Wounded Spirits, Ailing Hearts: Recent Advances in Understanding Trauma and Its Consequences among American Indians

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Posttraumatic stress disorder (PTSD) is an anxiety disorder that a person may develop after experiencing or witnessing an extreme, overwhelming traumatic event during which s/he felt intense fear, helplessness, or horror.
A trauma is an intensely stressful event during which a person suffers serious harm or the threat of serious harm or death or witnesses an event during which another person (or persons) is killed, seriously injured, or threatened.
Posttraumatic Stress Disorder: Trauma Types

- Abuse: mental, physical, sexual, verbal (i.e., sexual and/or violent content)
- Catastrophe: harmful and fatal accidents, natural disasters, terrorism
- Violent attack: animal attack, assault, battery, domestic violence, rape
- War, battle, and combat: death, explosion, gunfire
The literature reveals that traumatic events – the etiological stressor central to the diagnosis of PTSD -- are not random, vary in frequency across population subgroups, and are related to the conditional risk for this disorder.
Given the stressful social, physical environments in which many American Indians live, and the high levels of trauma to which they are consequently exposed, PTSD is likely to be especially prevalent in this special population.
Wounded Spirits
PTSD & the Legacy of War
American Indian & Alaskan Native Veterans
Ailing Hearts
American Indian Vietnam Veterans Project

- Congressionally mandated replication of the National Vietnam Veterans Readjustment Study (Kulka et al, 1989)

- Department of Veterans Affairs-sponsored, cross-sectional study of 621 American Indian Vietnam theater military veterans
American Indian Vietnam Veterans Project: Aims

- Ascertain prevalence of psychiatric disorders, readjustment problems, and risk as well as protective factors
- Compare prevalence of psychiatric disorders to White, Black, Hispanic, Native Hawaiian, and Japanese counterparts
- Describe nature and extent of service use
American Indian Vietnam Veterans Project: Design

- Two reservation-based, tribal communities: Southwest and Northern Plains
- Representative samples of tribally enrolled, male, Vietnam theater military veterans, residing within or near (50 miles) of reservation boundaries
American Indian Vietnam Veterans Project: Design

- Lay-administered interview including core NVVRS measures and UM-CIDI, both conservatively modified for culturally relevant application

Southwest n = 316
Northern Plains n = 305
American Indian Vietnam Veterans Project: Design

- Clinician-administered reinterview (SCID) of select subsample, inclusion based on MPTSD score

- Southwest: n = 118
- Northern Plains: n = 100
Across the state, more and more Alaska Natives are killing themselves and damaging their loved ones, deciding that life is no longer worth cherishing. Almost down, alcohol is their final companion.

A generation of despair
Representative samples of tribally enrolled, male, Vietnam theater military veterans, residing within or near (50 miles) of reservation boundaries.
American Indian Vietnam Veterans Project: Results

- Point prevalence of PTSD (22.1-25.3%) greater than that of White Vietnam combat veterans (10%)

- Lifetime prevalence of PTSD (45-57%) greater than that of all other combat veterans

- Combat exposure most powerful predictor of PTSD
Percent of Veterans Using Any Biomedical Facilities

- Help with ADM Problem
- Help with Physical Problem

Comparison between Northern Plains and Southwest regions:
5 year, $7.2 million NIMH-sponsored study

Large community-based investigation of the epidemiology of major mental illness employing DSM-III-R and DSM-IV criteria

Multi-method approach to estimating service utilization patterns and rates
To obtain prevalence rates of the major DSM disorders among 2 large tribes in U.S.

To examine the interrelationships among predisposing factors, stress, mediators and psychiatric morbidity
To obtain utilization rates for mental health services

To investigate hypotheses regarding the relationships among background characteristics, social network factors, and mental health service use.
Enrolled members of a Northern Plains and a Southwest tribe who were 15-54 years old, lived on or within 20 miles of their reservations.

Stratified random sampling of tribal rolls by age (4 categories) and gender (2 categories).

Data collected between 1997 and 1999.
Found living on or near reservation
- 39.5% Southwest
- 46.5% Northern Plains

Located, deemed eligible and interviewed
- 73.7% Southwest, n= 1,446
- 76.8% Northern Plains, n= 1,640
AI-SUPERPFP: Design

3-stage design

- CAI by layperson, employing UM-CIDI, extensive characterization of risk and protective factors as well as multi-method measurement of service use

- Clinical reinterview (SCID) of 10% of sample, selected for meeting MDD, PTSD, and/or Alcohol Dependence

- Ethnographic follow-up of key index cases to examine context of service use through life history and narrative analyses
Lifetime exposure to at least one traumatic event ranged from 62.4% to 69.8%.
The NCS estimated the lifetime prevalence of exposure to any trauma for US men and women at 60.7% and 51.2%, respectively.

Australian National Mental Health Survey using methods akin to the NCS, reported remarkably similar lifetime rates: 64.6% for men and 49.5% for women.
Our findings were comparable for men, but vastly different for women who reported equivalent trauma exposure to men.
Inter-tribal differences also emerged, notably with respect to life-threatening accidents and natural disasters among NP males in contrast to SW tribal members.

Both AI populations witnessed traumatic events, experienced traumas to loved ones, and were victims of physical attacks more often than the US as a whole.
A generation of despair
Calculated on the basis of the single worst qualifying trauma, women (14%) were significantly more likely than men (7.1%) to be diagnosed with lifetime DSM-IV PTSD.

The Detroit Area Survey, based on the worst qualifying trauma, estimated the lifetime prevalence of DSM-IV PTSD at 9.5% for men and 17.7% for women.
The NCS -- which likewise employed the single worst trauma, but did not use the DSM-IV A criterion -- revealed a similar two-fold difference in DSM-III-R PTSD between males (5%) and females (10.4%).

This series of findings is in keeping with the earlier Epidemiological Catchment Area Survey which first documented the greater vulnerability of women (1.3%) than men (0.5%) to PTSD.
Previous studies demonstrate unequivocally that the risk of PTSD increases significantly in terms of increased exposure to traumatic events.

This association was robust here: reporting two or three traumatic events among the worst increased the lifetime prevalence of PTSD by two- and nearly three-fold, respectively.
### PTSD Prevalence Based on 3 Worst Qualifying Traumas

<table>
<thead>
<tr>
<th>Region</th>
<th>Males</th>
<th>Females</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwest</td>
<td>11.7%</td>
<td>19.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Plains</td>
<td>8.9%</td>
<td>19.2%</td>
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</tbody>
</table>
Alterations in central and autonomic nervous system function and hormonal dysregulation are associated with trauma, which, in turn, increase risk for CVD.

It may be that high rates of trauma exposure contribute to the increasing prevalence of CVD among American Indian men and women: their leading cause of death.
Neurocardiac Model of Stress, Depression, and Cardiovascular Function

Stress

Amygdala

Fear response

Hippocampus

Anterior Cingulate/Prefrontal Cortex

extinction to fear through amygdala inhibition

Hypothalamus

CRF

Pituitary

ACTH

Locus Coeruleus

NE

Adrenal

cortisol

Cerebral Cortex

Processing of stress

Effects on HRV, Endothelium, etc

output to cardiovascular System, \( HR, BP \)

extinction to fear through amygdala inhibition

CRF

extinction to fear through amygdala inhibition
PET and Cyclotron

- Highly sensitive, non-invasive method to detect myocardial dysfunction
- Measures flow reserve and ventricular function
- Uses superconducting magnet to measure concentrations of positron emitting radioisotopes in the body
Similarly, trauma is closely linked to pain; a relationship verified in our own work among Native people.

Pain affects help-seeking behavior, adherence to treatment recommendations, and speed of surgical recovery, all often compromised in American Indians.
In preparation:

- PTSD and asthma
- PTSD and traumatic brain injury
- PTSD and diabetes
The town of Kake seems poised on the precipice. Will its many non-drinkers risk turning the tide of self-destruction, or will fear and doubt leave them silent witnesses to slow death by alcohol?

A willingness to take risk

By KATHLEEN MCOY
New Lines of Inquiry

- Historical trauma, secondary traumatization, intergenerational grief
- Challenges in conceptualizing, operationalizing, measuring, and analyzing key constructs
New Lines of Inquiry

- Real-time, interactive videoconferencing offers effective means – clinically and fiscally -- of bridging treatment gaps in geography and cultural.

- Home-based telecommunication technologies, promise more continuous, responsive care.
Center for Native American TeleHealth and TeleEducation

- CNATT organizes and focuses technological resources for Native health to offer education, clinical care, research opportunities and training.

- CNATT monitors the impact of these telecommunication services.

- CNATT offers important models for using telehealth to improve services for underserved populations.
COMPONENTS

- Clinical Programs (Telehealth)
- Web-Based Services (www.uchsc.edu/ai)
- Research
- Technological Assistance (NTOTAP)
AIANP Active Partnerships in Telehealth and TeleEducation
Clinical Services

- PTSD assessment and treatment for Northern Plains American Indian veterans
- Child/adolescent consultation to Sioux San IHS Hospital, Rapid City
- Geriatric medicine and psychiatry consultation-liaison to Alaska Native nursing home
American Indian Veterans
PTSD Clinics
Program Need

- Approximately 60% rate of PTSD among Lakota military combat veterans, 3 times that of their White counterparts
- Local stigma and poor confidentiality
- Inadequate clinical expertise among IHS personnel
Program Need

- VA facilities 180-300 miles distant and lack transportation
- Distrust federal government
PTSD Services

- Weekly clinics offering initial assessment, medication management, individual and group psychotherapy
- 4 active; 3 more to be implemented July 2006
- Community liaison (TeleHealth Outreach Workers)
- Different models and partnerships
Clinic Structure

- Weekly 6 hour clinics
- 2 hour intake
- 2-3 hours for medication management and follow-up
- 1-one hour weekly therapy group
## PTSD Clinic Models

<table>
<thead>
<tr>
<th>End-site/ Partners</th>
<th>Rosebud</th>
<th>Wind River</th>
<th>Crow/ Northern Cheyenne</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Tribes</td>
<td>1 Tribe</td>
<td>2 Tribes</td>
<td>2 Tribes</td>
</tr>
<tr>
<td>End-Site support</td>
<td>1 TOW</td>
<td>2 TOWS</td>
<td>2 TOWS</td>
</tr>
<tr>
<td>Unique Programs</td>
<td>Tribal Vet Center</td>
<td>Traditional Healers</td>
<td>IHS services</td>
</tr>
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### PTSD Service Profile

<table>
<thead>
<tr>
<th>Dates</th>
<th>Wind River Oct 03 –April 05</th>
<th>Rosebud April 02 – April 05</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Clinics Held</td>
<td>68</td>
<td>124</td>
<td>192</td>
</tr>
<tr>
<td># of Intakes</td>
<td>38</td>
<td>38</td>
<td>76</td>
</tr>
<tr>
<td># of Follow-ups</td>
<td>245</td>
<td>282</td>
<td>527</td>
</tr>
<tr>
<td># of Groups</td>
<td>54</td>
<td>164</td>
<td>218</td>
</tr>
<tr>
<td>Group Attendance</td>
<td>3.3</td>
<td>2.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Total Number of Sessions</td>
<td>314</td>
<td>452</td>
<td>766</td>
</tr>
<tr>
<td>Total Number of Patient Contacts</td>
<td>437</td>
<td>623</td>
<td>1060</td>
</tr>
<tr>
<td>Average Contacts per week</td>
<td>6.3</td>
<td>5.6</td>
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Relevant Publications

The deadly brew of alcohol and despair has devastated Alaska Natives. But now people are reaching out to one another in a sobriety movement that is slowly gathering strength.

A growing revolution of hope