -.32, p < .05$ ) in both samples.

**Chinese Personal Meaning Profile**

We adapted the Chinese Personal Meaning Profile<sup>39</sup> (CPMP) from the PMP<sup>36</sup> to assess the sources of life meaning among Chinese student populations. The original CPMP consisted of 87 items and 12 subscales. We excluded items with a factor loading of less than .45 in Lin’s 2001 study,<sup>39</sup> thus yielding a 55-item CPMP with 10 factors that included Self-development, Achievement, Acceptance and contentment, Western

religion (participation and adoption of), Relationships (having healthy relationships with others), Pursuit of purpose, Family, Being close to nature and being authentic, Fair treatment, and Intimate relationships. Participants indicate the degree to which the items describe sources of a meaningful life. Respondents rank their responses on a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*a great deal*). A high score indicates a high level of meaning. The Cronbach alpha coefficient for the 55-item CPMP was .96, and the Guttman split-half reliability was .92. The CPMP score has a statistically significant positive correlation with the Purpose in Life Scale (PLS)<sup>49</sup> and the Satisfaction with Life Scale (SWLS).<sup>39</sup>

**Satisfaction with Life Scale**

This scale<sup>50</sup> measures global life satisfaction. It consists of 5 items that respondents rate on a 7-point Likert scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). The total score ranges from 5 to 35. A high score indicates a high level of global life satisfaction. Researchers<sup>51</sup> have validated the scale among Chinese student populations. The Cronbach alpha coefficient in this study was .87, and the Guttman split-half reliability was .85. The average interitem correlation was .58.

**RESULTS**

**Differences in Life Satisfaction and Acculturative Stressors**

We conducted a multivariate analysis of covariance (MANCOVA) to compare the group (Australia vs Hong Kong) differences in life satisfaction and acculturative stressors. Life satisfaction and acculturative stressors were the dependent variables, and group status with 2 levels (Hong Kong vs Australia) was the independent variable in the analysis. We controlled as covariates sex, duration of stay in the host society, level of education, age, marital status, and religiosity. The results of the MANCOVA were significant ( $F[5,594] = 7.03, p < .001$ ). The univariate *F* test revealed that the 2 groups differed significantly in both the acculturative stressor total score and the scores on the 4 distinct domains of acculturative stressors (see Table 2). We

**TABLE 2. Group Differences in Life Satisfaction and Acculturative Stressors Between the Hong Kong (HK) and Australian (A) Samples**

Variable	Hong Kong sample (n = 400)		Australian sample (n = 206)		F(1, 619)	Pairwise comparison
	M	SD	M	SD		
Life satisfaction	20.16	6.28	20.99	6.35	0.00	NS
Total stressors	1.21	0.55	1.43	0.57	23.79**	HK < A
Language deficiency	1.38	0.74	1.55	0.73	11.93**	HK < A
Social interaction	1.56	0.75	1.79	0.76	20.39**	HK < A
Academic work	1.15	0.65	1.35	0.69	7.72*	HK < A
Cultural difference	0.74	0.63	1.03	0.63	28.22**	HK < A
Discrimination	—	—	1.62	0.71	—	—
Financial difficulty	—	—	0.96	0.76	—	—

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

found no significant difference in life satisfaction between the Australian and Hong Kong samples. A pairwise comparison indicated that the Australian sample experienced a higher level of total acculturative stressors and stressors in language deficiency, social interaction, academic work, and cultural difference than did the Hong Kong sample. The level of acculturative stress was the second highest for discrimination ( $M = 1.62$ ,  $SD = 0.71$ ) and the lowest for financial difficulty ( $M = 0.96$ ,  $SD = 0.76$ ) in the Australian sample. The effect of the covariate of sex ( $F[5, 594] = 2.97$ ,  $p < .05$ ) was significant. Women ( $M = 21.25$ ,  $SD = 6.08$ ) had a significantly higher level of life satisfaction than did men ( $M = 19.43$ ,  $SD = 6.47$ ;  $F[1, 598] = 9.44$ ,  $p < .01$ ). We found no significant effect for the other covariates.

### Correlations of Acculturative Stress, Meaning of Life, and Life Satisfaction

Table 3 shows the Pearson correlations of acculturative stress, meaning of life, and life satisfaction in the Australian and Hong Kong samples, respectively. In both samples, acculturative stress was negatively correlated with meaning of life ( $r_A = -.25$ ,  $p < .001$ ;  $r_{HK} = -.23$ ,  $p < .001$ ) and life satisfaction ( $r_A = -.32$ ,  $p < .001$ ;  $r_{HK} = -.28$ ,  $p < .001$ ), and meaning of life was positively correlated with life satisfaction ( $r_A = .39$ ,  $p < .001$ ;  $r_{HK} = .39$ ,  $p < .001$ ). We also found that specific domains of acculturative stressors were positively correlated with one another and were highly positively correlated with the total acculturative stress score in both samples (see Table 3).

### Predictors of Life Satisfaction in Acculturation

We performed separate hierarchical regression analyses for the Australian and Hong Kong samples to assess the independent predictive effects of the variables of demographic factors, acculturative stressors, and meaning of life on life satisfaction. We placed sex, duration in the host society, level of education, age, and marital and religious status in the first block. We placed 4 and 6 domains of acculturative stressors in the second block of the hierarchical regression model for the Hong Kong and Australian samples, respectively. We placed 10 factors of meaning of life in the third block. The acculturative stressors made a significant joint contribution to predicting life satisfaction (see Table 4), which accounted for an additional 8% and 12% of the total variance of life satisfaction in the Hong Kong and Australian samples, respectively. The acculturative stressors of social interaction ( $\beta = -.13$ ,  $p < .05$ ) and academic work ( $\beta = -.14$ ,  $p < .01$ ) made unique and significant contributions to negatively predicting life satisfaction in the Hong Kong sample. The acculturative stressors of academic work ( $\beta = -.24$ ,  $p < .05$ ) and financial difficulty ( $\beta = -.17$ ,  $p < .01$ ) made significant negative contributions to predicting life satisfaction in the Australian sample. Meaning of life had a significant effect on predicting life satisfaction, which accounted for an additional 21% and 26%, respectively, of the total variance of life satisfaction in the Hong Kong and Australian samples. Demographic factors exhibited no significant predictive effect on life satisfaction in either sample. To con-

clude, in both samples, acculturative stressors had a negative impact on life satisfaction, and meaning of life made a strong contribution to predicting life satisfaction.

### Mediating Effect of Meaning of Life in the Relationship Between Acculturative Stress and Life Satisfaction

We conducted path analysis to examine the mediating effect of meaning of life in the relationship between acculturative stress and life satisfaction. We tested the model using the procedure suggested by Frazier et al<sup>52</sup> for the identification of mediating effects. We tested the effect separately in the Australian and Hong Kong samples. Correlational analysis showed that the predictors (acculturative stress and meaning of life) and the outcome variable (life satisfaction) had significant correlations in both samples (see Table 3). We then developed a series of regression equations for each path in the model. Figures 1 and 2 present the results of path analysis for the Hong Kong and Australian samples, respectively. Figure 1 shows that the  $\beta$ -weight was  $-.28$  ( $p < .001$ ) when life satisfaction was regressed alone on acculturative stress. When we added meaning of life to the model, the resulting  $\beta$ -weight was significantly reduced to  $-.20$  (Sobel =  $-3.90$ ,  $p < .001$ ), which suggests that meaning of life partially mediates the relationship between acculturative stress and life satisfaction. The model explained 19% of the total variance of life satisfaction in the Hong Kong sample. We observed this partial mediating effect of meaning of life also in the relationship between acculturative stress and life satisfaction in the Australian sample (Sobel =  $-3.14$ ,  $p < .001$ ; see Figure 2).

To conclude, we found that acculturative stress contributed to life satisfaction through direct and indirect pathways. On the one hand, acculturative stress had a negative impact on life satisfaction. On the other hand, acculturative stress was negatively related to meaning of life: the greater the stress, the lower the meaning of life. Furthermore, a lower level of meaning of life was associated with a lower level of life satisfaction. Therefore, more acculturative stress led to a lower level of life satisfaction directly and indirectly. The direct effects were  $-.20$  and  $-.23$ , and the indirect effects were  $-.08$  and  $-.09$ , in the Hong Kong and Australian samples, respectively.

## COMMENT

### Group Comparison of Acculturative Stressors and Life Satisfaction

Chinese students in Australia experienced a higher level of acculturative stressors in language deficiency, social interaction, academic work, and cultural difference than did the mainland Chinese college students in Hong Kong. This may be attributed to cultural distance and the importance of using the host language in the acculturation process. Babiker et al<sup>53</sup> found that Australian and American cultures clustered closest to Scottish culture; Asian culture was furthest from these 3. Thus, the cultural distance between Asia and Australia is much greater than that between mainland China and Hong Kong. Our results confirm previous findings that the greater the cultural

**TABLE 3. Correlations of Levels of Acculturative Stress, Meaning of Life, and Life Satisfaction**

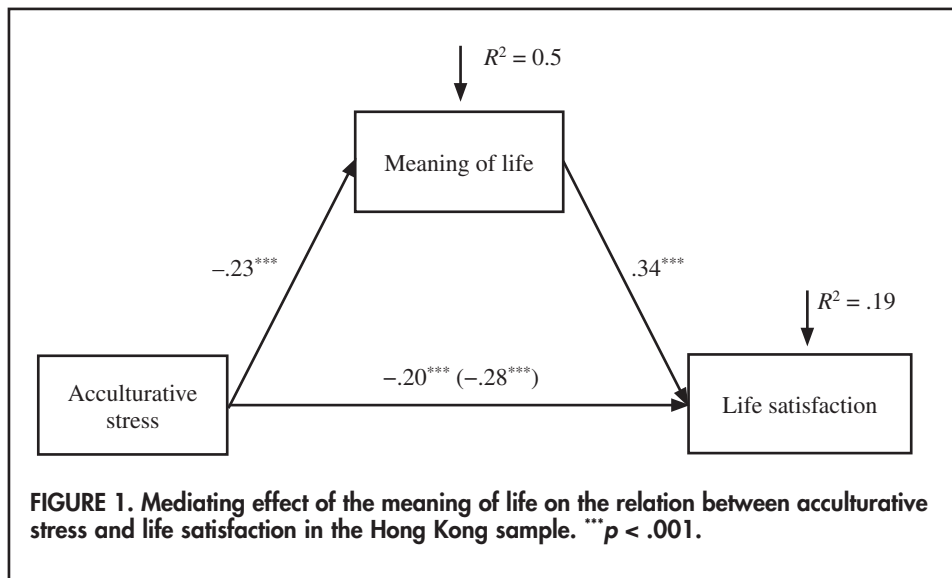
Variable	Acculturative stress	Language deficiency	Social interaction	Academic work	Cultural difference	Discrimination	Financial difficulty	Meaning of life	Life satisfaction
<b>Australian sample</b>									
Language deficiency	.77***	—							
Social interaction	.77***	.54***	—						
Academic work	.78***	.69***	.49***	—					
Cultural difference	.74***	.53***	.50***	.48***	—				
Discrimination	.68***	.30***	.51***	.35***	.51***	—			
Financial difficulty	.68***	.28***	.42***	.38***	.37***	.46***	—		
Meaning of life	-.25***	-.24***	-.23***	-.18***	-.24***	-.11	-.13	—	
Life satisfaction	-.32***	-.26***	-.20**	-.33***	-.15*	-.13	-.27***	.39***	—
<b>Hong Kong sample</b>									
Language deficiency	.82***	—							
Social interaction	.75***	.44***	—						
Academic work	.82***	.61***	.46***	—					
Cultural difference	.75***	.45***	.51***	.50***	—				
Meaning of life	-.23***	-.18***	-.16***	-.17***	-.21***	—			
Life satisfaction	-.28***	-.19***	-.24***	-.24***	-.22***	—	—	.39***	—

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**TABLE 4. Hierarchical Regression Analysis of the Effects of Demographic Factors, Acculturative Stressors, and Meaning of Life on Life Satisfaction**

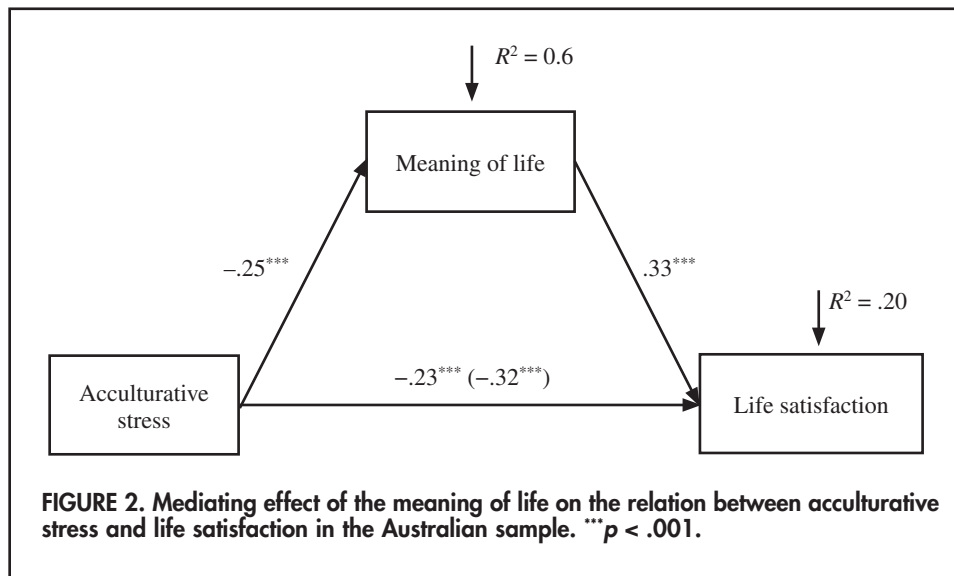
Predictor	Hong Kong sample (n = 400)				Australian sample (n = 206)			
	$\beta$	$R^2$	$\Delta R^2$	$\Delta F$	$\beta$	$R^2$	$\Delta R^2$	$\Delta F$
Step 1: Demographic factors		.03	—	1.99		.03	—	1.10
Sex	.13**				.10			
Duration in host society	.02				.07			
Academic degree	.06				.02			
Age	-.08				-.02			
Marital status	.06				.12			
Actively religious	.00				-.01			
Step 2: Acculturative stressors		.11	.08	8.79***		.16	.12	4.68***
Language deficiency	-.02				-.09			
Social interaction	-.13*				.00			
Academic work	-.14*				-.24*			
Culture gap	.06				.06			
Discrimination	—				.04			
Financial difficulty	—				-.17*			
Step 3: Meaning of life		.32	.21	11.91***		.41	.26	8.07***
Self-development	-.10				.11			
Personal achievement	.18*				.20			
Acceptance and contentment	.26***				.32***			
Participation in Western religion	-.07				.00			
Relationship	-.24**				-.15			
Pursuit of purpose	-.04				-.09			
Family	.20***				.04			
Close to nature and authenticity	-.06				-.25**			
Fair treatment	.25***				.26***			
Intimate relationships	.14*				.08			

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



distance is, the more difficulties students experience in the host society<sup>23,54</sup> and the greater the acculturative stress.<sup>55</sup> In addition, host-language proficiency plays an important role in cross-cultural adaptation. Confidence and proficiency in the English language can facilitate the acculturation of Chinese travelers into an English-speaking country.<sup>2</sup> English language deficiency is an impediment to making friends with the host

nationals.<sup>10</sup> We found that host-language proficiency not only influences the academic work of overseas students, but also affects their social lives and understanding of the host culture. Furthermore, the correlation coefficients were greater in the Australian sample than they were in the Hong Kong sample, which indicates that this effect was much greater in Australia than it was in Hong Kong. This is understandable, because



English is the only language in which Chinese students can communicate with Australians, whereas mainland Chinese students in Hong Kong can communicate with residents there in either Chinese or English.

However, we observed no significant difference between the Hong Kong and Australian samples on level of life satisfaction. This is consistent with previous findings: Although Malaysian and Singaporean students in New Zealand experienced greater social difficulties than did Malaysian students in Singapore, the researchers observed no significant difference in mood disturbance between the 2 groups.<sup>23</sup> This may be related to the similar prediction of acculturative stressors and meaning of life on life satisfaction that was found in the 2 samples in this study.

#### Acculturative Stressors as a Risk Factor of Life Satisfaction

As hypothesized, acculturative stressors negatively predicted life satisfaction; however, the impact of different domains of acculturative stressors on life satisfaction varied between the Hong Kong and Australian samples. Specifically, academic work played a negative role in the prediction of life satisfaction in both samples. Social interaction made a significant negative contribution to predicting life satisfaction in the Hong Kong sample, whereas financial difficulty had a negative effect on predicting life satisfaction in the Australian sample. These findings indicate that social interaction and academic work are the major risk factors of life satisfaction for mainland Chinese students in Hong Kong, and academic work and financial difficulty are the major risk factors of life satisfaction for Chinese students in Australia. Unlike other groups of travelers and immigrants, international students go overseas to advance their education. Educational achievement and success are highly valued in Asian families.<sup>56</sup> Chinese students in overseas universities want to make a good impression on their hosts and on behalf of their families by achieving academic success.<sup>57</sup> These high expectations constitute a source of stress

for Chinese students,<sup>58</sup> which is associated with general satisfaction with the travel experience.<sup>30</sup>

We found the negative predictive effect of social interaction on life satisfaction in the Hong Kong sample only. This finding is consistent with a previous cross-cultural comparative study that found a link between interactions with host nationals and psychological distress in a group of Malaysian students in Singapore but not in Singaporean and Malaysian students in New Zealand.<sup>23</sup> It is also consistent with a previous finding that the levels of social interaction with locals made no significant contribution to predicting the mental health of Chinese students attending school in Australia.<sup>21</sup> As found in this study, the mainland Chinese students in Hong Kong interacted with Hong Kong nationals more than the Chinese students in Australia interacted with Australians. Instead, they likely interacted primarily with other Chinese students or Chinese immigrants. Thus, the students may have encountered more problems in interaction with local residents because of cultural and social differences. In a collective Chinese society, harmonious relationships with other people and in society are highly valued, which we found to reduce daily life stress.<sup>59</sup> Future researchers should study the quality of social interaction in the host society. Another possible explanation is that the majority (45.6%) of the mainland students in the Hong Kong sample had lived in Hong Kong for less than 1 year, whereas the majority (32.6%) of the Australian sample had been in Australia for more than 3 years. The challenges of establishing a new social network in the host society is a major risk factor of poor mental health for Chinese immigrants in their first year in Hong Kong.<sup>60</sup>

In this study, a unique risk factor for the Australian sample was financial difficulty. Because research students in Hong Kong are fully sponsored by their universities, more than 60% of the mainland Chinese students in Hong Kong in the scale validation study reported no financial problems. Thus, we did not assess financial difficulty in the Hong Kong



sample. However, most Chinese students in Australia were financially self-supported. Furthermore, the cost of studying and living is much higher in Australia than it is in Hong Kong. The difficulty of paying for overseas study constitutes a source of acculturative stress for Chinese students in Australia and has a negative impact on their life satisfaction.

We found no significant predictive effect of life satisfaction for language deficiency in either sample. We reached this conclusion on the basis of the significance test of the  $\beta$ -weight of language deficiency in the hierarchical regression model on life satisfaction (see Table 3). However,  $\beta$ -weight may underestimate the importance of a predictor that makes a strong joint contribution to explaining a dependent variable but does not make a strong unique contribution.<sup>61</sup> As seen in the results of the hierarchical regression model, language deficiency made a significant joint contribution with other domains of acculturative stressors to predicting life satisfaction in both samples. Furthermore, the correlation of language deficiency and life satisfaction was significant in both samples (see Table 3), which is consistent with the previous finding that better English-language skills have a significant correlational relationship with life satisfaction.<sup>10</sup> Thus, the role of English-language proficiency in predicting the life satisfaction of Chinese international students needs further investigation.

#### **Meaning of Life as a Protective Factor of Life Satisfaction in Acculturation**

We found that meaning of life is a protective factor in the level of life satisfaction of Chinese students in Australia and Hong Kong. Specifically, meaning of life partially mediated the relationship between acculturative stress and life satisfaction in both samples. This is consistent with the previous finding that meaning of life partially mediates the link between perceived stress and life satisfaction.<sup>44</sup> Students who experience a lower level of acculturative stress are more likely to search for more personal meaning in their lives, which is consistent with the previous finding that perceived acculturative stress was a significant negative predictor of meaning in life.<sup>62</sup> Therefore, finding more personal meaning in life is related to increased satisfaction with life in the host society. This indicates that acculturative stress has a direct negative effect on life satisfaction and an indirect effect on life satisfaction via meaning of life among Chinese students studying abroad. Lower levels of acculturative stress are associated with a higher level of meaning of life, which leads to a higher level of life satisfaction. We observed this effect in the Hong Kong and Australian samples. Two ways to increase the level of life satisfaction in Chinese international students are to decrease the various types of acculturative stressors that they encounter in the host society and to help them find meaning and purpose in their overseas lives from various sources.

#### **Theoretical and Practical Implications**

This study has theoretical and practical implications for acculturation and mental health research. First, although investigators have not widely used the resilience framework

in studying the mental health of study-abroad students, we examined the protective function of meaning of life on level of life satisfaction, which is conceptually classified as a positive dimension of psychological well-being. Guided by the resilience framework, future researchers could examine other protective factors and use other positive indicators of psychological well-being, such as positive emotions and postmigration growth, to further investigate positive adaptation outcomes for study-abroad students. Second, we adopted a comparative approach to understand the contextual issues that shape the acculturative experiences of Chinese students in Australia and Hong Kong. This approach has yielded interesting similarities and differences and has contributed to our understanding of the contextual impact in acculturation research.

Our findings also have practical implications for college health services. Host universities must set up a multidisciplinary team to help Chinese international students adapt to their host societies. We also encourage them to find ways to facilitate the academic work of Chinese students by organizing supervisory panels and peer-learning groups at the departmental level.<sup>12</sup> Cooperative learning and curricular change are other ways to meet the challenges of cross-cultural educational situations.<sup>11</sup> English-language centers should not only provide English-enhancement programs, but also teach international students how to make presentations in English and how to engage in group discussions. For mainland Chinese students, the Hong Kong universities could broaden their social network by organizing various social activities to help them make more local and foreign friends. The student union or student associations could play an active role in initiating such activities. Student counseling centers could present intercultural training programs that provide a range of experiential opportunities to help international students understand cultural differences and appreciate similarities in a multicultural situation.<sup>11</sup> For example, the Excellence in Cultural Experiential Learning and Leadership program, which Mak et al<sup>63</sup> developed in Australia, has helped international students foster sociocultural competencies through experiential social learning and cultural mapping approaches. Student affairs personnel at Hong Kong universities can steer mainland Chinese students toward “adopted” local families to establish continuous relationships with and gain social support from local residents in the course of their study. Last, international student offices (or related offices) in Australian universities could provide Chinese students with more financial support by, for example, offering more scholarships to deserving international students, providing low-interest loans, creating more on- and off-campus part-time job opportunities, and supplying accommodation at rents lower than the market price.

To strengthen the protective factor of meaning of life, counselors are encouraged to integrate meaning into the counseling process through meaning-centered counseling.<sup>64</sup> Developing culturally sensitive intervention programs for Chinese students is of particular importance. Counselors can help these students find meaning in their relationships

with others and with the host society. They can also assist Chinese students in understanding and affirming their reasons for migrating to such places as Australia and Hong Kong. This is particularly helpful for students who are undergoing stressful migration experiences and questioning their motives for studying overseas. Counselors should therefore ascertain the reasons that international students have chosen to study overseas and help them to find positive meaning in their decisions.

### Limitations

This study has several limitations. First, because we obtained ethical approval only from the University of Melbourne, we recruited all Chinese participants in Australia only from this university. Thus, the generalization of the results from this sample to the total population of Chinese students attending school in Australia is limited. Second, as with all mediation analyses, alternative models may also be consistent with the data.<sup>52</sup> Third, because we e-mailed the questionnaire via the Web mail system at the University of Hong Kong and sent it through the administrative staff at the International Student Office of the University of Melbourne, we do not know exactly how many students received the e-mail invitation. Thus, we were unable to estimate the response rate. Fourth, the differences between the 2 samples in age and in terms of their duration of residence in the host society may have influenced the differences in the results of the study. Last, because we used a cross-sectional rather than longitudinal research design, we cannot determine the causal relationships among the variables. Future researchers should use a longitudinal research design to ascertain the causality of the study variables.

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### NOTE

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