Sacred Wisdom: The Path to Healing from the Devastating Legacy of American Indian Historical Trauma


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Academic Experience

PhD – Cultural Psychology
  Cultural-historical Psychology (Vygotsky and M. Cole)
  Neuropsychology:

  Brain Morphology and Physiology - BIOLOGY

  ADAPTATION (Analogy: lifting weights)

  Behavior, Cognition and Culture - ENVIRONMENT

MPH – International Health
  Biochemistry Graduate Student → Medical School
  Lymphokyne Activated Killer (LAK) Cell Cytotoxicity
    Skills utilized today in the laboratory

BS – Animal Health Science/Animal Science

Window Rock High School – Ft. Defiance, Navajo Nation
Hometown - Sawmill, AZ
Research Focus:

Psychopathology: mental distress & abnormal maladaptive behavior

- **Adverse Childhood Experiences** – Impact of Fear, Pain, and Shame on DEVELOPMENT
- **PTSD** – Implicit Memory (emotional and procedural memory)

**Toxic Stress**

When a child experiences strong, frequent, and/or prolonged adversity – such as physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, exposure to violence, and/or the accumulated burdens of family economic hardship - **without adequate adult support**. This kind of prolonged activation of the **stress response systems** can **disrupt the development of brain architecture and other organ systems**, and increase the risk for stress-related disease and cognitive impairment, well into the adult years.

*National Scientific Council on the Developing Child (2005)*
Academic and Professional Interests:

My Focus – 2 sides of the same coin:

1. The neurophysiological impact of Adverse Childhood Experiences (abuse, neglect, and witnessing violence).
   a. Environmental and cultural stimulation changes physiology (adaptation). The brain and body adapts (like the concept of lifting weights).
   b. These changes have the potential:
      1. To cause disease (chronic inflammation $\rightarrow$ chronic diseases), and diabetes (cortisol $\rightarrow$ blood sugar) – HPA axis, and
      2. To affect behavior – Sympathetic Nervous System (fight or flight)
         - hypervigilance and hyperarousal $\rightarrow$ anger & violence (hyper = excessive; vigilance = alert to possible danger)
         - Self-medication with substances, food, and maladaptive behaviors.

2. The body’s potential for wellness, healing and resilience, utilizing Sacred Wisdom (Indigenous philosophies), and Psychosocial Health (relationships and interactions with the environment, beliefs, and behavior).
Health Disparities of the American Indian and Alaska Native

The leading cause of death for **AIAN men** is coronary heart disease, followed by accidents, chronic liver disease, suicide, diabetes mellitus, cerebrovascular disease. (Rhoades, 2003)

For **AIAN women**, increased incidence and prevalence of cardiovascular disease, accidents, diabetes, and cancer. (IHS, 2001)

**Hypothesis:**

- **Historical Trauma** → **Cultural Changes**
  - Intergenerational Trauma
    - (learned responses to fear and pain)
    - Adverse Childhood Experiences
  - 1) HPA-axis
  - 2) Sympathetic Nervous System
  - 3) PTSD

- **Chronic Stress** → **1) Chronic Diseases**
  - 2) Hyperarousal Hypervigilance (agitation, anger, violence)

3) Behavioral Health Issues
Prefrontal Cortex: Executive Functions

Limbic System
Orbitofrontal Cortex
Anterior Cingulate
Thalamus
Hypothalamus
Hippocampus
Amygdala

Basal Ganglia
Caudate
Putamen
Globus Pallidus
Substantia Nigra
Subthalamic Nucleus

Brain Stem
Autonomic Nervous System

PRIMATIVE – "REPTILIAN" BRAIN
*Reacts to Environment
*Survival: Fear, Food, and Sex
Sympatho-adreno-medullary System

Release of adrenaline (epinephrine) into bloodstream.

Activates the Sympathetic Nervous System:

- Increased: Heart rate, Blood pressure

PROBLEM
Hyperarousal
Hypervigilance

Anger/Violence

Hypothalamic Pituitary Adrenal Axis (HPA-axis)

The bodies “Fight-or-Flight Mechanism”

Gets activated Every time we Experience Stress: fear, pain & shame

PROBLEM
Cortisol
Neurodevelopment Cognition (Thinking)

Chronic Inflammation
Chronic Diseases

The Brain Changes as a result of chronic STRESS (Psychological and Physical)

Interferes with cell division and growth – impacting a growing brain
**Chronic, toxic stress** = hyperarousal and hypervigilance
Chronic Stress may be associated with patterns of behavior established during childhood:

A. The combination of toxic stress, fear and pain (physical, emotional, spiritual) contribute to behaviors associated with self-medication, anger, violence, depression, and other psychiatric outcomes.

B. On the Navajo Nation:

Mortality rates (deaths) for AI/AN (IHS, 2010):

- Accidents 3 times higher than the general US population
- Diabetes 3 times higher…
- Chronic Liver Disease 5 times higher…
- Drug Induced death 2 times higher…
- Suicide 2 times higher…
- Assault 2 times higher…
Adverse Childhood Experience (ACE) is associated with intergenerational maladaptive behaviors and chronic stress. Chronic stress leads to changes in the HPA axis, which regulates cortisol and the GC receptor dysregulation, contributing to inflammation. The SAM axis is affected, leading to adrenaline and hyperarousal, hypervigilance, affecting sleep (short sleep) and increasing agitation, anxiety, and depression, possibly leading to suicide.

Cardiometabolic diseases include increased blood sugar, insulin resistance, and diabetes mellitus II. Increased blood pressure, cardiovascular diseases, and metabolic diseases are also observed.

Sleep health is impacted by decreased leptin and increased ghrelin, leading to increased appetite and obesity. REM sleep and slow wave sleep are affected, influencing memory and academic achievement.

Sleep disturbances and increased ghrelin contribute to increased appetite and obesity. REM sleep and slow wave sleep are affected, influencing memory and academic achievement.

The removal of waste and toxins is crucial for brain health and is associated with Alzheimer's and other cognitive degenerative diseases.
Alternative Treatment for Major Depression Using Whole-body Hyperthermia

Procedure that takes 2-hours, laying in a special device that delivers infrared heating to the body to 38.5°C (100°F)

Study looks at the effects on depression, stress, the immune system and sleep

Eligibility:
Between age 18-65
Currently experiencing depression for at least four weeks
Not taking antidepressants
Medically healthy

Effective Treatment:
Heating the skin activates serotonin producing an antidepressant effect on same neural circuits as Selective Serotonin Reuptake Inhibitors (SSRIs)
Whole-Body Hypertermia for the Treatment of Major Depressive Disorder

A Randomized Clinical Trial

Clemens W. Janssen, PhD1,2; Christopher A. Lowry, PhD3; Matthias R. Mehl, PhD4; John J. B. Allen, PhD4; Kimberly L. Kelly, MPA6,6; Danielle E. Gartner, BA6,7; Angelica Medrano, BA8,9; Tommy K. Begay, PhD7,7; Kelly Rentscher, MA4; Joshua J. White, BS5,8; Andrew Fridman, BS8; Levi J. Roberts, BA9; Megan L. Robbins, PhD9; Kay-u Hanusch, MSc10; Steven P. Cole, PhD11; Charles L. Raison, MD1,2,5,12

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Ceremony – reconnection to Sacred Wisdom, Universe and Earth
Sweat Lodge Ceremony (Inipi, Ta’chéé) – Purification rite
My Research Interests are Personal:

A. Where I come from (Navajo Nation)
   Mortality rates for AI/AN (IHS, 2010):
   - Accidents 3 times higher than the general US population
   - Diabetes 3 times higher...
   - Chronic Liver Disease 5 times higher...
   - Drug Induced death 2 times higher...
   - Suicide 2 times higher...
   - Assault 2 times higher...

B. Great grandmother – Bah Tsosie (Healer/Medicine Woman/Herbalist)
   - Diné be' Iiná – In this tradition, there is just “Life”, not reduced to culture, spirituality, etc.
   - Natural Order – Balance, Duality, Unity, Purpose, and Beauty
   - Stimulus $\rightarrow$ Response, Habits, Behavior, and Culture

C. Culture: Two sides of the same coin
   - One Side: disorder, dysfunction, disease, addiction, violence, & abuse
   - The other Side: Hózhó, order, wellness, healing, self-identity, self-esteem

D. Personal Experience – My own DARKNESS and RECOVERY
My Uncle and Navajo Code Talker:

Frank C. Todacheenie

Photo courtesy of Kenji Kawano


“I remember most my visit to the Great Wall of China; I thought at the time ‘I can’t believe I’m here.’”

Frank Carl Todecheenie and his grandson Lederrick Max Smith, four.

FRANK CARL TODECHEENIE
Todich’iiinii and Hashka‘aahzhoo’ Clan
4th, 6th Marine Divisions
Guam
Pearl Harbor
North China
Okinawa
Sacred Wisdom - Personal Philosophy

*Sa’ah Naghaii Bik’eh Hózhóón* = Everlasting and beautiful living.

Represents “balance” in living:
- Harmony and balance within, and inter-connection with the physical and spiritual world lend to health and wellness

*Sa’ah Naghaii* = “in old age walking”
*Bik’eh Hózhóón* = “on this beautiful trail”

**WALK IN BEAUTY**

*Hozho’ji* – Navajo Blessingway
- Foundation of Diné Philosophy – and the basis for Human Integrity
- All ceremonies open and close with Blessingway Prayer
- Opening Prayer – Protection Way
- Corn pollen and the arrowhead

BELIEF ➔ THOUGHTS ➔ BEHAVIOR
Hozho’ji = Blessingway - the core of human existence
(the action of Sa’ah Naghaii Bikeh Hozhoon)

Protection Way
Male
Assertive
Tools/Weapons
Higher
Education

Sympathetic NS
Science

Beauty Way
Female
Gentleness
Sacredness
Symbiotic
Environmental Application
in the way of Hozho

Parasympathetic NS

Responsible, ethical, ecological application of Science - Hózhó
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Hózhó: Sacred Wisdom
Diné Philosophy – Model for Psychosocial Health
BALANCE = NATURAL ORDER

1) THE SACRED Universal Energy

2) PHILOSOPHY = HUMAN INTEGRITY

3) SELF

SACREDNESS

SPRITUAL

HOPE

PHYSICAL

MENTAL

EMOTIONAL

4) ENVIRONMENT
- Physical
- Social

5) BEHAVIOR “ACTION”

Kinetic Energy
W = F x d

Earth = Changing Woman
The Diné people believe they are the children of the female deity, Changing Woman
“Warriors are not what you think of as warriors. The warrior is not someone who fights, because no one has the right to take another life. The warrior, for us, is one who sacrifices himself for the good of others.

His task is to take care of the elderly, the defenseless, those who can not provide for themselves, and above all, the children, the future of humanity.”

~ Sitting Bull
Kill The Indian… Save the Man.
Capt. Richard Henry Pratt
Founder of the Carlisle Indian Industrial School
The first non-reservation Indian boarding school

In an attempt To “civilize” & “Americanize” the American Indian…

These are actual tiny child handcuffs used by the U.S. government to restrain captured Native American children and drag them away from their families to send them to the Indian boarding schools where their identities, cultures and their rights to speak their Native languages were forcefully stripped away from them.
Historical trauma refers to the collective complex trauma inflicted on a group people who share specific identity, affiliation, ethnicity, nationality or religious affiliation. It is the legacy of numerous traumatic events a community experiences over generations and encompasses the psychological and social responses to such events (Brave Heart, 1999, 2000; Brave Heart & DeBruyn, 1998).

The cumulative emotional and psychological wounding over the lifespan and across generations, emanating from massive group trauma. Historical unresolved grief is the grief that accompanies the trauma.

Over successive generations, Native American people have experienced a history of Ethnic and Cultural Genocide (Smith, 2003) as defined by a series of traumatic assaults which include:

- community massacres
- genocidal policies
- forced relocation
- prohibition of spiritual and cultural practices
- the forced removal of children through Indian boarding school policies (Stannard, 1992; Thornton, 1987).
Historical Trauma and Chronic Disease

Contemporary Native American communities suffer from some of the highest rates of lifetime traumatic events, including:

- **Interpersonal violence** (Greenfield & Smith, 1999)
- **Child abuse and neglect** (T.A. Cross, Earle & Simmons, 2000)
- **Poor health** (Walters, Simoni & Evans-Campbell, 2002)
- **Poor academic achievement**, and
- **An ongoing barrage of negative stereotypes** that disparage and undermine Native American societies and identity.
Linking Historical Trauma to the Contemporary Health of American Indians and Alaska Natives – Intergenerational Trauma

Trauma SHOCKS the brain; STUNS the mind; and FREEZES the body (Levine, 2017)

Acts of Genocide → Historically Traumatic Events → Cultural Disconnect from Wellness and Healing Practices

PTSD
HPA-axis Dysfunction
Prenatal Effects
Epigenetics/Genetics

1) Initial Traumatic Experience SHOCK
2) Inter-generational dysfunctional coping behaviors: neglect, abuse, violence, addictions → TOXIC STRESS → chronic diseases, addiction, affecting academic achievement, self-identity and self-esteem

1) Brain: ANS ↔ neocortex
2) Neurodevelopment
3) Endocrine System

Inter-generationally Learned Behaviors (Vygotsky/Cole):
Violence learned in the home, carried into adulthood (Egeland, 1993)

Biology
Culture

Health & Wellness

Cultural Crisis

Self-Determination

Self-Empowerment

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Health Disparities Associated With ACEs

Mechanism by which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

- Generational Embodiment / Historical Trauma
- Social Conditions / Local Context
- Adverse Childhood Experiences
- Disrupted Neurodevelopment
- Social, Emotional, & Cognitive Impairment
- Adoption of Health Risk Behavior
- Disease, Disability, & Social Problems
- Early Death

Cultural Augmentation

Individual Outcomes

Death

Conception
Return to BALANCE and NATURAL ORDER

Healing the nervous system - Autonomic Nervous System
  Sympathetic NS – calm: fight flight, freeze – and self-medication
  Parasympathetic NS – FOCUS on peace and calm
    Meditation – mindfulness – changes brain structure
    Therapeutic Talking Circle – Cognitive Behavioral Therapy
    Breathing – vagal nerve
    Gratitude/Prayer

Learning (Re-learning) Appropriate Coping Skills
  Focus on OBJECTIVITY (only the facts: assess → plan → action)
  Exercise new areas of the brain
    Calm the “Primitive Animal Brain” (fear, anger, & anxiety)
    Allow “Human Brain” to work and resolve problems
  Exercise Body: psychoactive properties (endorphins & enkephalins – natural opioid molecules in brain, pain relief)

Action and Activity – Resiliency and Recovery
  Everything we do has neurophysiological consequences.
  It’s good to listen, it’s good to watch – BUT NEED ACTION.
Fear/Pain-based emotional responses

Stimulus → Response → Consequences

Chaos

Mindfulness Practice and Experience (New Habits)

Therapy
Re-Charge
Healing

Natural Order

Wellness
• Balance
• Peace
• Content

Soothing Nervous System
Re-learn Responses
Behavior Modification – ACTIVE PROCESS (it doesn’t happen to you – you do it)

1. Mindfulness – focus: balance, pedaling, etc. (Pre-Frontal Cortex)
2. Repetition – habit development (Basal Ganglia)
3. New Habit is Formed – don’t even think about it, becomes reaction (focus A → B)
Sports Camps

Apply mechanics and form (best practices → efficiency and success)
Repetition → Train the Brain → Reaction (no time to “think”) – basil ganglia
Example of Behavior Modification
- Develop new habits/responses to external stimuli
Gary Leffew Bull Riding School – California

Understand the foundations for being successful
Work on mechanics and form – body movements (physics: balance forces)
Repetition – train the brain to respond to movement
Performance – subconscious response – habitual response
  - Don’t “think” about – learned response acquired through repetition.
  - This is behavior modification
SPIRIT = LOVE
- Warmth
- Light

CONNECT THROUGH PRAYER

WE ARE SACRED BEINGS TO TAKE LIGHT + WARMTH TO PLACES THAT ARE DARK AND COLD

The Way of the Warrior
Talking Circle: Similar to Cognitive Behavior Therapy (CBT)
The Power of Empathy