



# Shattered Shangri-la: Differences in Depressive and Anxiety Symptoms in Students Born in Tibet Compared to Tibetan Students Born in Exile



EMORY

Dabney Evans, MPH<sup>a</sup>, David C. Buxton<sup>b</sup>; Dawa Ngodup<sup>c</sup>; Charles L. Raison, MD<sup>d</sup>

<sup>a</sup> Rollins School of Public Health, Emory University; <sup>b</sup> Virginia Commonwealth University School of Medicine; <sup>c</sup> Tibetan Childrens' Villages; <sup>d</sup> Psychiatry and Behavioral Sciences, Emory University School of Medicine, Winship Cancer Institute

## Introduction

The People's Republic of China invaded Tibet in 1949, beginning an era that has seen an estimated 1.2 million Tibetans perish as a result of the Chinese occupation. In 1959, Tenzin Gyatso, the 14<sup>th</sup> Dalai Lama fled Tibet and went into exile in Northern India. Over the next several years, significant numbers of Tibetans followed and established refugee communities in India and Nepal. These communities have been in existence for over 40 years and have been frequently cited as models of successfully coping with the challenges of refugee life and of preserving cultural identity in exile. In contrast to relatively stable living conditions in these exile communities, repeated political upheavals and consequent Chinese reprisals in Tibet have produced a steady stream of refugees escaping Tibet. In 1998, 33% of these refugees were children, 90% of whom were unaccompanied by their parents. These recent arrivals have typically been raised in an environment in which human rights were curtailed and have come to India for religious freedom and for educational opportunities. Many of these refugees report that either they or their family members have suffered detention and various degrees of torture in Tibet. In addition to these adversities, the journey across the Himalayas is long and perilous, with frequent reports of refugees perishing en route and a significantly larger number suffering afflictions such as frostbite. Moreover, reports of mistreatment along the way are common. Thus the escape to India is itself a significant risk for traumatic exposure. Several studies have examined rates of trauma exposure and PTSD, as well as depressive and anxiety symptoms, in these refugees. Prior studies suggest that rates of psychiatric disturbance are high in refugees who flee Tibet and are highest in those with the greatest trauma exposure. It is not known, however, whether the prevalence of psychiatric symptoms such as depression and anxiety are increased in these refugees when compared to ethnic Tibetans born and raised in the relative stability of the long-established exile communities in India and Nepal. To address this question, we conducted a study to compare rates of depressive and anxiety symptoms in ethnic Tibetan adolescents and young adults born in Tibet with ethnic Tibetans of a similar age born in India or Nepal. We sought to test the *a priori* hypothesis that depressive and anxiety symptoms would be significantly increased in refugees from Tibet when compared to ethnic Tibetans born in exile.

## Methods

### Study Setting and Population

The study was conducted in the Indian State of Himachal Pradesh at the Upper Dharamsala and Bir campuses of the Tibetan Children's Villages (TCV). The study was conducted in August 2002. At the time of this study, 2,374 students attended the Upper Dharamsala campus. Sixty-nine percent of the students at this campus were born in Tibet and escaped (or were brought by their parents) to India. The remaining students were ethnic Tibetans born and raised in India or Nepal. The Bir campus is located in a rural area of northern India. All students live on campus. At the time of this study, 1,594 students attended Bir. Unlike Upper Dharamsala, which has a mixture of Tibetan and Indian/Nepalese born students; 98% of the student body at Bir at the time of the study was born in Tibet. The study population was derived from a convenience sample of 517 Tibetan adolescent and young adult students given self-report questionnaires by study personnel. Questionnaires were distributed to all students in grades 9-12 attending class on the days that the study team visited the Upper Dharamsala and Bir campuses. Students were explicitly told prior to filling out the questionnaires that they were free to answer or not answer any of the questions. Students who completed at least 80% of the Hopkins Symptom Checklist (HSCL)-25 and who provided relevant demographic data were included in the data analysis.

### Study Design

This study utilized a cross-sectional design in which subjects were asked to complete the Hopkins Symptom Checklist-25 (HSCL-25) and to provide information on place of birth (Tibet or India/Nepal), age, and availability of family support in India. The HSCL-25 and demographic assessments were translated into Tibetan following a standard back-translation procedure. Depressive and anxiety symptoms were assessed using the Hopkins Symptom Checklist-25 (HSCL-25). Although no standardized version of the HSCL-25 had been validated for use in the Tibetan exile community living in India, the instrument has nonetheless been the most frequently employed assessment tool in studies of psychiatric morbidity in Tibetan refugees. The questionnaire includes 10 anxiety-related and 15 depression-related items taken from the 58-item version of the HSCL. Results are reported as the average score on the anxiety and depression sections individually and as a combined anxiety/depression score. Although not entirely consistent, data from both western and non-western populations suggest that a cut-off score of 1.75 on the individual and combined sections of the HSCL-25 is consistent with significant emotional distress and correlates with the presence of diagnosable psychiatric morbidity. Although not independently validated in Tibetan populations, a cut-off of 1.75 has also been used as a metric for significant anxiety and/or depression in a past study of Tibetan refugees. Demographic data were collected on a form created for this study and subsequently translated into Tibetan as described below. This form queried age, sex, country of birth, and frequency of family contact in India. To evaluate frequency of family contact, students were asked to list all relatives (parents, siblings, grandparents and aunts and uncles) living in India and how often they saw them.

### Statistical Analysis

Differences between groups were assessed using t-tests or analysis of variance (ANOVA) for continuous measures and Chi-square or Fisher tests (as appropriate) for categorical variables. To evaluate relationships between continuous measures, Pearson correlations were employed. Availability of contact with family of origin was operationalized as ability to see any family member  $\geq$  once a month vs.  $<$  once a month. Regression models (PROC GLM in SAS) were employed to identify factors independently associated with depressive and anxiety scores. Factors entered into the model included country of birth, sex, age, frequency of family contact and first-order interactions between these factors. A backward elimination method with a significance level set at  $p=0.05$  was used to derive final models for depressive and anxiety scores. All tests of significance were two-sided with an alpha level set at 0.05.

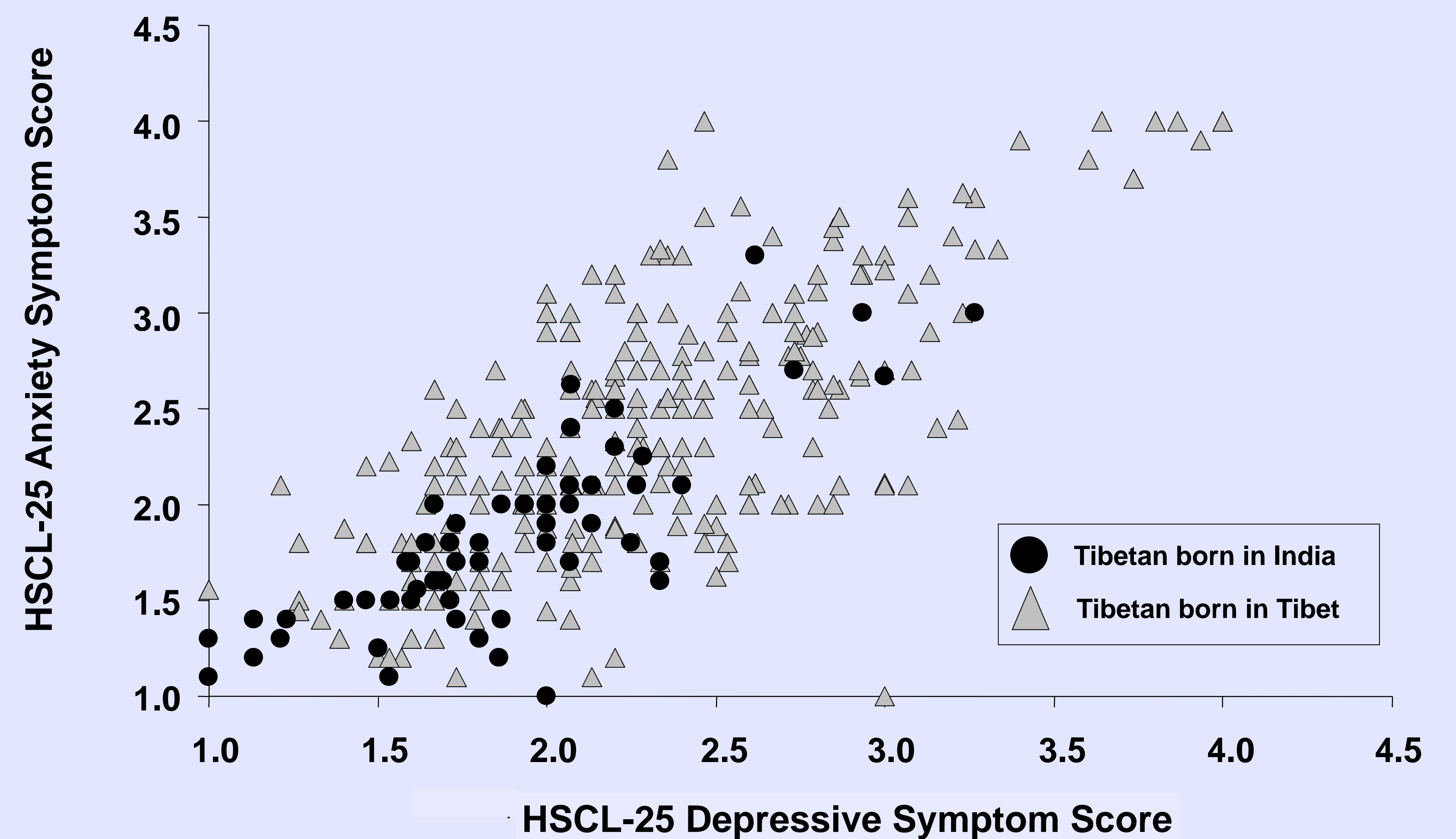
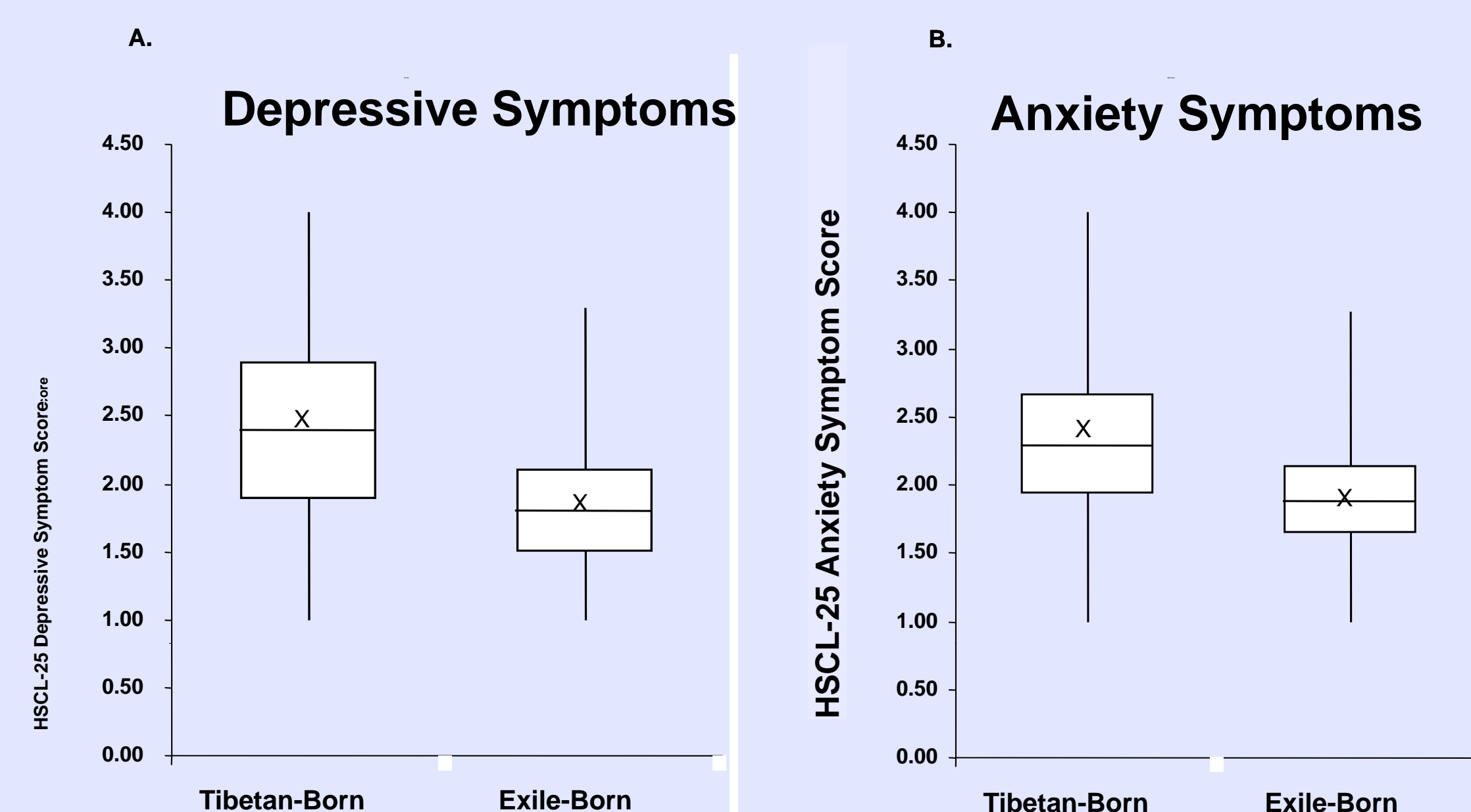


TABLE 1. Demographics of the Study Population.

Characteristic	Total (N=319)	Tibet-Born (N=258)	Exile-Born (N=61)
Age - yr			
Mean ( $\pm$ SD)	18.4 (2.8)	18.5 (3.0)	18.1 (2.1)
Range	10 - 40	10-40	4-29
Males - no. (%)	181 (57)	153 (59)	28 (46)
Family Contact - no. (%)	54 (17)	30 (12)	24 (39)*

Legend: Family Contact defined as seeing a relative at least once a month. \* Exile-Born vs.

Tibet-Born, chi-square=27.0, df=1,  $p<0.0001$



## Results and Conclusions

1. Mean HSCL-25 scores for the study population as a whole were 2.23 (SD 0.56) for depressive symptoms and 2.31 (SD 0.67) for anxiety symptoms. Seventy eight percent of the students scored above the 1.75 cut-off score on depression and 79% scored above 1.75 on anxiety.
2. Students born in Tibet demonstrated significantly higher mean HSCL-25 depression and anxiety scores than students born in India. Tibetan-born students were also significantly more likely than students born in exile to have depression and anxiety scores above the 1.75 cut-off. After adjusting for potential confounding effects of age, sex, and frequency of familial contact, being born in Tibet was associated with increased depressive symptoms ( $F [2, 316] = 29.96, p<0.0001$ ) and anxiety symptoms ( $F [4, 316] = 43.57, p<0.0001$ ). Interestingly, in Tibetan-born subjects with available data, age of escape from Tibet was positively correlated with both depressive and anxiety symptom scores and length of time living in India was negatively correlated with these symptoms (depression:  $r = -0.31, p<0.001$ ; anxiety:  $r = -0.26, p<0.01$ ).
3. Results from this study strongly suggest that the experience of being born in Tibet and escaping to India is a risk factor for the development of depressive and anxiety symptoms when compared to the experience of being born and raised in an exile community in northern India or Nepal. This finding highlights the cost in human emotional suffering of the ongoing human rights crisis occurring within Tibetan cultural regions of the People's Republic of China.