

2003

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Recommended Citation

Striley, Catherine Woodstock, "Effect of cultural identity and enculturation on alcohol and other symptoms after exposure to traumatic events" (2003). *Posters*. Paper 20 Samuel B. Guze Symposium on Alcoholism.
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Effect of Cultural Identity and Enculturation On Alcohol and Other Symptoms After Exposure to Traumatic Events

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Guze Symposium, February 28, 2003

Acknowledgements

- Arlene Rubin Stiffman, Chair of Dissertation and PI of AIM-HI
- Urban school district and Tribal council from the southwestern American Indian communities
- **Funding:** NIDA R01 DA 13227-01 and NIDA R03 DA 14398-01

Abstract

Cultural factors may serve as resiliency factors for American Indian youth, buffering the effects of traumatic events on later pathology. Buffering hypotheses are commonly analyzed using an interaction term in multiple regression. This paper uses both regression and Analysis Of Variance to test whether enculturation buffers or reduces the effect of exposure to traumatic event on behavioral health outcomes in a sample of 401 American Indian youth.

Significantly, cultural factors may not be buffers of traumatic events. Analysis Of Variance adds additional information revealing that the cultural factor tested corresponded to increased symptoms, and that exposure to traumatic events increases total symptoms in both high and low enculturation groups.

Problem

- Studies on American Indian youth have shown both higher and similar need compared to majority youth
- Need is generally considered as symptoms of behavioral health problems
 - Substance abuse
 - Mental health problems

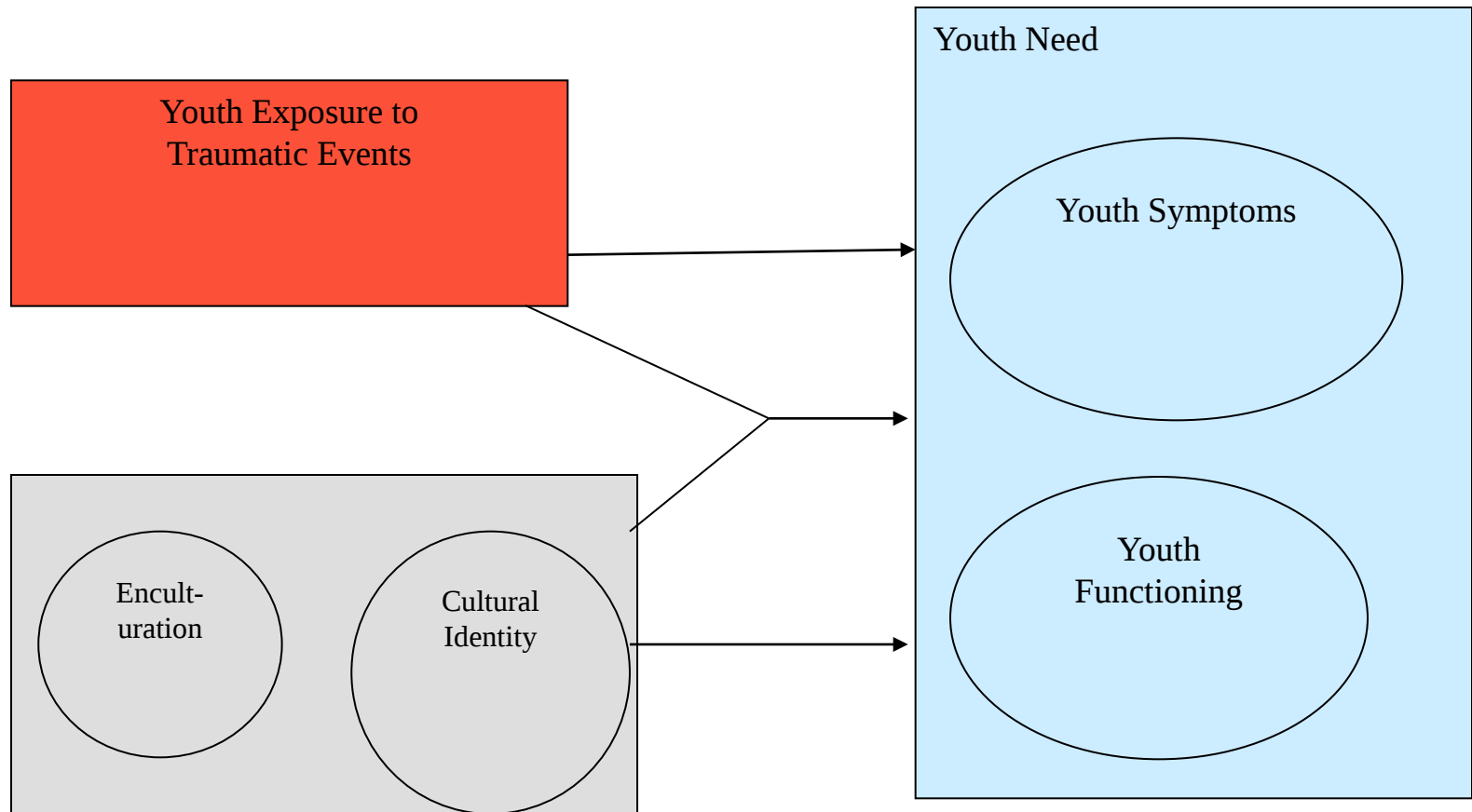
Background Concepts

- Functioning may be more appropriate than symptoms for
 - American Indian culture
 - Teens themselves
 - Provides another measure of need
- Strong association between traumas and symptoms shown in many studies
- AI youth have unique cultural factors
- Risk models assume some factors are protective or buffer the effects of risk factors

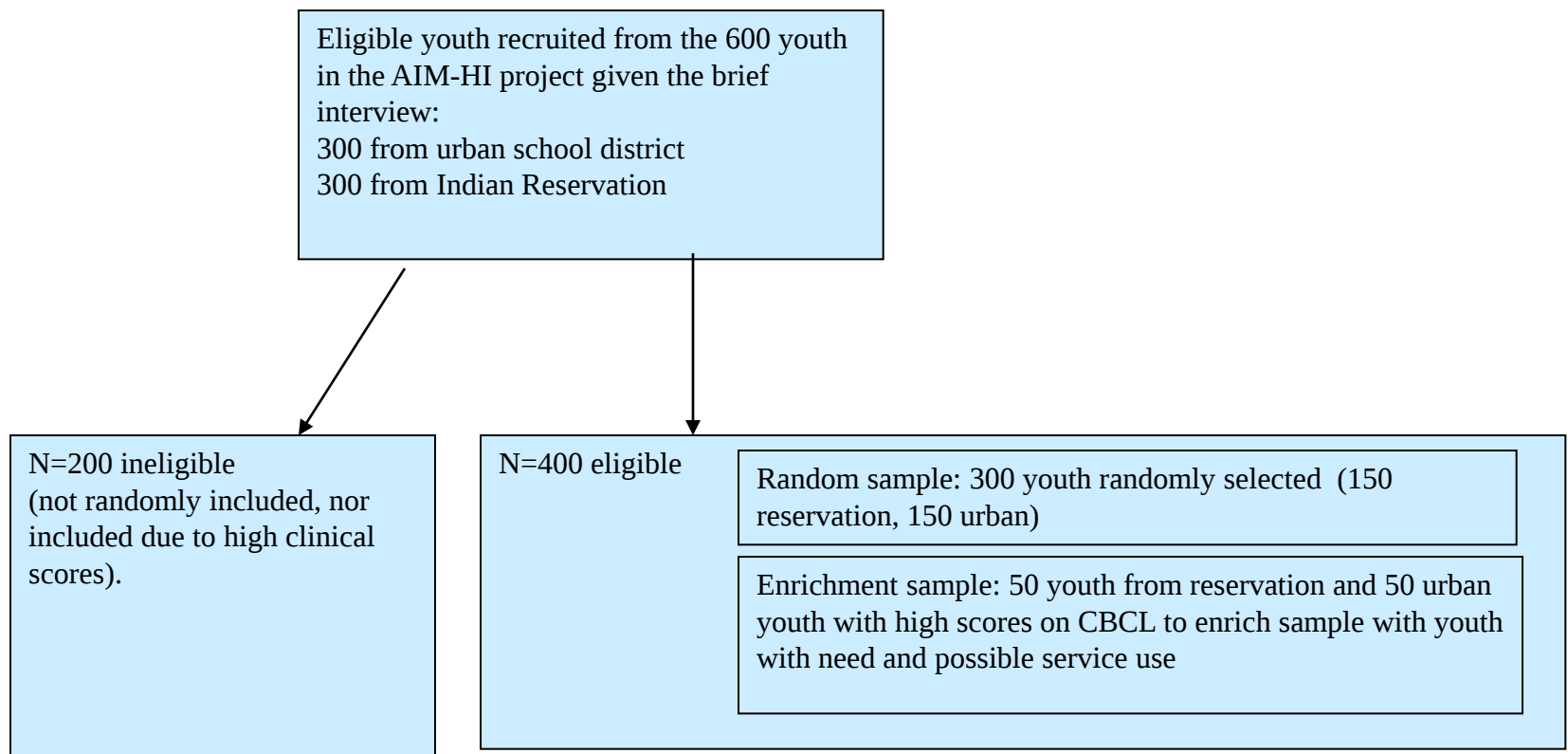
Theory-Base

- Models consider that ethnic and cultural factors effect need
 - cultural factors moderate stress and trauma (Walters and Simoni, 2002, “Indigenist” Stress-Coping Model)

Model tested



Methods: Sample



Methods: Variables 1

- *Symptoms*
 - Measured through DIS: included symptoms of conduct disorder, post-traumatic stress disorder, depression, alcohol abuse and dependence, drug abuse and dependence, and suicidality
- *Functioning*
 - WHO-DAS II used to measure functioning in six life domains
- *Exposure to traumatic events*
 - measured with DIS PTSD questions on events

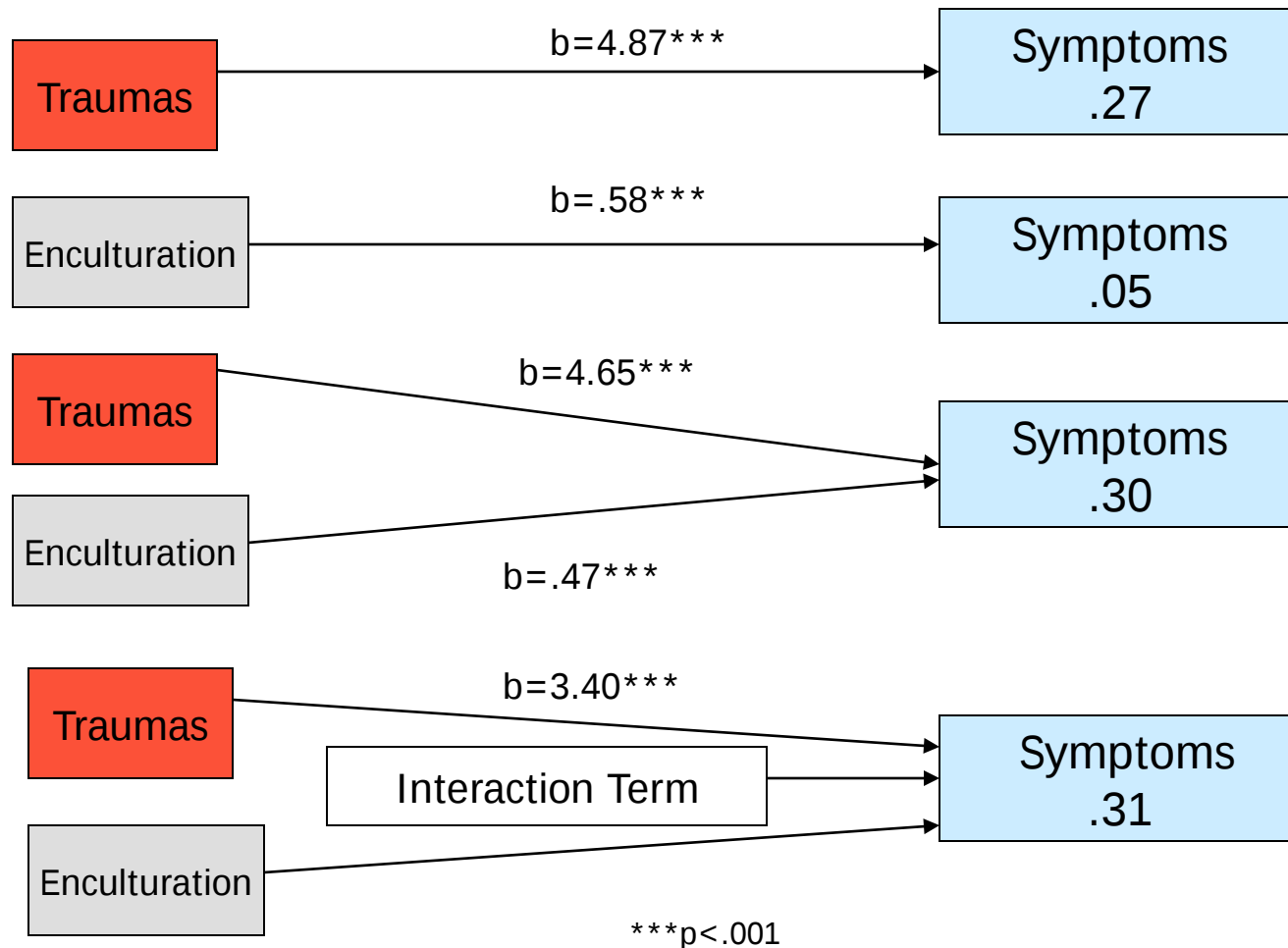
Methods: Variables 2

- *Cultural Identity* measured with youth
 - Participation in Native way of life (parents)
 - Pride in being an American Indian
 - Participation in different cultural practices
- *Enculturation* sum of whether
 - Still has relatives or friends on reservation
 - Speaks tribal language
 - Understands tribal language;
 - And number of years youth lived on reservation

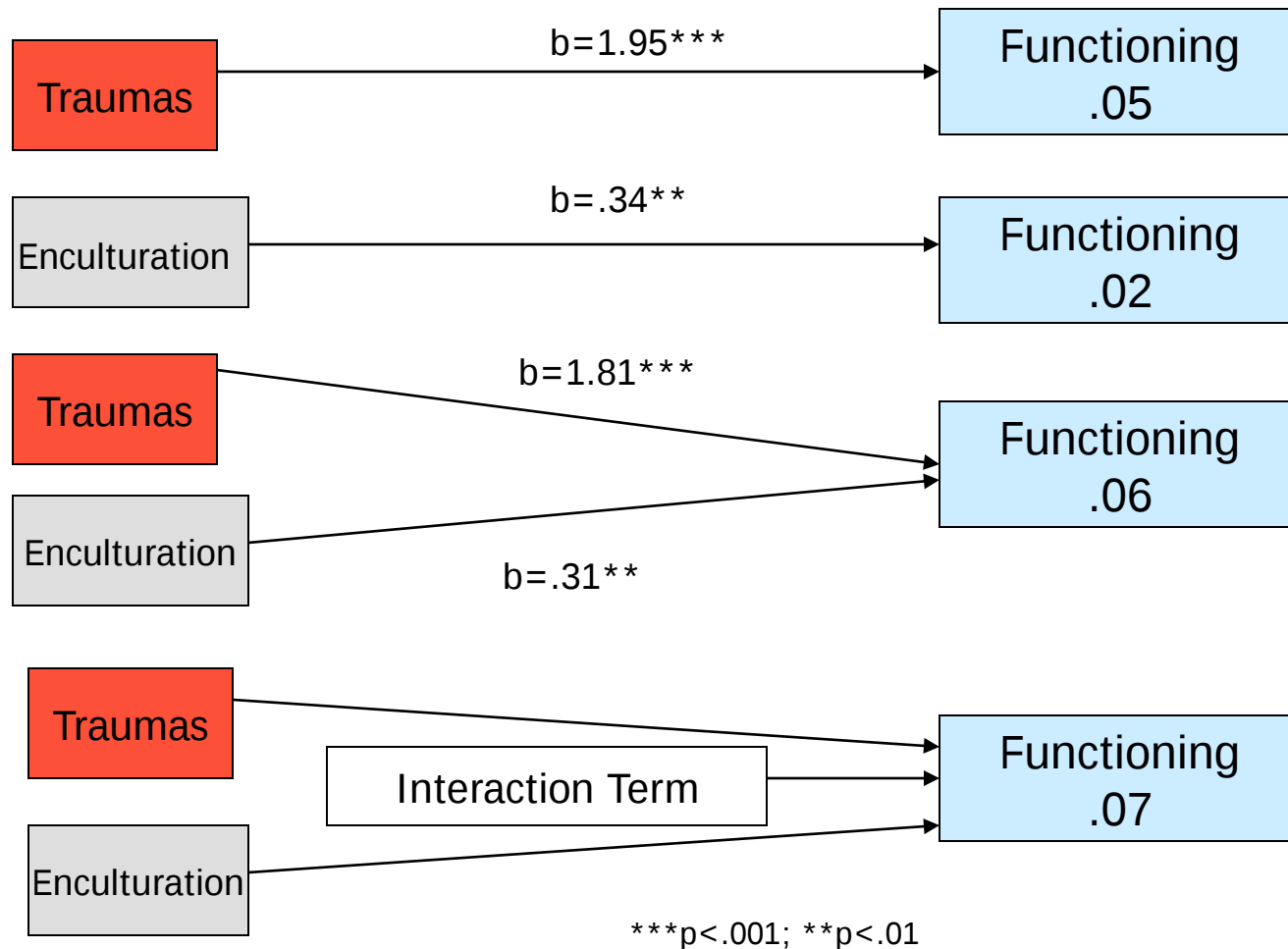
Method: Analyses

- Univariate, bivariate and multivariate analysis was used.
- Multiple regressions were run in SAS and STATA
 - With symptoms as the dependent variables
 - With enculturation as the independent variable, exposure to traumatic events the independent variable, and both with an interaction term
 - STATA to give robust standard errors for regression models

Results: Regressions Predicting Symptoms



Results: Regressions Predicting Functioning



Using ANOVA to Clarify Findings

- Cultural factors can not be expected to moderate when there is no exposure
- ANOVA was used to test the effect of enculturation (high/low) on exposed (no/some) individuals' symptoms
- Exposed high enculturation individuals' symptoms were 3 times those of low exposure/low enculturation individuals

Using ANOVA to Clarify Findings

- Overall model significant, $F=27.78$ (df=3), $p<.0001$, $R^2=.17$
- *mean number of symptoms
- **split at median

	Low Enculturation **	High Enculturation
No Exposure	4*	13
Exposure	10	28

Further Analyses

- Are some diagnoses more or less effected by cultural factors?
- When diagnostic specific symptoms were separated (conduct disorder, substance abuse and dependence, alcohol abuse and dependence, depression, post-traumatic stress disorder) only substance abuse was significantly affected by cultural factors at the multivariate level

Using ANOVA for Substance Abuse Symptoms

- Overall model significant,
 $F=17.53$
($df=3$),
 $p<.0001$,
 $R^2=.12$
- *mean number of symptoms
- **split at median

	Low Enculturation**	High Enculturation
No Exposure	0*	3
Exposure	0	9

Discussion

- Exposure to traumatic events predicts symptoms and functioning
- Cultural factors are not clinically significant in directly affecting or moderating symptoms
- But, high enculturation triples symptom counts in the presence of exposure for total symptoms and substance abuse symptoms

Limitations of the Study

- Cross-sectional nature of data
- Cultural variables lack clear definition and measurement
 - Need ethnographic work to understand enculturation with this specific group
- Youth sample may have less variance in enculturation than on more isolated reservations

Implications

- Exposure to traumatic events in this population is high
- Implement prevention programs to lower exposure to traumatic events
- Stakeholders invested in cultural models
- Cultural factors may not be high enough to buffer, and may exacerbate effects of exposure