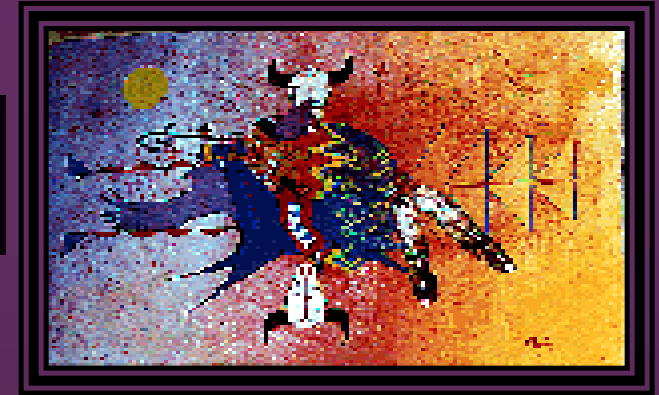


# Native Elder Research Center

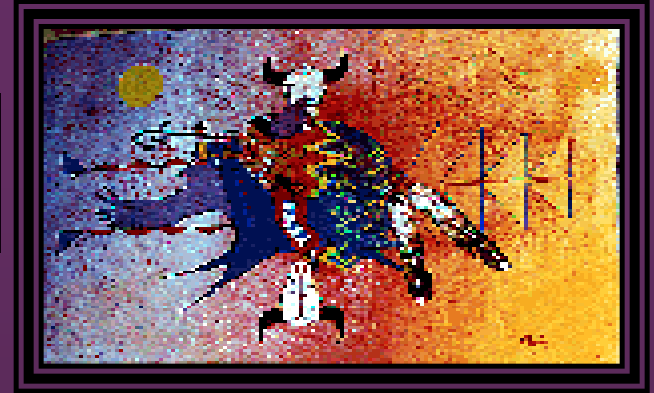


## Traumatic Stress among Older American Indians: Considerations of Social Support and Health

Presented by  
Melissa Tehee, JD, PhD  
Cohort X (2016-2018)  
Utah State University

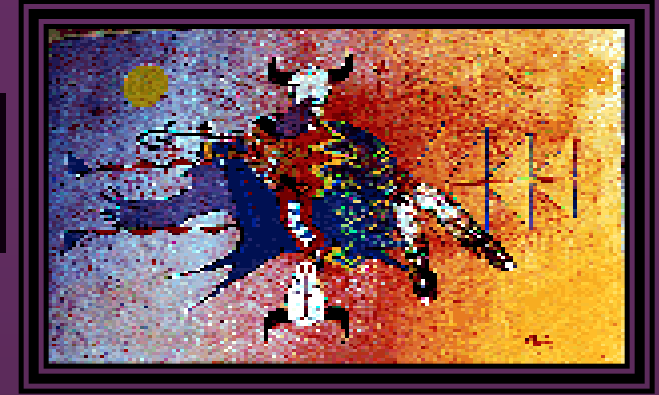


# Trauma Prevalence: American Indians (AI)



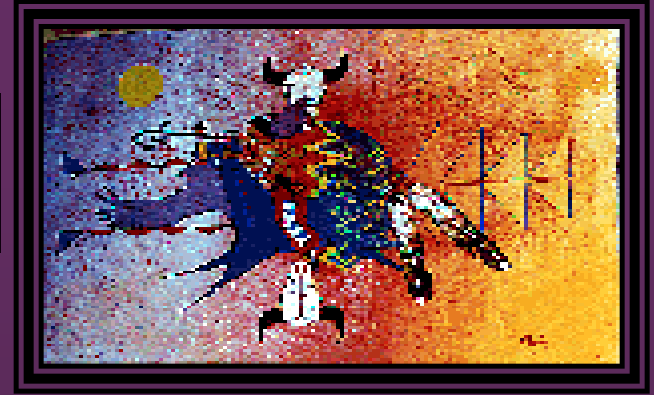
- ❖ Up to 81% of American Indians, age 55 years or younger, have experienced at least one traumatic event in their lifetime
  - ◆ Probability of trauma exposure increases with age (up to 55)
- ❖ Prevalence unknown for those age 55 and older
- ❖ Unique, highly prevalent trauma exposures in older AIs
  - ◆ Violent victimization
  - ◆ Military/combat exposure
  - ◆ Indian boarding school

# Trauma Symptoms



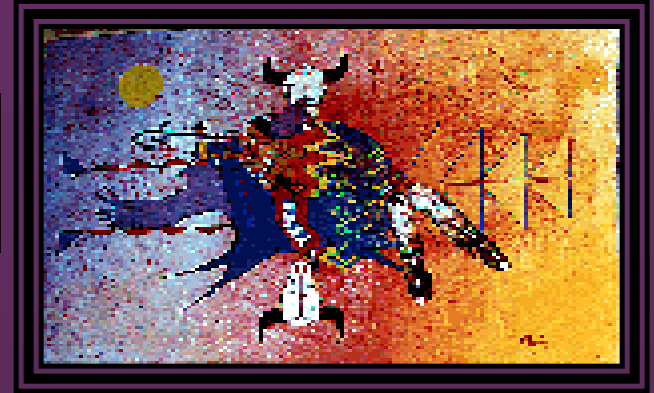
- ❖ Traumatic events can lead to post-traumatic stress symptoms
- ❖ Common symptoms include:
  - ◆ Re-experiencing the event
  - ◆ Emotional numbing
  - ◆ Hyper-arousal
  - ◆ Avoidance behaviors

# Trauma Prevalence: American Indians (AI)



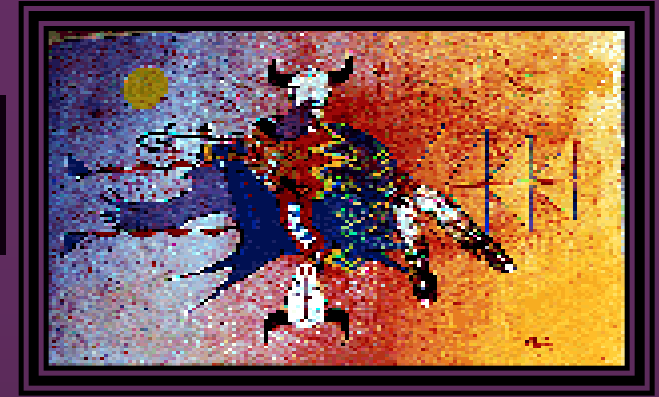
- ❖ An **estimated 40%** of American Indians exposed to a traumatic event will develop one or more symptoms of traumatic stress
- ❖ Prevalence of post-traumatic stress symptoms among AIs  $\leq 55$  years of age is **3 times higher** than among Whites of same age
- ❖ Paucity of relevant research with older AIs

# Health Outcomes



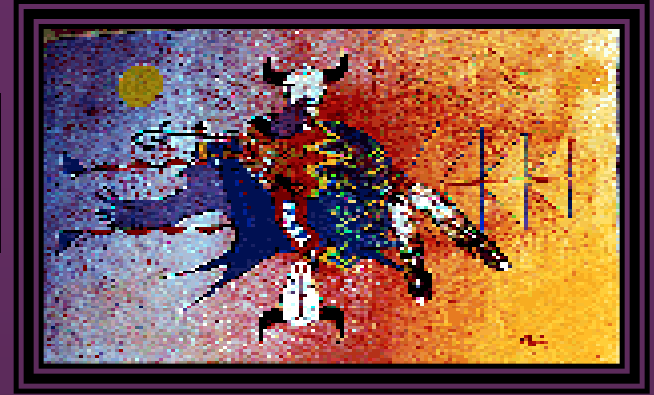
- ❖ Post-traumatic stress symptoms are linked to increased risk for mental and physical illnesses
  - ◆ Chronic pain
  - ◆ Hypertension
  - ◆ Cardiovascular disease
  - ◆ Obesity
  - ◆ Depression
  - ◆ Substance Abuse

# Social Support



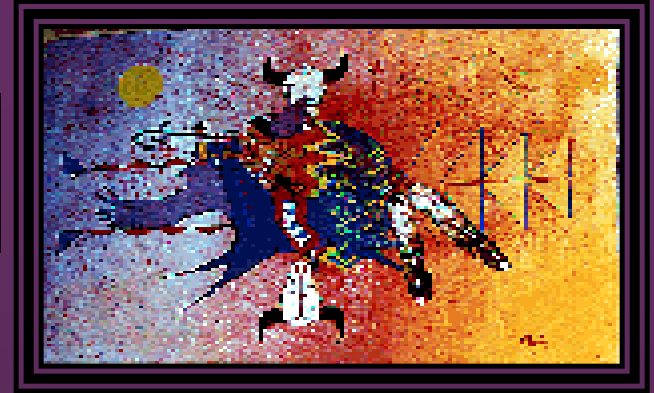
- ❖ Social support protects against adverse mental and physical health outcomes
- ❖ Low levels of social support is associated with increased mortality among older adults
- ❖ Social support is linked to better coping with traumatic events in general U.S. population

# Social Support and Aging



- ❖ Forming and maintaining close relationships can be difficult for older individuals exposed to trauma
  - ◆ Disengagement often accompanies emotional numbing and withdrawal
- ❖ Older individuals are at risk for less social support due to decreased mobility and greater morbidity and mortality of people in their interpersonal networks

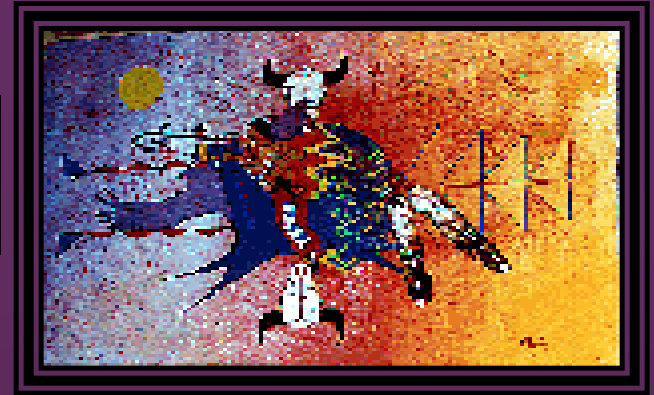
# Specific Aim 1



- ❖ Estimate prevalence among older American Indians:
  - ◆ Lifetime traumatic experience
  - ◆ Current post-traumatic stress symptoms

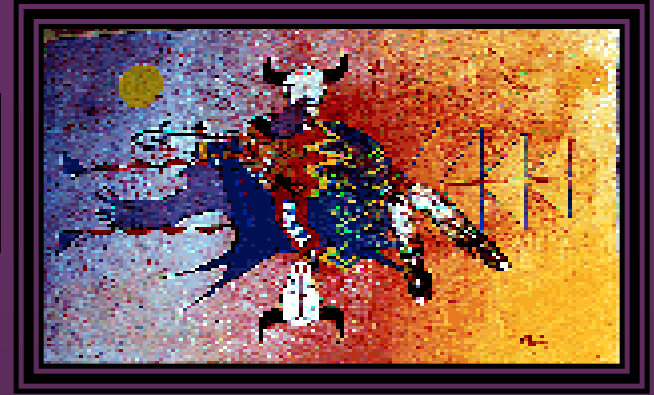


## Specific Aim 2



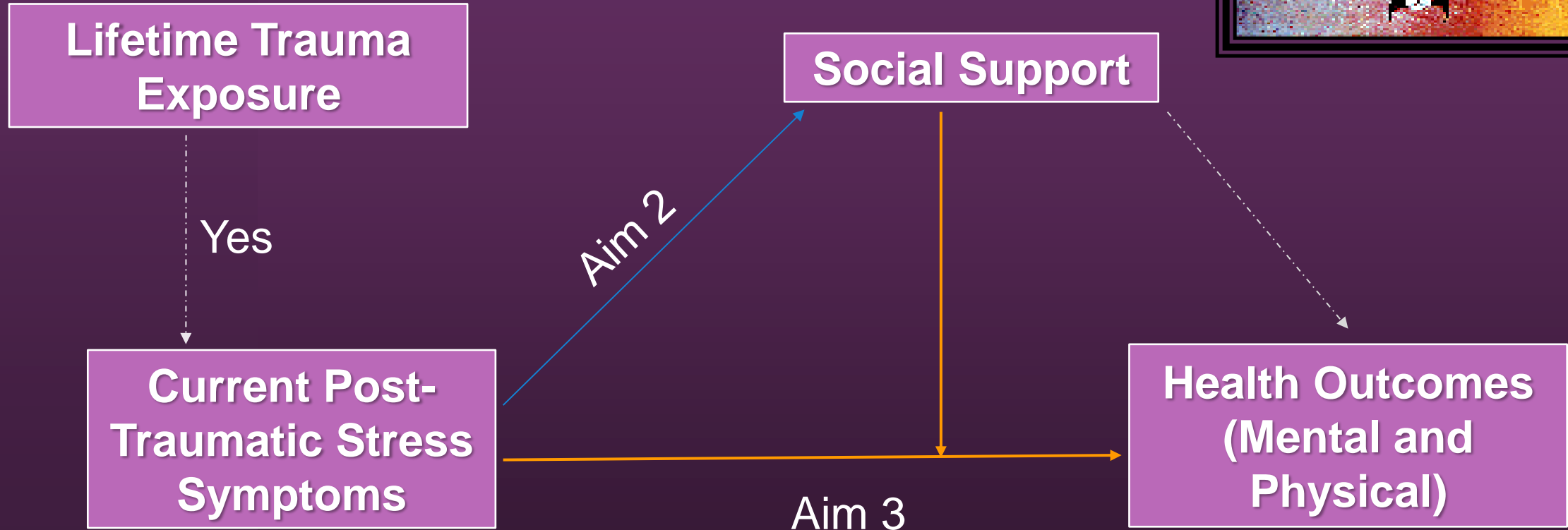
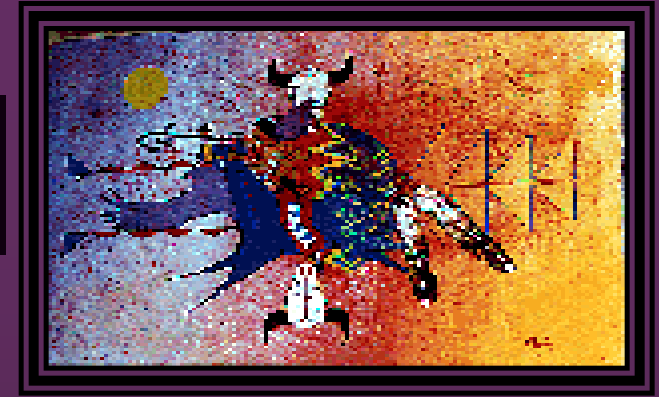
- ❖ Association between social support and current post-traumatic stress symptoms

## Specific Aim 3



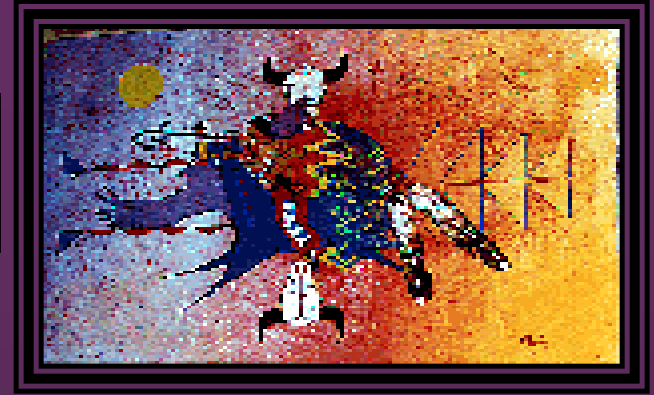
- ❖ Relation between current post-traumatic stress symptoms and Health outcomes
  - ◆ Possible moderation by social support

# Specific Aims



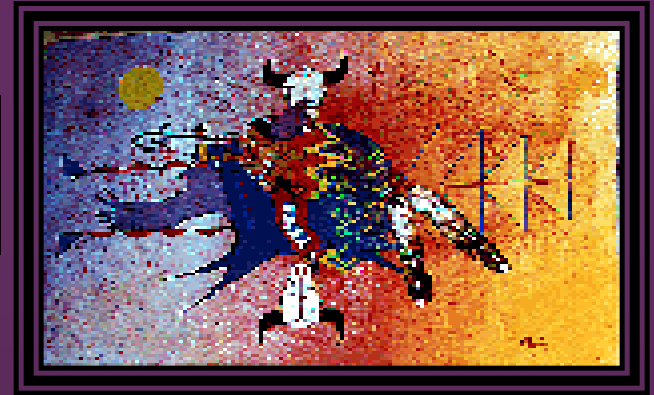
# Native Elder Care Study

- ❖ Tribal Participatory Research
- ❖ Cross-sectional study
- ❖ 505 tribal members from a southeastern tribe
- ❖ 55 years of age and older
  - ◆ Random, age-stratified sample
  - ◆ Mean age = 70.7 years

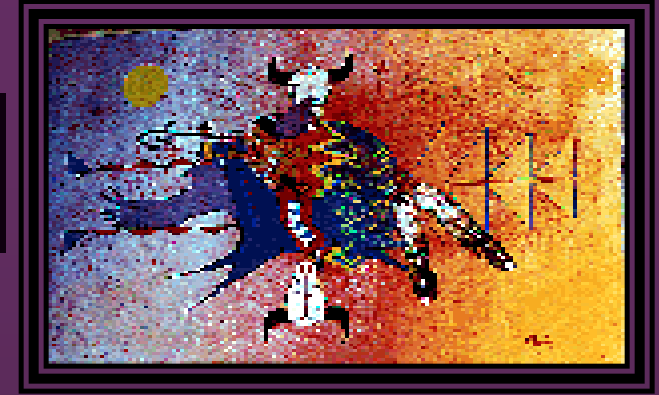


# Method

- ❖ 60-90 minute interviews
- ❖ Included:
  - ◆ Physical and mental health
  - ◆ Daily functioning
  - ◆ Service use
  - ◆ Sociodemographics
  - ◆ Environmental characteristics



# Measures



## ❖ Trauma

- ◆ PTSD questions from the National Anxiety Disorder Screening Day instrument
  - ❖ Lifetime trauma exposure
  - ❖ Current symptoms of post-traumatic stress (past 30 days)
    - 1) Re-experiencing the traumatic event
    - 2) Emotional numbing
    - 3) Hyper-arousal
    - 4) Avoidance behaviors

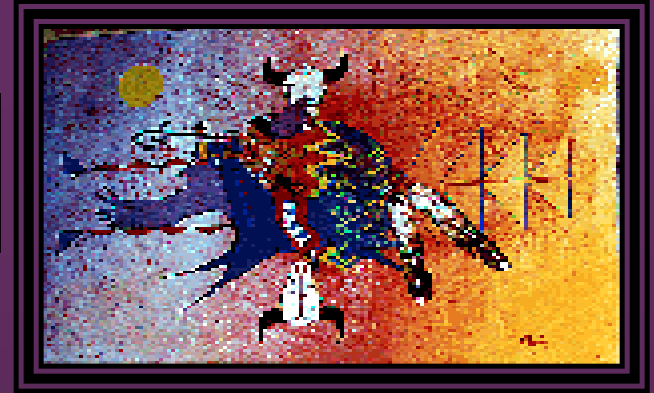
# Measures

## ❖ Perceived Social Support

### ◆ Medical Outcomes Study Social Support Scale

#### ❖ Total support

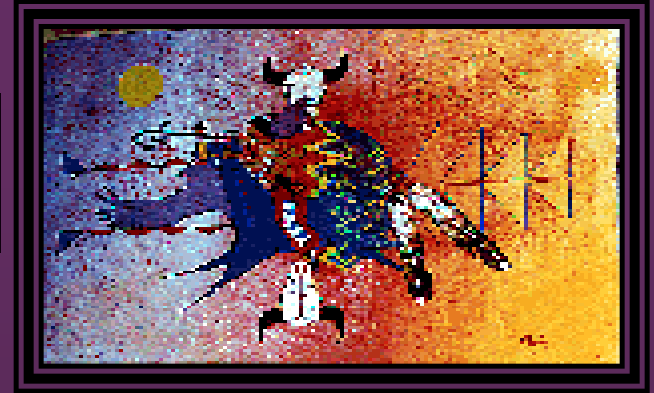
- Tangible support
- Emotional/informational support
- Affectionate support
- Positive social interaction



# Measures

## ❖ Physical and Mental Health

- ◆ Cardiovascular Disease
- ◆ Chronic Pain
- ◆ Hypertension
- ◆ Diabetes
- ◆ Depressive symptomology (CES-D)
- ◆ Alcohol usage

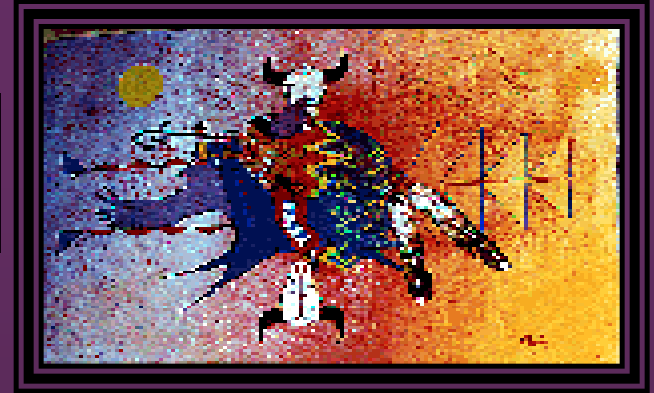




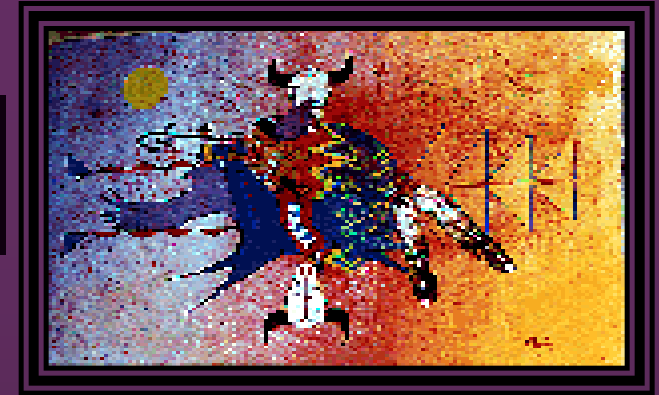
# Measures

## ❖ Covariates

- ◆ Age
- ◆ Gender
- ◆ Education
- ◆ Marital status
- ◆ Income
- ◆ Indian boarding school attendance

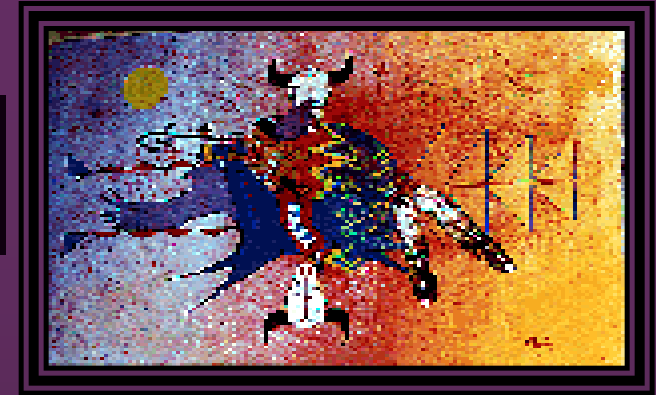


# Prevalence



- ❖ 31% of older American Indians  $\geq 55$  years reported lifetime trauma exposure
  - ◆ Of those, 43% reported current post-traumatic stress symptoms
    - ◆ Re-experiencing: 67%
    - ◆ Hyper-arousal: 55%
    - ◆ Avoidance: 50%
    - ◆ Emotional numbing: 44%

# Social Support



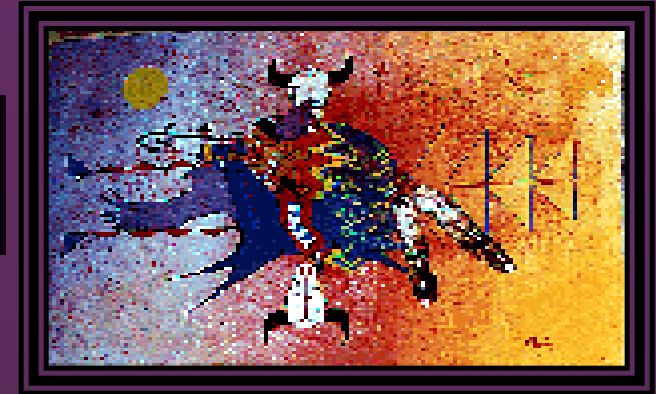
## Associations of Current Traumatic Stress Symptoms with Perceived Social Support

	Traumatic stress symptoms <sup>1</sup>		
	Prevalence ratio	95% CI	p-value
Overall	0.73	(0.58, 0.93)	0.011
Emotional support	0.77	(0.63, 0.96)	0.017
Tangible support	0.89	(0.70, 1.13)	0.328
Affectionate support	0.75	(0.61, 0.92)	0.006
Positive social interaction	0.78	(0.65, 0.94)	0.008

<sup>1</sup> Estimated from logistic regression model using marginal standardization, controlling for age, gender, education and attendance at Indian boarding school

- ❖ Each additional unit of social support was associated with a 27% lower probability of traumatic stress

# Physical and Mental Health



**Association Between Current Traumatic Stress Symptoms and Self-Reported Mental and Physical Health Among Older American Indians**

	Prevalence ratio <sup>1</sup>	95% CI	p-value	p-interaction <sup>2</sup>
<b>Cardiovascular disease</b>	<b>1.640</b>	<b>(1.204, 2.234)</b>	<b>0.002*</b>	<b>0.378</b>
<b>Chronic pain</b>	<b>1.314</b>	<b>(1.158, 1.492)</b>	<b>&lt;0.001*</b>	<b>0.672</b>
Hypertension	1.177	(0.993, 1.394)	0.060	0.644
Diabetes	1.008	(0.753, 1.348)	0.959	0.378
Smoking	0.776	(0.473, 1.274)	0.316	0.480
	Mean Difference <sup>1</sup>	95% CI	p-value	p-interaction <sup>2</sup>
<b>Alcoholic drinks per week</b>	<b>-0.698</b>	<b>(-1.174, -0.223)</b>	<b>0.004*</b>	<b>0.319</b>
<b>Depression symptomology</b>	<b>7.600</b>	<b>(4.127, 11.074)</b>	<b>&lt;0.001*</b>	<b>0.909</b>

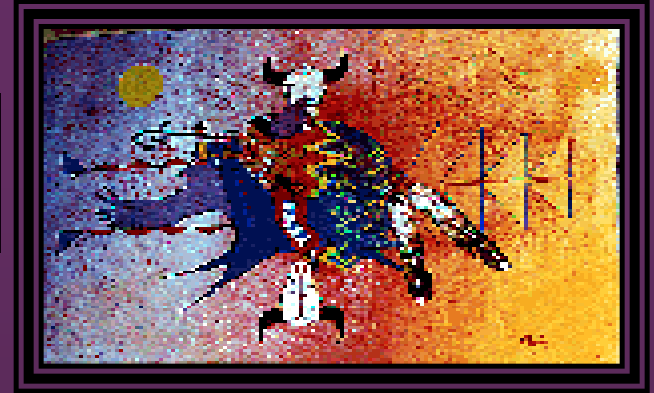
<sup>1</sup>Models adjusting for age, gender, education, and Indian boarding school attendance.

<sup>3</sup>p-value from the test of effect modification in a model additionally adjusting for social support and its interaction with traumatic stress symptoms.

- ❖ Symptomatic participants had a greater relative risk of cardiovascular disease & chronic pain
- ❖ Symptomatic women had a 7.6 mean increase in depression symptoms

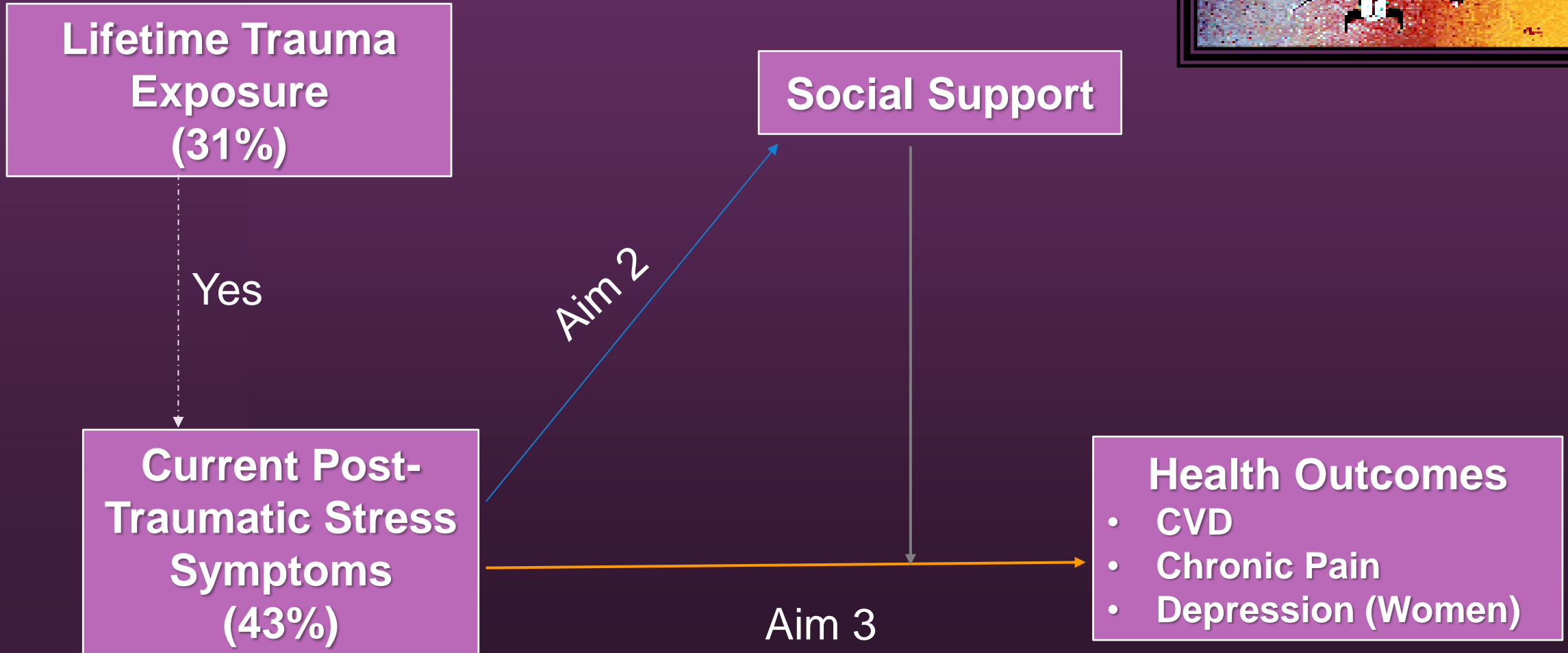
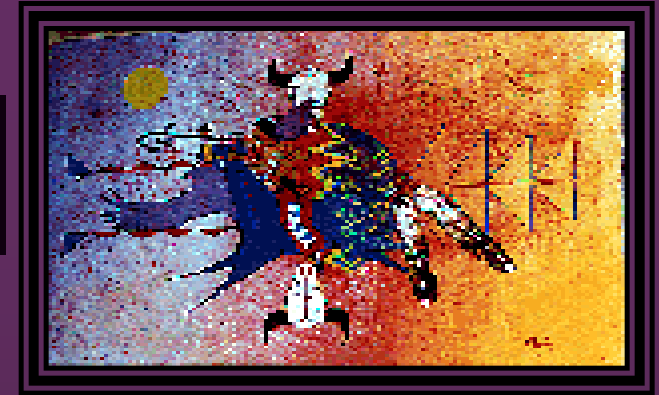


# Discussion

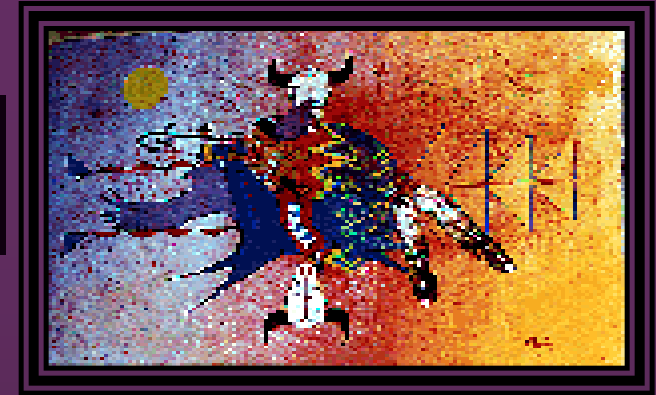


- ❖ Lifetime trauma experience was lower than younger American Indians (31% compared to 64-81%)
  - ◆ Perceptions of the nature of trauma may change over time
  - ◆ Sample may reflect a survivorship bias
- ❖ Consistently with younger American Indians, 40% endorsed current post-traumatic symptoms

# Findings



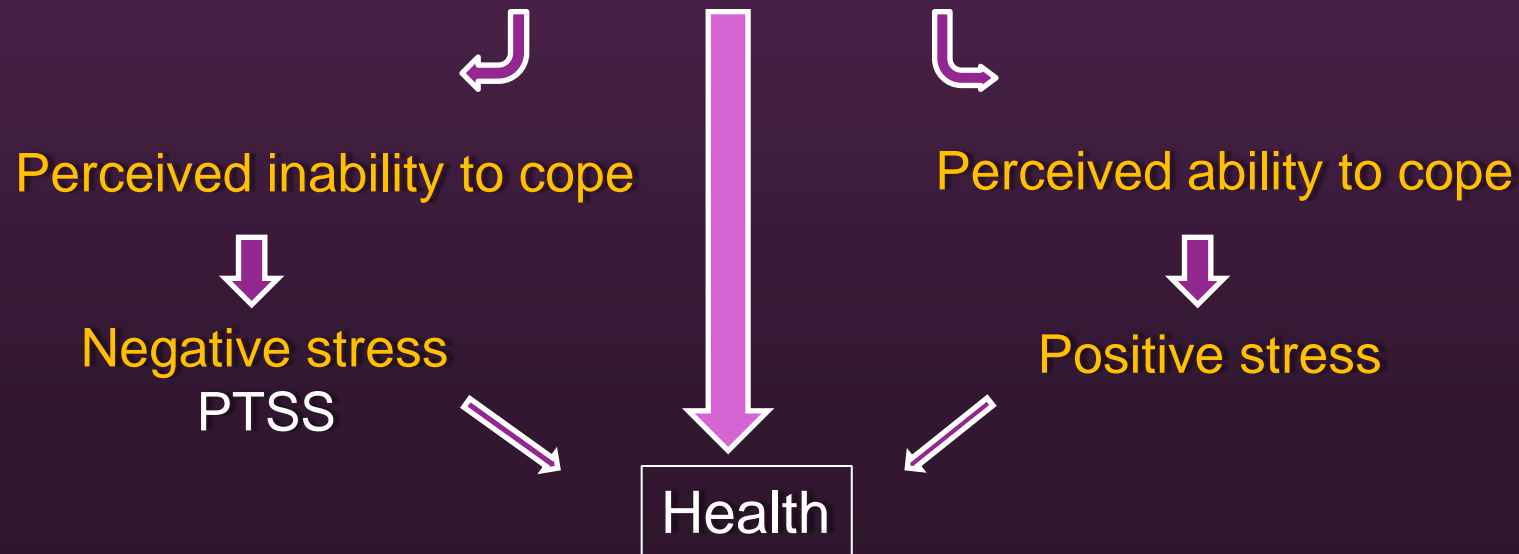
# Transactional Model of Stress



Primary Appraisal  
Perceived threat = Traumatic event



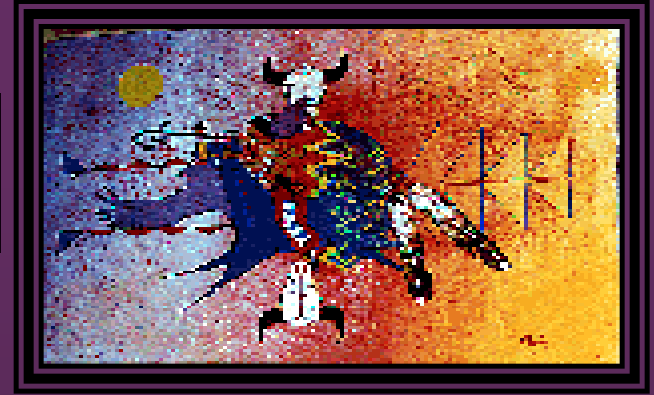
Secondary Appraisal  
Perceived ability to cope with traumatic event  
Individual Level: Coping and resilience  
Social-Interpersonal Level: Social support



Adapted from  
Lazarus & Folkman



# Acknowledgements



- ❖ National Institute on Aging and Resource Centers for Minority Aging Research
- ❖ P30 AG15297 (SM Manson) & P60 MD000507 (SM Manson)
- ❖ Mentoring team
  - ◆ Dedra Buchwald, MD, Washington State University
  - ◆ Adam Omidpanah, MS, Washington State University
  - ◆ Cathryn Booth-LaForce, PhD, University of Washington
- ❖ Collaborators
  - ◆ R. Turner Goins, PhD, Western Carolina University
  - ◆ Spero Manson, PhD, University of Colorado Anschutz Medical Campus