

Associations Between Relocation and Seasonal Depression

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Introduction

Seasonal Affective Disorder (SAD) is a mood disorder that is characterized by depressive symptoms that onset and remit at the same times each year. Whereas few people (about 1%) experience problems severe enough to be labeled SAD, many people (estimates range from 30%-90%) may experience mild to moderate changes in depressive symptoms in response to seasonal changes in day length and other meteorological factors.

Current Study

Given that latitude affects the extent to which day length varies seasonally, this study explored the extent to which international college students' relocation to a new (typically more Northern) latitude (44.57° N; Corvallis, Oregon) may be associated with their seasonal depressive symptoms.

Hypotheses

Controlling for other moving-related stressors, two predictions were made:

1. The severity of students' current depressive symptoms will be related to the extent of latitudinal change (relative distance from the equator) between their city of origin and Corvallis.
2. Lifetime histories of seasonal depression will be more prevalent among students from latitudes that are further from the equator.

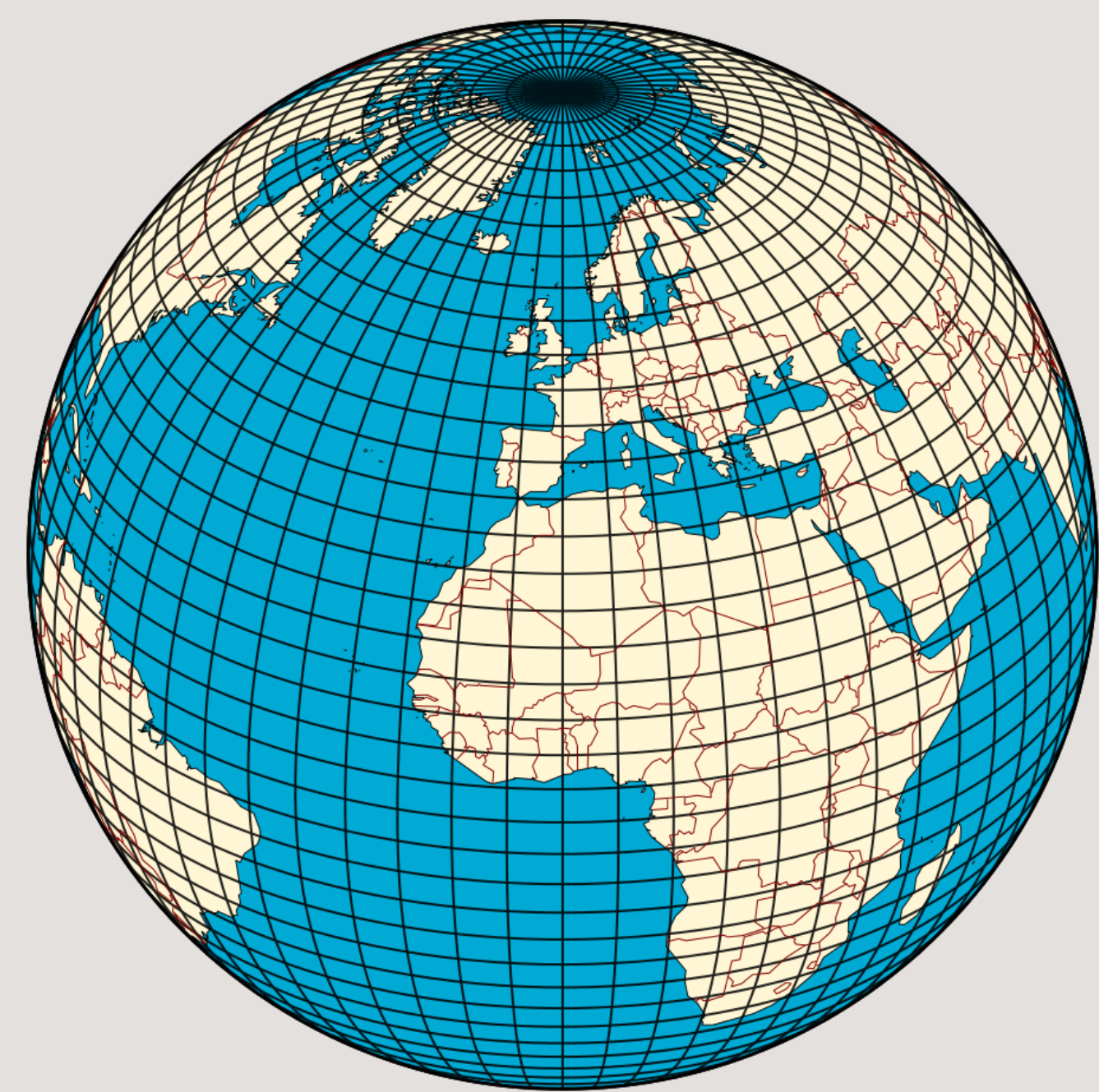


Figure 1.
Hypothesis 1 and 2

Methods

Participants:

International students (N = 50, men=33, women=16, unreported=1) ages 18+ with evidence of English proficiency were recruited in January or February from an international learning center. The majority of the participants experienced change in latitude of at least 10° (Figure 2). Nearly all (98%) participants came from a more southern latitude (mean latitude of origin was 27° N); thus many participants were potentially experiencing a significant latitudinal change, as well as more dramatic changes in day length.

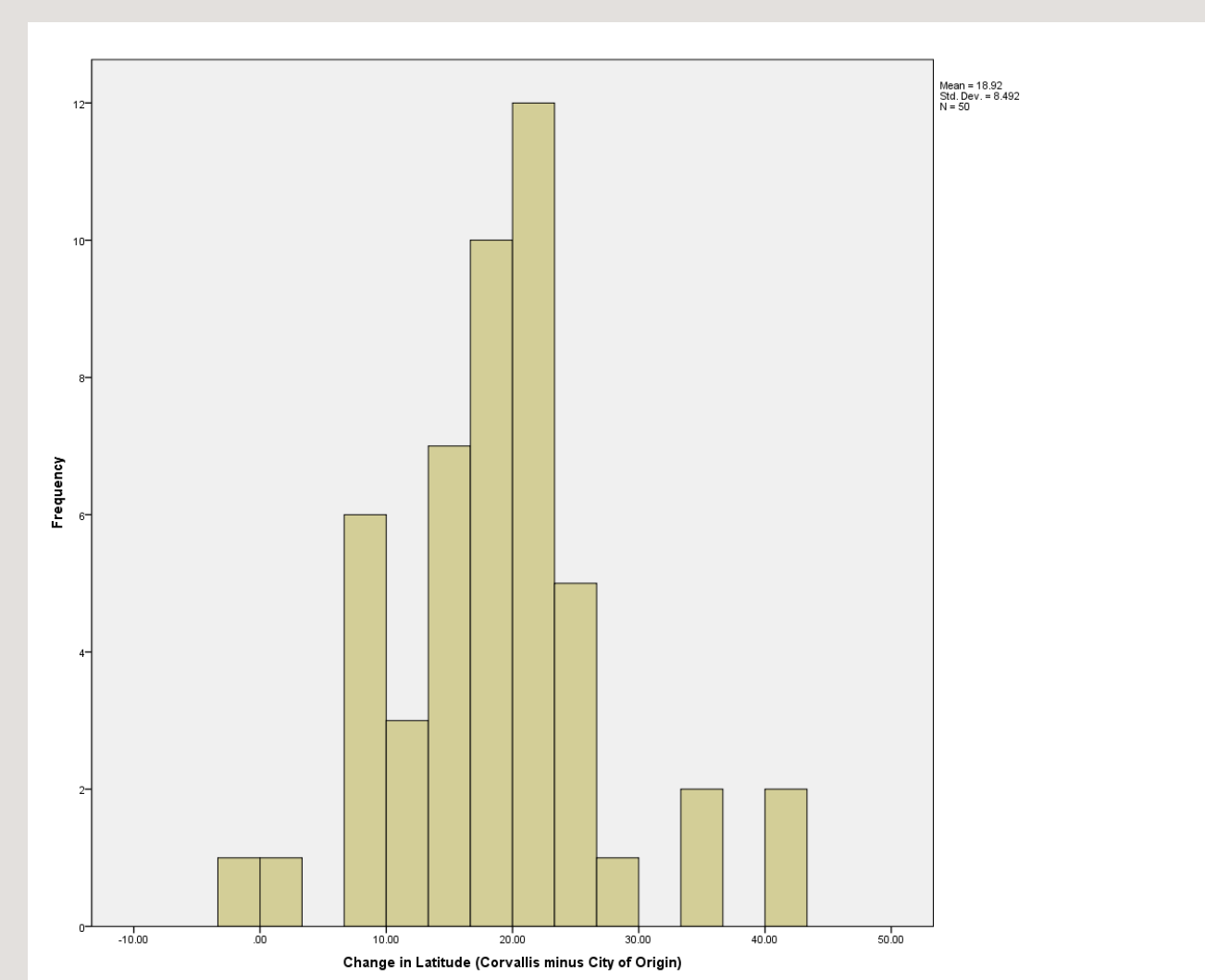


Figure 2. Mean latitudinal change participants experienced was 18.92°.

Measures

Participants were surveyed on acculturative stress, social support, current depressive symptoms, and lifetime seasonal depressive symptoms using the following instruments:

Seasonal Pattern Assessment Questionnaire (SPAQ): measured current and lifetime Seasonal Affective Disorder symptoms in the participants.

Example question: do you notice change in food preference during different seasons?

The Center for Epidemiologic Studies Depression Scale (CESD): measured depressive symptoms in the past week.

Example: How often in the past week have you not felt like eating and your appetite was poor?

Modified short version of the Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale (SAFE): measured levels of acculturative stress.

Example question: how much does it bother you to have an accent?

Index of Sojourner Social Support (ISSS): measured levels of social support.

Example question: how many people that you know can listen and talk to you whenever you feel lonely or depressed?

Results

Hypothesis 1

Latitudinal change was not associated with severity of current depressive symptoms ($r = -.35, p < .05$) (Figure 3). However, current depressive symptoms were found to be strongly correlated with lower social support scores ($r = -.35, p < .05$) and higher acculturative stress scores ($r = .63, p < 0.001$) (Figure 4).

Figure 3.

Relationship between the severity of current depressive symptoms and the amount of latitudinal change experienced by the participants ($r = -.35, p < .05$).

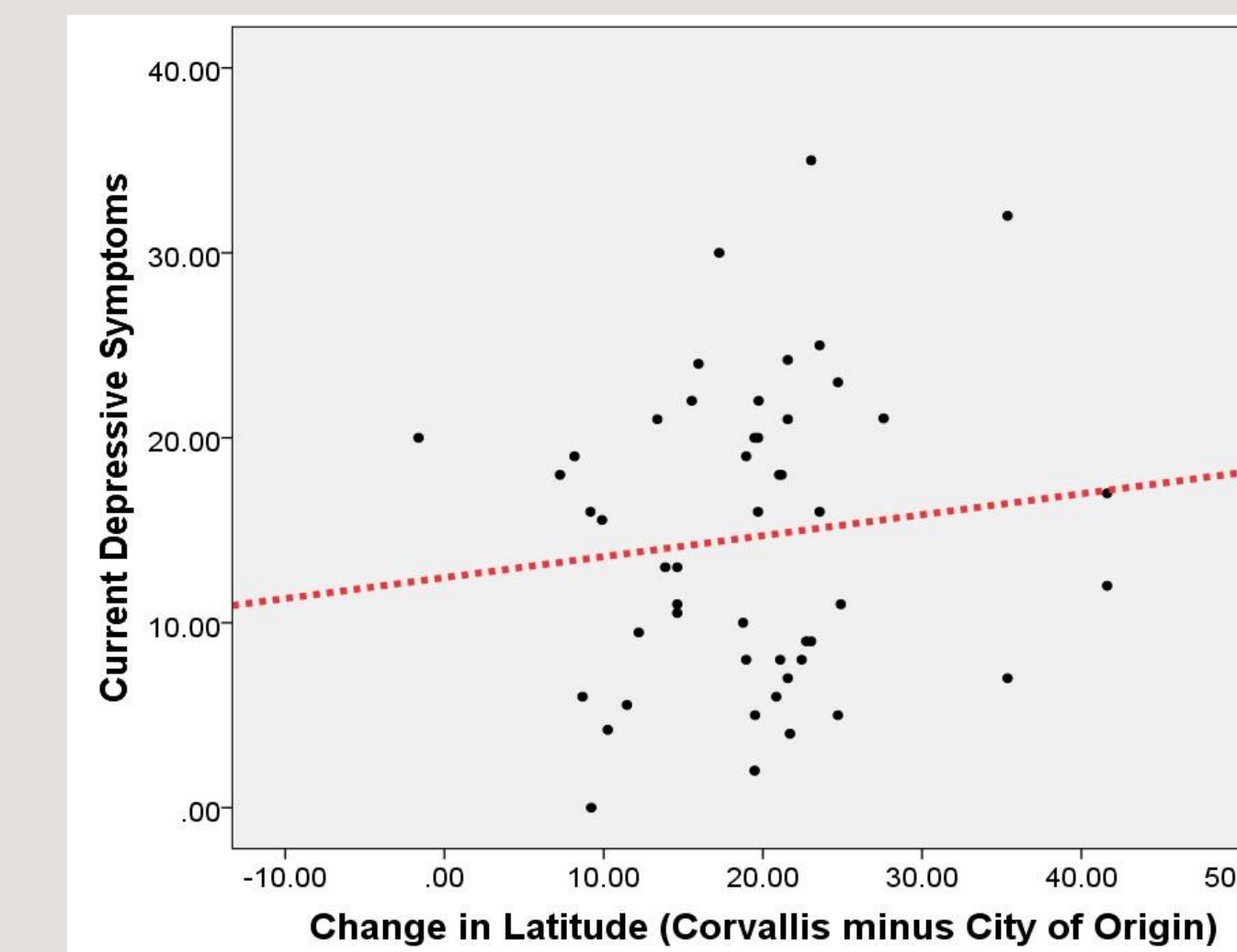
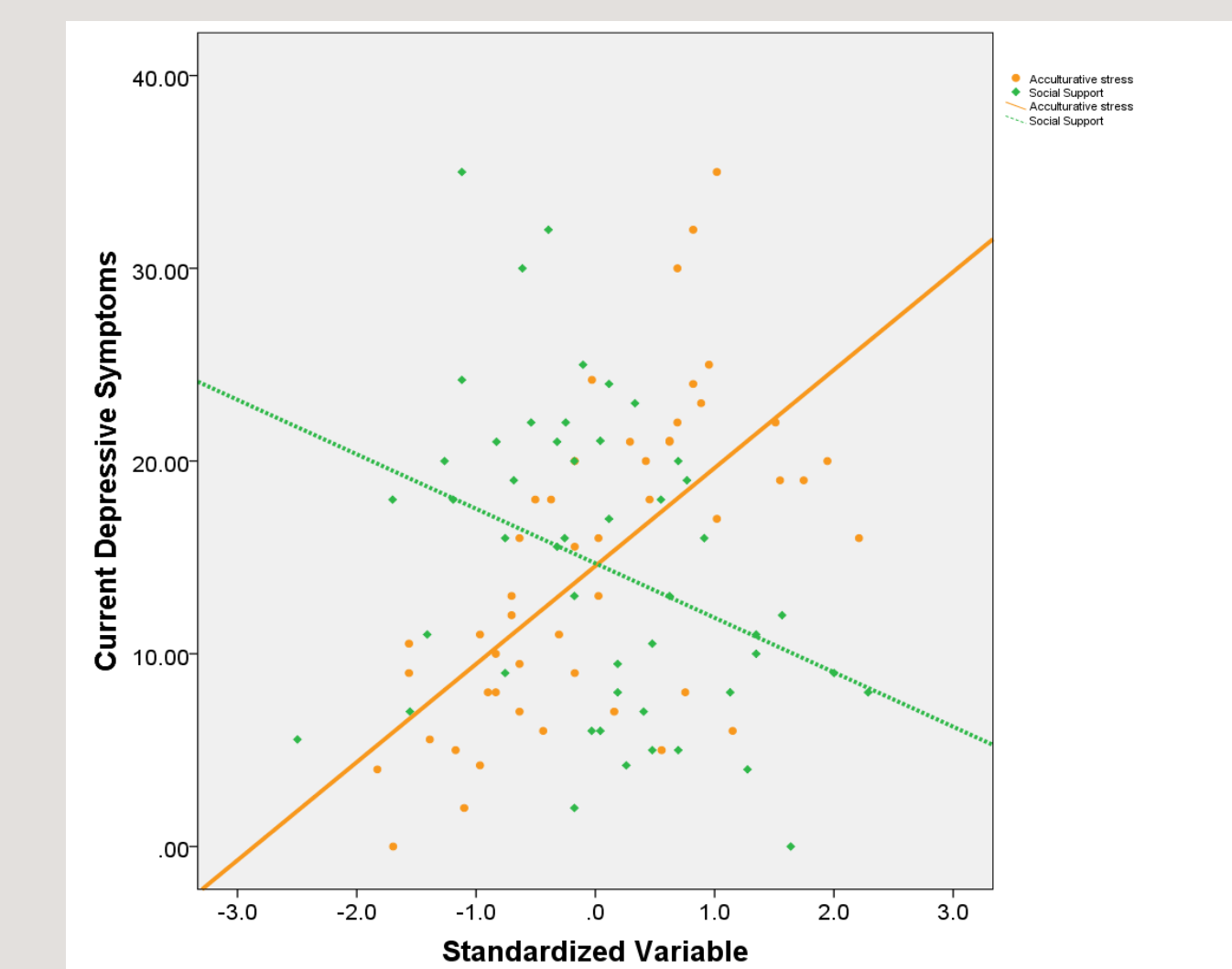


Figure 4.

Correlation between higher depression scores and lower social support scores ($r = -.35, p < .05$) is displayed in green. Correlation between depression and acculturative stress is shown in orange ($r = .63, p < 0.001$).

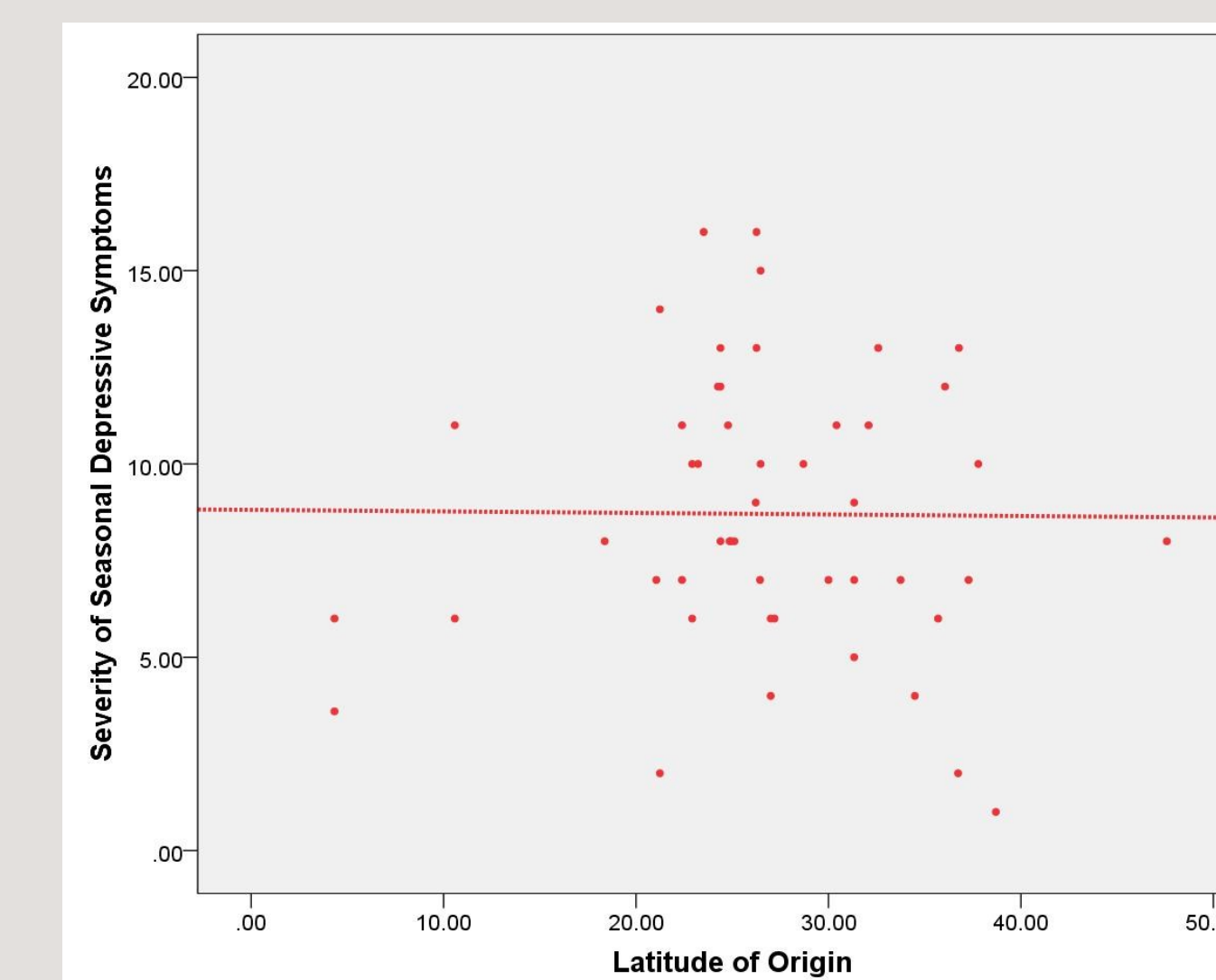


Hypothesis 2

Latitude of origin was not found to be related to lifetime history of depression ($r = -.01$) (Figure 5).

Figure 5.

Correlation between latitude of origin and severity of seasonal depressive symptoms (lifetime).



Limitations

The current pilot study had a small sample size (N=50). The sample was recruited through a convenience sampling technique with limited variability in the latitude variable studied.

Instruments were not for the cultural diversity of the studied international population. Even though the questionnaire was adjusted for non-native speakers, having the participants not understand the questions may have been a barrier for polling more accurate results.

A study with an increased sample size, an improved sampling technique, and an improved method for gathering data is needed to fortify the conclusions proposed by this study.

Conclusions

Despite the high prevalence (49%) of clinically significant depressive symptoms in the sample studied, no support was found for the notion that latitude was a powerful influence on participants' depressive symptoms.

Rather, stress due to acculturation and low social support were clearly linked with present depressive symptoms. This suggests that international populations at college campuses are at high risk for depression and are at higher need for resources to deal with stress and depression.

Contrary to previous research using domestic samples, no correlation was found between latitude of origin and a lifetime history of more severe seasonal depressive symptoms.

Failure to support either hypothesis of this study may mean that depressive symptoms related to seasonality are not related to annual changes in day length experienced throughout the lifetime.

Acknowledgments

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