



Cognitive Vulnerability and International Student Stress: A Test of the Diathesis-Stress Model of Depression in International Students in Spain

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Background

Negative cognitive styles have been shown to predict risk of depressive symptoms and onset of depressive episodes (Alloy et al., 2006).

Diathesis-stress models predict that the combination of stress and a negative cognitive style may place people at the highest risk.

International students face a unique set of stressors that increase their likelihood of developing depressive symptoms (Mori, 2000); the number of international students in Spain has risen dramatically since 2005 (OECD, 2010).

Revollo et al. (2011) found that there was a correlation between stress from immigration and depressive symptoms.

Studies have shown that factors associated with immigration demands predict higher depressive symptoms (Aroian & Norris, 2003).

Methods

Participants:

151 international students in Madrid, Spain

Sample characteristics:

64.9% women

Mean age = 22.34 (SD = 4.86)

60 countries represented, 68.2% from United States

Time in Spain: 1 week - 7 years, (24.5% one month)

14% were treated for depression at some point in life

Measures:

Patient Health Questionnaire (PHQ-9) — The PHQ-9 is a nine-item self-report measure, with response choices ranging from (0) not at all to (3) nearly every day. The nine items that make up the measure are based on the nine symptom criteria for major depression in the DSM-IV.

Attributional Style Questionnaire (ASQ) — The ASQ assesses causal attributions for hypothetical events. Participants are asked to picture themselves in the situation being presented and write down a major cause for the event. An overall summary score reflecting explanatory style will be used.

Demands of Immigration Scale (DI) — The DI Scale will be used to assess the stress levels that immigration has placed on the lives of the international student participants. It is a 23-item survey that assesses feelings of loss, not feeling at home, novelty, language accommodation, and discrimination.

Perceived Stress Scale (PSS) — The PSS is a fourteen-item scale that measures the degree to which an individual perceives situations in his or her life as stressful. This measure captures global stress and serves as an alternative to the DI for assessing stress.

Results

Table 1: Sample descriptive statistics of the scales

	Range	Mean	Standard Deviation
Patient Health Questionnaire	0-25	5.11	4.46
Attributional Styles Questionnaire	-4-13	3.58	2.79
Perceived Stress Scale	0-35	14.13	6.46
Demands of Immigration	0-50	14.58	8.66

Table 2. Multiple regression with demands of immigration

Model	Standardized Beta coefficients	t	p value (significance)
Attributional Style	.154	2.064*	.041
International Student Stress	.495	4.022*	<.001
Stress*Attributional Style	.106	.876	.382

Dependent variable: Depressive symptoms

Table 3. Multiple regression with perceived stress

Model	Standardized Beta coefficients	t	p value (significance)
Attributional Style	-.083	-1.166	.245
Perceived Stress	.539	5.470*	<.001
Stress*Attributional Style	-.006	-.062	.951

Dependent variable: Depressive symptoms

Limitations

- Lack of follow-up
- Based on only four surveys
- Sample size does not allow for studying subsets of the data

Discussion

The fact that an interaction was not detected is important because it suggests that attributional style and stress function independently in relation to depressive symptoms.

The significant main effects of attributional style and international student stress demonstrate the importance of these two factors in analyzing depressive symptoms in international students in Spain.

This research provides a basis for future research in the area of depressive symptoms, attributional styles, and different types of stress in international students.