

# Post-Traumatic Stress Disorder and Substance Use in Latino Adults

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## Introduction

Post-traumatic stress disorder (PTSD) is an anxiety disorder characterized by the inability to recover from stress reactions to a traumatic event [1]. People with PTSD may demonstrate symptoms such as insomnia, intrusive thoughts, and hypervigilance as well as having an increased risk for using substances due to poor coping strategies [2].

Substance use is a prominent issue among Latinos, and they often demonstrate more substance use than non-Latinos [3]. Rates may differ based on factors such as poverty, education, and immigration generation status [4]. For example, first-generation Latinos show lower rates of substance use compared to U.S.-born generations [5].

Differences in PTSD among Latinos exist as well. For example, Puerto Ricans and Dominicans had an increased chance of developing PTSD after 9/11 compared to other Latinos and non-Latinos in New York City [6], suggesting that PTSD rates may differ between Latino subgroups.

Although previous studies have established an association between PTSD and substance use, there is a lack of literature that discusses this association among Latinos.

## Research Questions

- ❖ Is substance use independently associated with PTSD among Latino adults?
- ❖ Are there differences in this association between various Latino subgroups?

## Methods

### Participants

- ❖ The sample was drawn from the National Latino and Asian American Study (NLAAS), which surveyed 4,864 Latino and Asian-American adults aged 18 or older residing in American households between May 2002 and December 2003.
- ❖ In order to find eligible adults, the study screened 27,026 housing units. Fifty-five percent (N = 2,554) of the participants were Latino and 46% (N = 2,125) were male. The average age was 41 years (SD = 15.3). The present analyses are based on a subset consisting of only Latinos.

### Measures

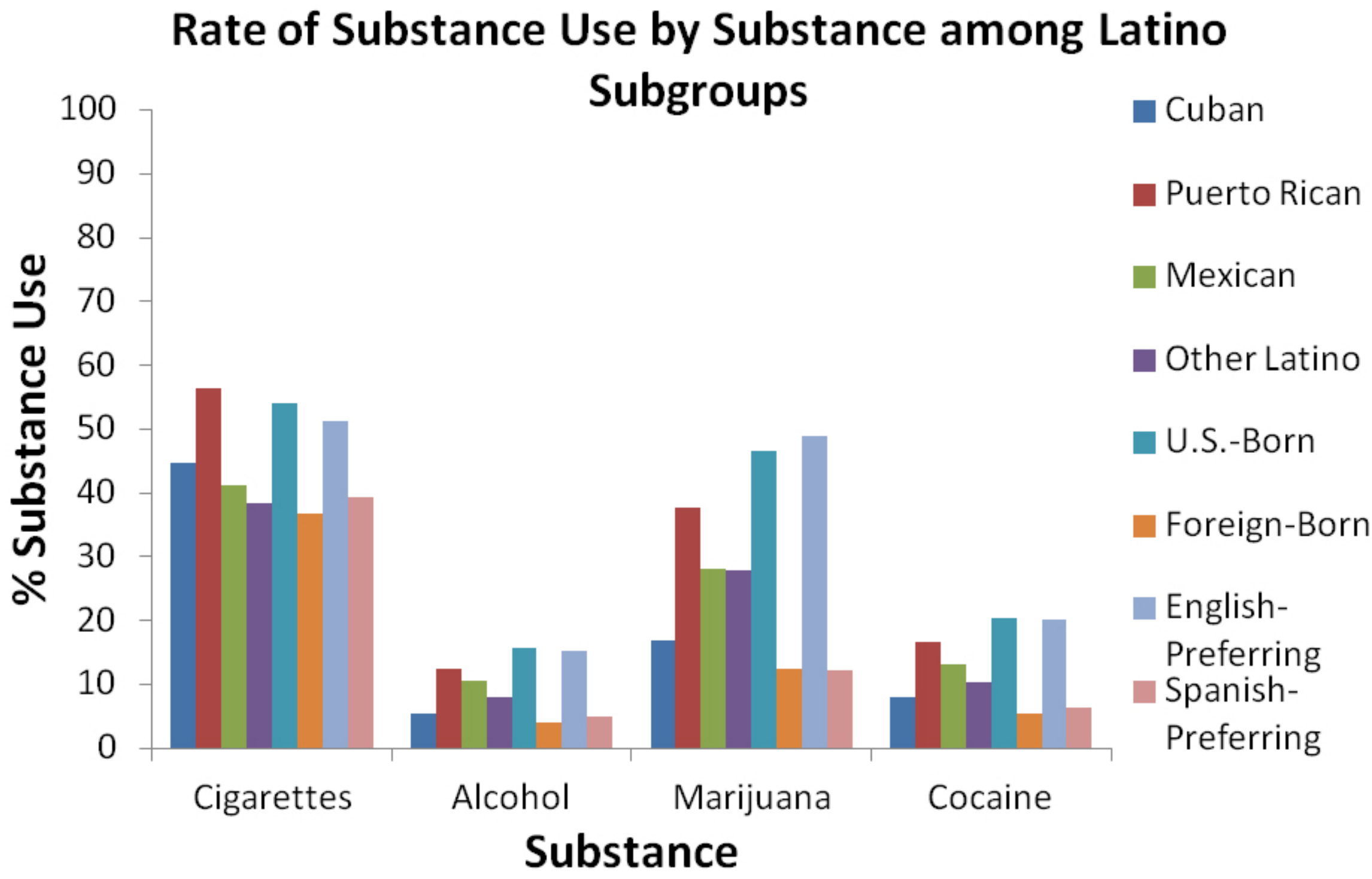
- ❖ *PTSD*. Measured by the lifetime diagnosis from the International Statistical Classification of Diseases and Related Health Problems 10 (ICD-10).
- ❖ *Substance Use*. Three dichotomous variables representing lifetime use of cigarettes, marijuana, and cocaine were created based on having ever used the substance at least once. A dichotomous variable representing alcohol abuse was created based on the ICD-10. A quantity of substances used variable was created based on having ever used (abused in the case of alcohol) the substances of interest and ranged from 0 – 4.
- ❖ *Latino Identification*. Assessed at the time of entry. Participants were categorized as being Cuban, Puerto Rican, Mexican, or Other Latino.
- ❖ *Origin of Birth*. Measured by whether or not the participant was born in the United States. Participants were categorized as either being U.S.-born or foreign-born.
- ❖ *Language Preference*. Measured by the language the interview was conducted in. Participants were categorized as preferring English or Spanish.

## Measures (cont'd)

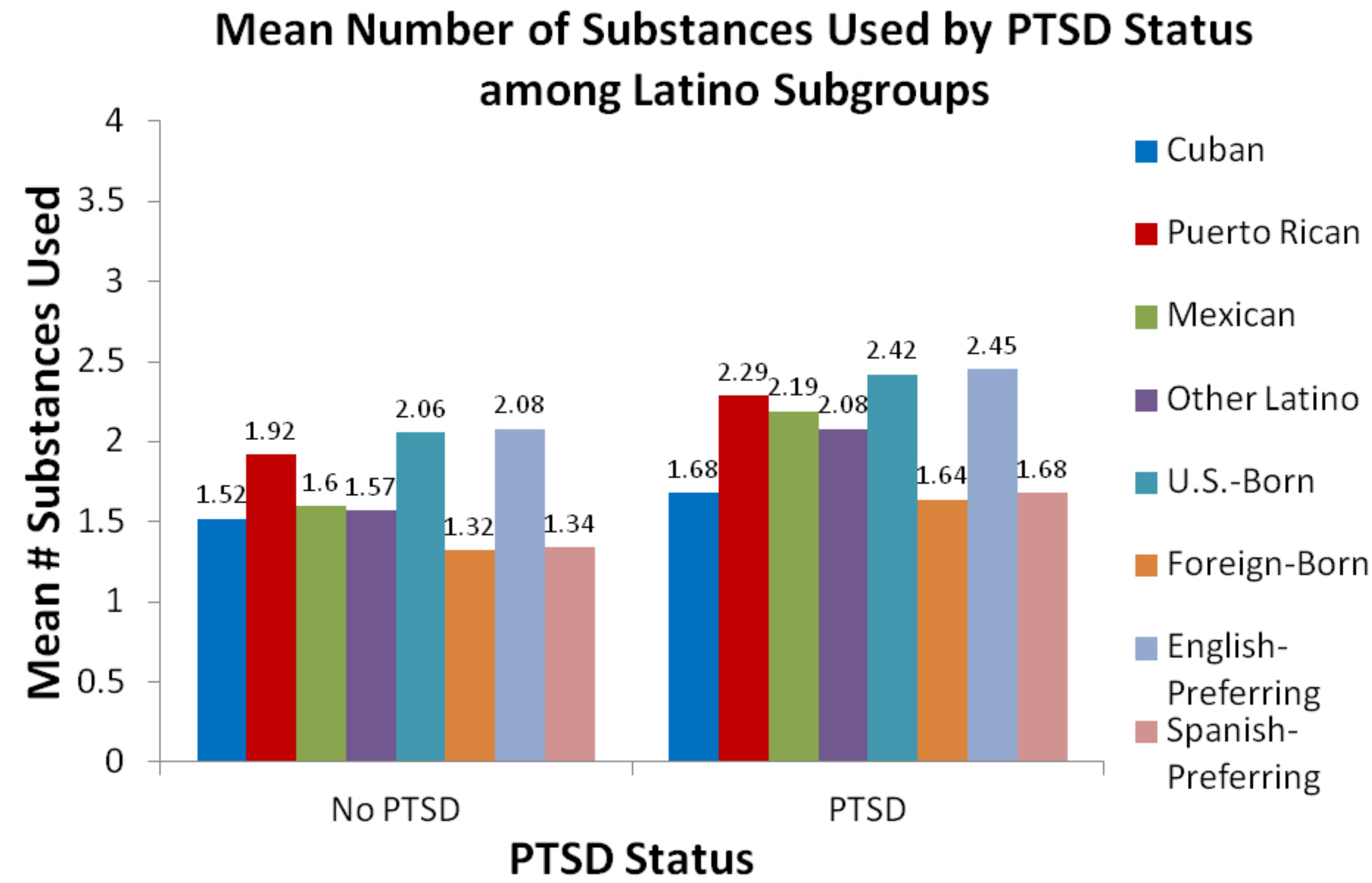
### Analyses

- ❖  $\chi^2$  tests with Bonferroni adjustments were used to examine the association between PTSD and substance use.
- ❖ Analyses of Variance (ANOVAs) and Duncan post hoc tests were used to examine the association between PTSD and quantity of substances used.
- ❖ Logistic regression models were used to further test the association between PTSD and substance use and to find possible covariates.

## Results



- ❖  $\chi^2$  tests revealed that Puerto Ricans were more likely to have used cigarettes than all other ethnic subgroups (all  $p < .001$ ). Puerto Ricans and Mexicans were more likely to have abused alcohol than Cubans (all  $p < .001$ ). All ethnic subgroups demonstrated similar rates of marijuana and cocaine use.
- ❖ U.S.-born Latinos consistently demonstrated more substance use than foreign-born Latinos (all  $p < .001$ ). Similarly, English-preferring Latinos consistently demonstrated more substance use than Spanish-preferring Latinos (all  $p < .0001$ ).



- ❖ ANOVAs revealed that Latinos with PTSD demonstrated a significantly higher mean quantity of substances used than Latinos without PTSD ( $p < .0001$ ). Regardless of PTSD status, Puerto Ricans demonstrated a significantly higher mean quantity of substances used than the other ethnic subgroups ( $p < .0001$ ).

## Results (cont'd)

- ❖ Regardless of PTSD status, U.S.-born Latinos demonstrated a significantly higher mean quantity of substances used than foreign-born Latinos ( $p < .0001$ ). Similarly, regardless of PTSD status, English preferring Latinos demonstrated a significantly higher mean quantity of substances used than Spanish-preferring Latinos ( $p < .0001$ ).
- ❖ Logistic regression analyses revealed that after adjusting for potential covariates, only cocaine use was significantly associated with having PTSD (OR = 1.74,  $p < .0207$ , CI = 1.09-2.78). The association between PTSD and cigarette use was confounded by alcohol abuse, marijuana use, cocaine use, Cuban ethnicity, Puerto Rican ethnicity, other Latino ethnicity, being born in the U.S., being male, and having dysthymia. The association between PTSD and alcohol abuse was confounded by cigarette use, marijuana use, cocaine use, being born in the U.S., being male, having dysthymia, having major depressive episodes, and having social phobia. The association between PTSD and marijuana use was confounded by cigarette use, alcohol abuse, cocaine use, Cuban ethnicity, Puerto Rican ethnicity, Mexican ethnicity, other Latino ethnicity, being born in the U.S., preferring English, being male, having graduated high school, and having major depressive episodes.

## Discussion

The findings from this study suggest that Puerto Ricans, U.S.-born Latinos, and English-preferring Latinos use substances the most. Likewise, these subgroups had the highest mean quantity of substances used, regardless of PTSD status.

When considering PTSD status, those with PTSD consistently had a higher mean quantity of substances used compared to those without PTSD, and this was true across all subgroups. These findings are consistent with literature that suggests that those with PTSD use substances for self-medicating purposes [7].

While all substances examined were significantly associated with PTSD, only cocaine remained significantly associated with PTSD after adjusting for possible covariates. This finding suggests that illicit substances may be more related to having PTSD than non-illicit substances within the Latino community.

There were limitations in this study. The data set only had abuse and dependence variables for alcohol, meaning the other three substances had to be examined by use. Also, there was a limited number of ethnic subgroups included in the data set. Future research is needed to address these limitations.

These findings highlight the importance of substance use education and psychological intervention for Latinos, especially those that are Puerto Rican, U.S.-born, and/or English-preferring.

## References

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