

# The Impact of Acculturative Stressors on Wellness of International Undergraduates Studying in Thailand with Social Support as a Moderator

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## Abstract

This study aimed to investigate the influence of acculturative stressors on wellness of international undergraduates studying in Thailand with social support as a moderator. The study participants were 192 international undergraduates ( $M_{\text{age}} = 21.71 \pm 2.15$ ). Instruments used consisted of Acculturative Stressors Scale, Social Support Scale, and Wellness Scale. Data were collected via self-report, both online and paper-pencil. Our analysis suggested that acculturative stressors have a negative relationship with social support at the significance level of .05, that social support has a positive relationship with wellness at the significance level of .001, and that acculturative stressors have no significant relationship with wellness. With social support moderating the relationship between acculturative stressors and wellness of international undergraduates in Thailand, it was found that acculturative stressors had no significant relationship with wellness among students with high levels of social support. For those with low levels of social support, however, acculturative stressors had a negative relationship with wellness at the significance level of .01.

**Keywords:** Acculturation, Stressors, Social Support, Undergraduates

## Introduction

The number of international students in Thailand has been on the rise. According to the Office of the Higher Education Commission, there were 16,361 international students in Thai higher education institutions in 2008. That number rose to 20,309 students from 135 countries enrolled in 103 higher education institutions in 2012 (Office of the Higher Education Commission, 2014).

Being a university student can be difficult, particularly during the first year (D’Zurilla & Sheedy, 1991) due to its transitional nature (Towbes & Cohen, 1996). Examples of the stressors that many university students face include living on one’s own for the first time, being in a new social environment, and pressures related to finding a job or potential life partner.

For international students, not only do they have to encounter the stressors that domestic university students face, but they also encounter additional unique sets of stressors that domestic university students don’t have to face as well (Mori, 2000). One such set of stressors is called acculturative stressors, which are the daily hassles encountered specific to the migration status in the context of acculturation (Lay & Nguyen, 1998). Examples of some

major categories of acculturative stressors include language deficiency, academic work, cultural differences, and social interaction (Pan, Yue, & Chan, 2010).

Such acculturative stressors can add up to the existing stressors that all university students (both domestic and international) face, potentially resulting in international students' ability to cope or readjust being overtaxed, their physical or psychological resources being depleted, and an increased probability that they will encounter physical illness or psychological distress (Lazarus & Folkman, 1994). Therefore, studies investigating exactly how acculturative stressors might have an impact on international students' well-being, as well as ways to prevent or lessen the potentially negative impact of such stressors on international students, are of paramount importance.

Examples of studies investigating the potentially negative impact of acculturative stressors on international students include the following: Ying and Han (2006) found that acculturative stressors, which consisted of feelings of homesickness, cultural difference, social isolation, academic difficulty, and unfamiliar climate, in this case, predicted higher depression for Taiwanese students in the US. Pan and Wong (2011) found that fewer academic and cultural stressors predicted higher negative affect for Chinese students in Hong Kong. Megahani and Harvey (2016) found that fewer academic stressors predicted more healthy trajectories of depressive symptoms for Asian Indian graduate students in the US.

One of how adverse impacts of stressors can be prevented lies with social support. Cohen and Willis (1985) stated that there were 2 ways in which social support could positively affect well-being. First, the main effect model suggested that social support has a direct effect on well-being, regardless of whether the person was experiencing high or low levels of stressors. Evidence for the main effect model was found when the social support measure assessed a person's degree of involvement in a large social network. Second, the stress-buffering model suggested that social support acts as a buffer when the person was experiencing high levels of stressors, preventing or lessening the negative impact of such stressors. Evidence for the stress-buffering model was found when the social support measure assessed the perceived availability of interpersonal resources that were responsive to the needs elicited by stressors.

Since a recent meta-analysis by Bender, van Osch, Slegers, and Ye (2019) found that objective social support related less strongly to psychological adjustment than subjective social support for international students, it seemed reasonable to suggest that the relationship among acculturative stressors, social support, and any acculturation outcomes should be informed by the stress-buffering model (Cohen & Willis, 1985). However, previous research investigating the relationship among these variables in international students, such as Misra, Crist, and Burant (2003), did not utilize the stress-buffering model as a basis for their investigations.

In addition to the aforementioned gap in the studies investigating the relationship among acculturative stressors, social support, and acculturation outcomes in international university students, we also found at least 4 additional gaps in the literature. First, there has been almost no research investigating the relationship among such variables in international students. Second, most acculturation outcomes investigated were negative in nature (e.g. depression, anxiety). Third, acculturation outcomes being investigated in the literature did not directly inform counseling interventions (unlike outcomes such as wellness). Fourth, most studies were conducted in western countries (particularly in the USA).

In an attempt to, at least partially, fill in these gaps, the present study aimed to investigate the relationship among acculturative stressors, social support, and wellness among international undergraduates studying in international programs in Thailand, with social support acting as a moderator. The researchers hoped to inform university counseling psychologists of the potentially protective role of social support, which could lead to initiatives of several new

interventions, such as social skills training and group counseling, to better support international students.

## Methodology

This study was part of the first author's doctoral dissertation, which was approved by the Research Ethics Review Committee for Research Involving Human Research Participants, Health Sciences Group, Chulalongkorn University (COA No. 146/2563).

Participants were international undergraduates from Thai universities who enrolled in the academic years of 2019 and 2020. Study participants must not be born, raised, or have lived in Thailand since childhood. Also, they must not be receiving any psychiatric treatment. In this study, a purposive sampling method was used to recruit potential study participants according to the aforementioned criteria through several channels: (1) Online communities of international students in Thailand (e.g. a Facebook group named 'International Students Thailand') (2) Offices of student/academic affairs of universities with international undergraduate programs (3) People who work closely with potential participants.

Research instruments consisted of items asking for demographic information (e.g. gender, year of study, nationality, faculty, and university) and the following measures:

1) Acculturative Stressors Scale The scale was developed by the researchers, based on the principles of the original scale: The Acculturative Hassles Scale by Pan et al. (2010). The scale consists of four dimensions: Language Deficiency, Academic Work, Cultural Difference, and Social Interaction. It is a 21-item self-report scale with 4-point Likert scale (i.e. 0 = not at all, 1 = a little, 2 = moderate, and 3 = a lot). The instrument's reliability was .88.

2) Wellness Scale The researchers translated the Wellness Inventory for Thai undergraduates, based on Myers and Sweeney's principle of holistic wellness (2000) and later developed by Vongtangswad (2016) for Thai population, into an English version for international students. It consists of five dimensions of wellness: Creative Self, Coping Self, Social Self, Essential Self, and Physical Self. It is a 49-item self-report scale with 4-point Likert scale (i.e. 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The scale's reliability was .95.

3) Social Support Scale The scale was developed by the researchers, based on the Index of Sojourner Social Support by Ong and Ward (2005). It is a 21-item scale consisting of two dimensions: Socioemotional Support and Instrumental Support. It is a self-report with 5-point Likert scale (ranging from 1 = no one would do this to 5 = many would do this). The scale's reliability was .94.

## Results

The study participants were 192 undergraduates studying at universities in Thailand. The majority of them were females (60.42%), with a mean age of 21.71 years old (+ 2.15). Mostly, they were third-year students (33.85%); the rest were second-year students (23.96%), fourth-year students (15.62%), first-year students (14.06%), and others (12.49%). Most students were from South East Asia (SEA) (49.46%). 33.32% were from Asia (excluding SEA), 8.84% from Europe, and 8.38% from others. (see Table 1)

### Relationships among acculturative stressors, social support and wellness

After conducting Pearson correlations among acculturative stressors, social support and wellness, the results indicated that acculturative stressors were negatively associated with social support at the significance level of .05. Social support was positively associated with wellness at the significance level of .001. However, the relationship between acculturative stressors and wellness wasn't statistically significant. (see Table 2)

**Table 1** Sample characteristics

Demographic Variables		Frequency	%
Age: 21.71+2.15, <i>Min</i> = 18, <i>Max</i> = 29			
Months in Thailand: 13.90+16.32, <i>Min</i> = 0.5, <i>Max</i> = 72			
Gender	Female	116	60.42
	Male	76	39.58
Native/Home Country	China	41	21.35
	Indonesia	39	20.31
	Cambodia	16	8.33
	Myanmar	15	7.81
	Vietnam	14	7.29
Faculty	Others (e.g. India, France, Congo, Netherlands)	67	34.91
	Science	32	16.67
	Engineering	24	12.50
	Commerce and Accountancy	24	12.50
	Liberal Arts	21	10.94
	Communication Arts	14	7.29
	Others	77	41.10
Source of Financial Support (each source isn't mutually exclusive)	Family	128	66.67
	Scholarship (Both Foreign and Domestic)	66	34.37
	Oneself	18	9.37
	Other sources of financial support	9	4.68

**Table 2** Pearson's correlations among acculturative stressors, social support and wellness

Variables	M	SD	Possible Range	1	2	3
1) Acculturative stressors	1.24	0.51	0-3	1		
2) Social support	70.65	16.71	21-105	-.18*	1	
3) Wellness	151.19	20.55	49-196	-.07	.25**	1

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

### The relationship between acculturative stressors and wellness, moderated by social support

Following Tabachnick, Fidell and Ullman (2007)'s approach, the researchers examined the z-scores of each of the overall scales to check for univariate outliers. The researchers found two outliers (i.e., z scores below 3.29) and subsequently removed them for further analyses ( $n = 190$ ). To check for multivariate outliers, the researchers examined Mahalanobis distances among the variables (Tabachnick et al., 2007). No additional cases were found to be outliers (i.e., Mahalanobis distance  $> 18.46$ ).

The researchers then performed Structural Equation Modeling (SEM) via the R package Lavaan. The researchers performed SEM following the procedures suggested by Anderson and Gerbing (1988): (a) conducting a confirmatory factor analysis (CFA) to develop a measurement model with an acceptable fit to the data, and subsequently (b) conducting a structural model to test the hypothesized relationships. The researchers used the maximum likelihood method to examine the measurement and structural models. Four indexes were used to assess the goodness of fit of the models: the comparative fit index (CFI; .95 or higher), the incremental fit index (IFI; .95 or higher), the standardized root-mean-square

residual (SRMR; .08 or lower), and the root-mean-square error of approximation (RMSEA; .06 or lower; see Hu & Bentler, 1999; Martens, 2005).

**Item parcels:** The researchers created observed indicators (parcels) for two latent variables (i.e. acculturative stressors and wellness), following the recommendation of Russell, Kahn, Spoth, and Altmaier (1998). Four parcels were created for acculturative stressors and five parcels for wellness (see Table 3 for parcel correlations). There were two primary reasons why the researchers decided to create parcels. First, using individual items often leads to violations of the assumptions of the maximum likelihood method. Second, using parcels instead of individual items improves model fit due to the limited number and better distribution of the parameters (for a discussion, see Russell et al., 1998).

**Table 3** Zero-order correlations among 9 observed variables (n=190)

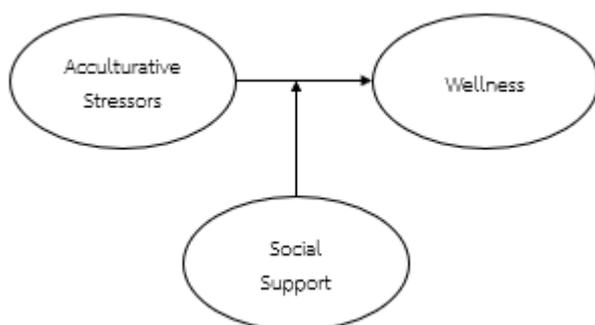
Variable	1	2	3	4	5	6	7	8	9
1) Stressor 1	1								
2) Stressor 2	.55**	1							
3) Stressor 3	.45**	.62**	1						
4) Stressor 4	.56**	.47**	.52**	1					
5) Wellness 1	-.07	-.16*	-.15*	.06	1				
6) Wellness 2	-.01	-.09	-.11	.09	.77**	1			
7) Wellness 3	-.08	-.19**	-.16*	-.05	.60**	.60**	1		
8) Wellness 4	.04	-.05	-.17*	.08	.60**	.59**	.49**	1	
9) Wellness 5	.01	-.11	-.09	.00	.49**	.49**	.42**	.41**	1
<i>M</i>	1.47	1.17	0.95	1.40	42.14	34.25	19.38	37.94	17.40
<i>SD</i>	0.72	0.61	0.59	0.62	5.84	4.58	3.49	5.67	3.15

*Note:* Stress 1-4 = the four parcels created from the Acculturative Hassles Scale; Wellness 1-5 = the five parcels created from the Five Factor Wellness Inventory

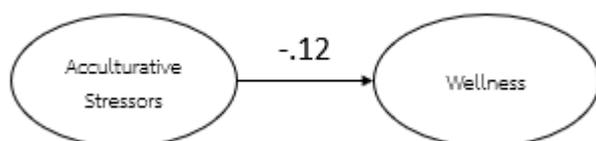
\* $p < .05$  \*\* $p < .01$

**Normality:** The maximum likelihood procedure used to test our model assumes normality, therefore, Mardia's (1970, 1974) coefficient was used. The result indicated that the multivariate data were not normal, prompting us to discard the standard maximum likelihood estimator in favor of its variant.

**Measurement model:** A test of the measurement model resulted in a good fit to the data,  $\chi^2(25) = 34.53$ ,  $p = .097$  (CFI = .98; IFI = .98; SRMR = .05; RMSEA = .04) All observed variables significantly loaded on the latent variables (all  $ps < .001$ ; see Table 4 and Figure 3). Thus, the two latent variables seemed adequately measured by their respective indicators. Moreover, the correlation of the two latent variables was negative, as expected. However, the correlation wasn't statistically significant,  $r = -.12$ ,  $p = .133$ .



**Figure 1** Hypothesized model



**Figure 2** Structural model



**Figure 3** Measurement model of acculturative stressors (left) and wellness (right)

**Structural model:** The researchers hypothesized that acculturative stressors had an effect on wellness (see Figure 1) The structural model used to test this hypothesis ( see Figure 2) showed a good fit to the data,  $\chi^2(25) = 34.53$ ,  $p = .097$  (CFI = .98; IFI = .98; SRMR = .05; RMSEA = .04). Acculturative stressors did not have a significant negative impact on wellness.

**Table 4** Factor loadings for the measurement model

Measured variable	Unstandardized factor loading	SE	Z	Standardized factor loading
<b>Acculturative Stressors</b>				
Language Deficiency	1.00	0.00	-	.80
Academic Work	0.76	0.09	7.92	.71**
Cultural Difference	0.87	0.08	10.44	.84**
Social Interaction	0.71	0.09	7.53	.65**
<b>Wellness</b>				
Creative Self	1.00	0.00	-	.87
Coping Self	0.78	0.04	16.58	.87**
Social Self	0.47	0.04	11.63	.69**
Essential Self	0.75	0.07	10.73	.68**
Physical Self	0.35	0.03	8.89	.57**

\*\* $p < .01$

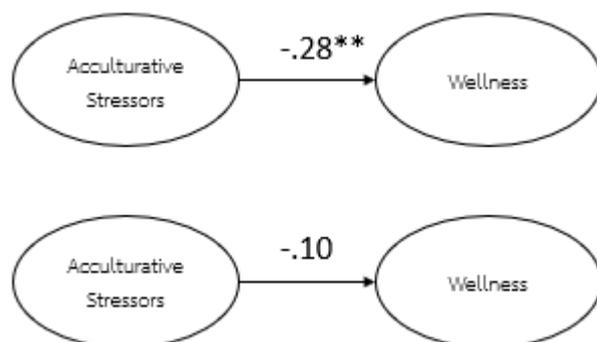
**Social support comparison:** The researchers examined the invariance of the path coefficient for the structural path in the model by conducting SEM multiple-group comparison analysis for students with low social support ( $n = 96$ ) and those with high social support ( $n = 94$ ). These two groups (low and high social support) came from the use of a median split on the

total score of The Index of Sojourner Social Support ( for a discussion, see Iacobucci, Posavac, Kardes, Schneider, & Popovich, 2015). When comparing the two models, we followed the sequences suggested by Vandenberg and Lance (2000): configural invariance (same structure across groups), metric invariance (same factor loadings across groups), scalar invariance (same item intercepts across groups), strict invariance (same error variance across groups), factor variance invariance (same factor invariance across groups), factor covariance invariance (same factor covariance across groups), and factor mean invariance (same factor mean across groups). The sequences were organized in a hierarchical order, with increasing constraints from one sequence to the next. We compared the fit of the model in one sequence with the fit of the model in the next sequence using a chi-square difference test. If the test wasn't statistically significant, the two models were considered invariant and we would need to proceed with the next sequence until we either reached the most restrictive sequence or had a significant chi-square difference test.

Our results showed that the relationship between acculturative stressors and wellness among students with high social support was different from the relationship among those with low social support (see Table 5). For students with high social support, acculturative stressors had no significant impact on wellness. On the contrary, for students with low social support, acculturative stressors had a significant negative impact on wellness (see Figure 4).

**Table 5** Results of invariance testing at different stages

Invariance Levels	$\Delta\chi^2$	$\Delta df$	$p$	Invariant?
Metric - Configural	90.23-77.97	59-52	.092	Yes
Scalar - Metric	101.57-90.23	66-59	.124	Yes
Strict - Scalar	121.39-101.57	68-66	<.001	No



**Figure 4** The relationship between acculturative stressors and wellness among students with low social support (upper) & the relationship between acculturative stressors and wellness among students with high social support (lower)

## Discussion

The results of this study suggested that, overall, acculturative stressors had no impact on wellness for international undergraduates in Thailand. This might be due to the fact that participants had relatively low levels of acculturative stressors ( $M = 1.24+0.51$ ) and the idea that acculturative stressors only affected the wellness of a certain group of international students instead of the wellness of all international students in general.

There were many reasons why participants had relatively low levels of acculturative stressors. Firstly, 73.42% of the students in this study were from Southeast Asia, China, Hong Kong, Japan, Taiwan, India, and Nepal, which were countries whose cultures were very similar to Thailand's (Schwartz, 1994, 1999, 2014). Therefore, participants might not experience many cultural adjustment issues. Secondly, the majority of international students

in this study (more than 50%) received scholarships from either their home countries or Thailand, possibly indicating both their high proficiency in the English language and academic performance. Thirdly, Thai people, in general, were considered friendly and fun-loving (Komin, 1990). These characteristics might be why international students in this study seemed not to have any serious social interaction difficulties. Fourthly, participants were relatively old ( $M = 21.71+2.15$ ) compared to most Thai undergraduates, whose age, according to Thailand's Office of the Education Council, ranged from 18 to 21 years old. Many researchers (e.g. Rienties, Beusaert, Grohnert, Niemantsverdriet & Piet, 2012; Tempelaar, Rienties, & Gijsselaers, 2006) suggested that international students' relative maturity affected their motivation and learning attitudes in a way that made them easier to adjust to the demands of higher education, compared to domestic students. Finally, the average length of stay in Thailand for international students in this study exceeded one year. Since it was previously found that the time when international student had the greatest social and cultural difficulties was within the first year of being in a foreign country (An & Chiang, 2015; Ruben & Kealey, 1979; Ward & Kennedy, 1996; Ward, Okura, Kennedy, & Kojima, 1998), it might be that students in this study had already reached the point where they were well-adjusted.

One interesting point of this study was the role of social support as a moderator in the relationship between acculturative stressors and wellness. It was found that for international undergraduates with high social support, acculturative stressors had no significant impact on wellness. On the other hand, for those with low social support, acculturative stressors were found to have a significant negative impact on wellness at the significance level of .01. This was consistent with the stress-buffering hypothesis (Cohen & Wills, 1985), which posited that social support protected individuals facing highly stressful events from their negative effects. The mechanisms of the stress-buffering hypothesis can be understood within Lazarus and Folkman's transactional model of stress and coping (1984): Social support could thwart or attenuate any appraisal responses that international students might have when they encountered the acculturative stressors, reduce any negative impact that acculturative stressors might have on international students' physiological and affective responses, or aid international students in their attempts to cope with the situations they were facing.

Despite the usefulness of its findings, this study had several limitations. Firstly, due to the outbreak of COVID-19 in Thailand since March 2020, many international students in Thailand decided to return to their home countries, preventing the researchers from recruiting additional participants. Therefore, the sample size of this study was smaller than what the researchers would like to have. Secondly, the majority of participants (73.42%) came from countries with similar cultures to Thailand, limiting this study's generalizability. Thirdly, this study focused on acculturative stressors, considered to be a type of stressors called daily hassles (Pan et al., 2010). Other types of stressors that international students might face, such as life change events, chronic stressors, nonevents, and traumas (Wheaton & Montazer, 2010), weren't investigated in this study. Fourthly, this study excluded international students who were receiving psychiatric treatment. Since individuals with psychopathology tended to judge their social relationships harshly (Kessler, Price & Wortman, 1985) and evidence for the stress-buffering model was only found when the social support measure assessed the perceived availability of interpersonal resources that were responsive to the needs elicited by stressors (Cohen & Willis, 1985), the stress-buffering effect found in this study might not necessarily translate well for students receiving psychiatric treatment. Lastly, participants' average length of stay in Thailand was 13.90+16.32 months. Since some aspects of acculturative stressors were most problematic for international students within their first year in a foreign country and gradually became more manageable as time went on (An & Chiang, 2015; Ruben & Kealey, 1979; Ward & Kennedy, 1996; Ward, Okura, Kennedy, & Kojima,

1998), generalizing the findings of this study to international students who just arrived in Thailand should be done cautiously.

## Conclusion

Generally speaking, for international undergraduates in Thailand, acculturative stressors seemed to have no impact on wellness. However, for the students with low social support, acculturative stressors did seem to harm their wellness, suggesting that social support acted as a buffer from the negative impacts of acculturative stressors on international undergraduates enrolling in international programs in Thailand.

Therefore, counseling psychologists, faculty members, staff members, or those involved with the promotion of wellness of international students should pay close attention to students with low social support. The Social Support Scale developed by the researchers, based on the Index of Sojourner Social Support by Ong and Ward (2005), could be used to preliminarily screen for international students with low social support. After that, counseling psychologists, faculty members, staff members, or those involved with the promotion of wellness of international students could provide both instrumental and socioemotional support to selected students.

Providing instrumental support referred to provisions of concrete or practical assistances, in terms of time, labor, money, things, information, or advice, that would enable individuals to better understand the situations they faced, deal with the problems they encountered, or function in their daily lives. Examples of ways which instrumental support could be provided included practical English/Thai tutorials, academic mentoring, and workshops/webinars on job search strategies. Providing socioemotional support referred to provisions of basic human needs for love, acceptance, encouragement, care, companionship, intimacy, sense of belonging, and reassurance of one's worth as a person to individuals. Examples of ways which socioemotional support could be provided included counseling services, meet-and-greet receptions, and cultural exhibits/demonstrations.

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