

mTranS-C: An Innovative, Mobile Behavioral Sleep Intervention for Improving Sleep Health Deficits and Decreasing Mental Healthcare Stigma Among Latinx Adolescents

👤 **Peralta JE**, Barete R, Asarnow L

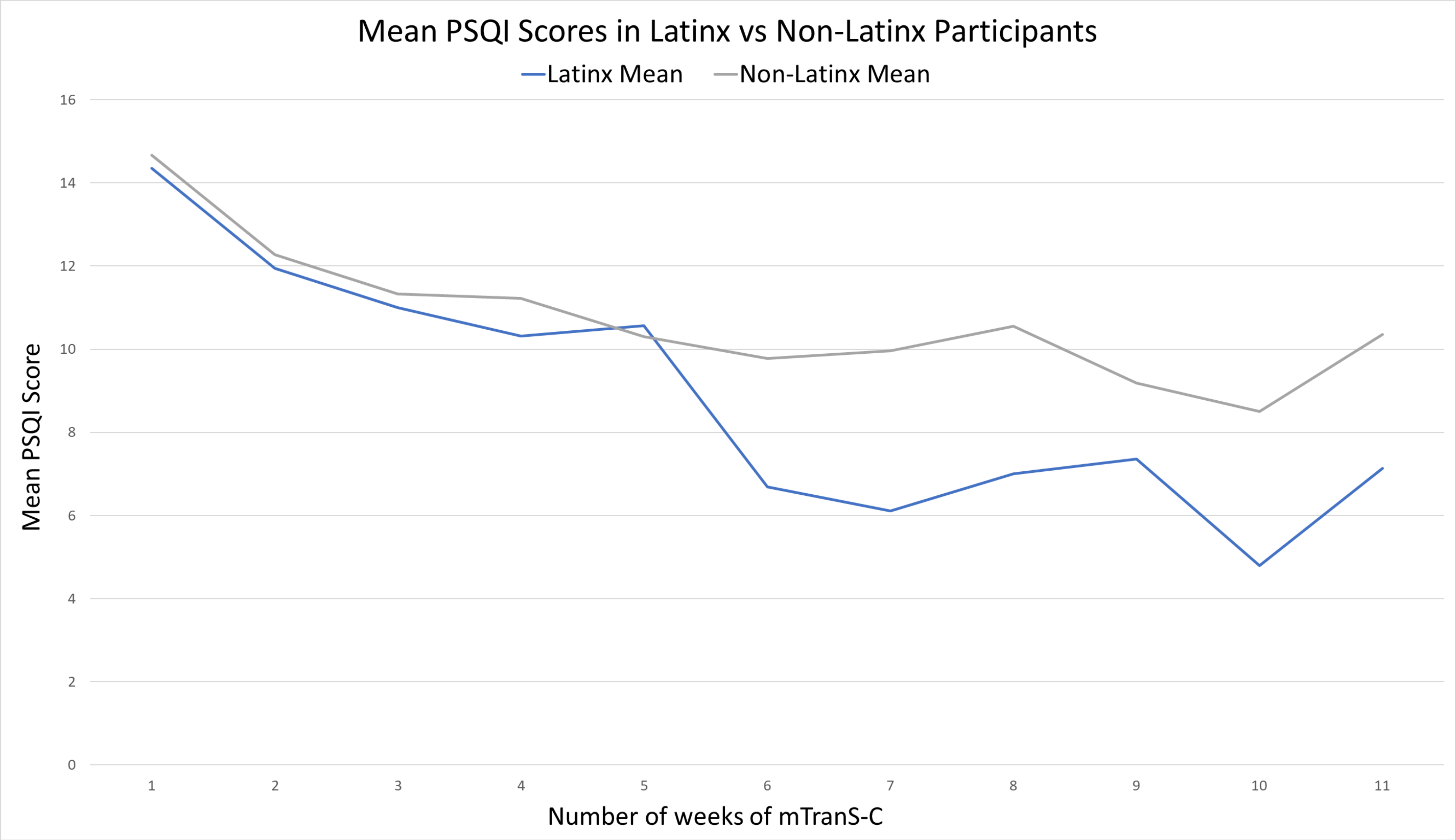
BACKGROUND

- More than two thirds of U.S. high school students report getting less than 8 hours of sleep on school nights and approximately 11 percent of adolescents report significant insomnia symptoms.
- Research suggests that there is an association between sleep health deficits and mental health problems such as depression among children and adolescents. Mental healthcare is sought out less among the Latinx community due to issues of stigma and cultural miscommunication.
- In an effort to address this issue, we conducted a secondary analysis study among Hispanic vs non-Hispanic youth to test a mobile adaptation of the Transdiagnostic Sleep and Circadian Intervention (TranS-C), which is a brief sleep intervention with demonstrated efficacy for improving sleep and mental health outcomes in youth (we refer to this novel intervention as mTranS-C).

METHODS

1. An open trial among adolescents with sleep health deficits (SHDs) from the community and the Gardner Packard Primary Care facility was conducted to assess the effectiveness of mTranS-C.
2. Data measures that were collected during the assessments include Mental Help Seeking Attitude Scale (MHSAS) scores, Pittsburgh Sleep Quality Index (PSQI), mTranS-C tracking data, and demographic data (age, biological sex, race/ethnicity, household income, maternal education level).
3. We calculated mixed effects models, with sleep quality index as an outcome and ethnicity as the predictor, accounting for maternal education level, household income, and biological sex in the model. Similar mixed effects models were used to analyze our measures of MHSAS and univariate analysis of variance was performed using treatment participation as outcomes and ethnicity as a predictor.

Latinx adolescents have a faster improvement in sleep quality than non-Latinx adolescents when treated with mTranS-C



University of California
San Francisco

RESULTS

- Linear fixed effects analysis of separate groups of Hispanic vs. non-Hispanic participants resulted in estimates of a -0.486 (95% CI -0.717 – -0.256, $p < 0.001$) and -0.194 (95% CI -0.387 – -0.001, $p = 0.048$) point reduction in PSQI scores per week of mTranS-C, respectively.
- Taking the absolute difference in reduction of PSQI scores per week of mTranS-C between the two groups results in an estimate of 0.227 (95% CI 0.029 – 0.426, $p = 0.026$), suggesting a significant difference between groups.
- Mixed model analysis of the absolute difference in change of MHSAS scores between the two groups resulted in a statistically insignificant estimate of a -0.002 (95% CI -0.030 – 0.027, $p = 0.915$) difference.
- Univariate analysis of variance of the difference in percentage of treatment modules completed between the two groups resulted in a statistically insignificant estimate of a 0.196 (95% CI -0.009 – 0.402, $p = 0.060$) difference.

DISCUSSION

Our investigations have shown that mTranS-C might be a viable and effective intervention to improve sleep quality, especially among Hispanic patients. More research needs to be done in a larger study designed to recruit more community members who would otherwise not be seeking healthcare for their sleep or mental health. This would give clearer insight into whether there is truly no difference in effect on mental help seeking attitudes between Latinx and non-Latinx patients and whether Latinx patients truly have faster improvement in sleep quality from mTranS-C.