AGENDA

• Limitations & research challenges
• Overview of evidence & mechanisms
• Breakdown of CAM Tools
  • Chinese Medicine
    • Acupuncture & electro-acupuncture (TEAS)
  • Mindfulness & Psychotherapy
  • Mind-body Practices
    • Exercise, yoga, qigong, tai chi
    • Relaxation & massage
  • Nutrition & Supplementation
• CAM Study of note
• CAM/IM access disparities
LIMITATIONS & RESEARCH CHALLENGES

• Overall need for increased research funding
  • (NCCIH, VA, DOD)

• RCT model doesn’t work for acupuncture when control = “sham” acupuncture/acupressure; similar across other CAM modes

• Small sample sizes, short longitudinal time frames

• Need for replication by independent researchers
WHAT ARE COMPLEMENTARY & INTEGRATIVE PRACTICES

• Have origins outside allopathic medicine
• Include multi-modal approaches
• Provider-administered care
  • Acupuncture, chiropractic, naturopathic care
• Self-administered wellness practices
  • Yoga, meditation, taking dietary supplements
• Growing in popularity for pain management & SUD regulation
PHYSIOLOGY OF ADDICTION

• Areas of the brain implicated in the pathophysiology of addiction: the prefrontal cortex and amygdala (Kalivas & Volkow, 2005)

• Default Mode Network (DMN) / “Brain Activation” (Brewer et al., 2011)
  • Brain-based biomarkers for depression & SUD vulnerability
CAM MECHANISMS CONTRIBUTE TO OUD RECOVERY

• Increase parasympathetic nervous system response

• Decrease sympathetic nervous system’s activity

• Decrease the effects of stress and strain on the body

• Increase support, connection & self-efficacy
CHINESE MEDICINE

- NADA Protocol

- Transcutaneous electric acupoint stimulation (TEAS)
MINDFULNESS & PSYCHOTHERAPY

• Meditation

• Bio-feedback (as add-on to CBT or Twelve-step)

• Mindfulness-Based Cognitive Therapy (MBCT)

• Dialectical Behavioral Therapy (DBT)
EXERCISE & MOVEMENT

• Yoga (No definitive protocol—spiritual vs. secular?)

• Qigong & Tai Chi

• Walking
RELAXATION & HEALING TOUCH

• Therapeutic Massage

• Naturopathic & Osteopathic Manipulation
NUTRITION & SUPPLEMENTATION

• Magnesium

• Ibogaine
CASE STUDY: MINDFULNESS-BASED RELAPSE PREVENTION (MBRP)

• Witkiewitz K, Bowen S. (2010). Depression, craving, and substance use following a randomized trial of mindfulness-based relapse prevention

• 8-week, group-based psychoeducational intervention
  ▪ combines traditional cognitive-behavioral relapse prevention with meditation training and mindful movement
  ▪ goal is to help patients tolerate uncomfortable states, difficult emotions, without automatically reacting

• Delivered after intensive stabilization

• Efficacy RCT; control was treatment-as-usual

• N=168 patient with SUD, mean age 40.45 years, SD = 10.28; 36.3% female; 46.4% non-White

• Measures: depression relative to Beck’s depression scale, substance use via Timeline Follow-Back instrument

• Results showed the MBRP group had significantly less substance use at 2-month follow-up, explained by a weakened association between depressive symptoms and craving
CAM ACCESS & DISPARITIES

National Health Interview Survey (2011) Data Indicates:

- CAM use increases with income and educational attainment
- CAM/IM used most often by Non-Hispanic Whites (36%), followed by Hispanics (27%), then Non-Hispanic Black (26%) individuals
- Controlling for other socio-demographic factors the study found that Hispanic & Black patients use CAM less frequently, and are less likely to disclose to PCPs if they are using CAM
- Gardiner, et al., found that Non-Hispanic Whites are most likely to use herbal medicine, relaxation techniques, and Chiropractic care and attributed this to their relatively high costs and lacking insurance coverage
- Neiberg et al., has hypothesized these demographic differences of CAM/IM use are most associated with differences in availability, familiarity, transportation, and public health policies
REFERENCES


REFERENCES CON’T


ELECTRO-ACUPUNCTURE PILOT STUDY


- Pilot RCT, N = 48, randomly assigned to active or sham TEAS
- Received three 30-minute treatments daily for 3 to 4 days
- Methods: In active TEAS, current was set to maximal tolerable intensity (8–15 mA); in sham TEAS, it was set to 1 mA
- Result: 2 weeks post-discharge, participants in active TEAS were less likely to have used any drugs (35% vs. 77%, p < .05); Improvements in pain interference & physical health
- TEAS is an acceptable, inexpensive adjunctive treatment and feasible implementation to inpatient detoxification protocols, particularly for opioid regulation
AURICULAR ACUPUNCTURE


- Three-arm RCT, randomly assigned to acupuncture, Rest-Relaxation (RR) technique or usual care
- Measured reduction in craving and anxiety following 10-week intervention among homeless veterans who were in recovery from SUDs
- N=67, acupuncture (n=23), RR (n=23), usual care (n=21)
- Methods: Participants in the two intervention groups rated their degree of craving on a scale of 1–10 & anxiety on a scale of 1–4 before and after each intervention session
- Results: Craving and anxiety levels decreased significantly following one session of acupuncture (−1.04, \( p = .0001 \); −8.83, \( p < .0001 \)) or RR intervention (−.43, \( p = .02 \); −4.64, \( p = .03 \))
  - The level of craving continued to drop with additional intervention sessions (regression coefficient \( b = −.10, p = .01 \), and \( b = −.10, p = .02 \) for acupuncture and RR groups)
  - Number of daily practice days of RR-eliciting techniques is also associated with reduction in craving ratings (\( b = −.02, p = .008 \))
NADA PROTOCOL

- Sympathetic
- Choose One
- Shenmen
- Kidneys
- Lung
- Liver
YOGA


- 2 arm-RCT, N=38, 12-session yoga intervention (n=20), control (n=18), looking at women 18-65 with PTSD

- Methods used the AUDIT & Drug Use Disorders Identification Test (DUDIT) at baseline, post-intervention period and one-month follow-up

- Results both the yoga and control groups experienced improvements in re-experiencing PTSD symptoms
  - Substance use decreased in the yoga intervention group, while it remained stable in the control group
  - the yoga group demonstrated improvements in hyperarousal symptoms too
  - Despite strong reported interest in seeking psychotherapy support for SUD only 2 participants in the yoga group followed through on their desire to seek psychotherapeutic support
MASSAGE FOR HEROIN ADDICTION


- This study looked at a combination of Acupuncture, massage, and herbs for treatment of heroin withdrawal, all subjects met DSM-III diagnosis of opioid dependence.
- 2 arm RCT, N=109; 1st arm used Paidu-Yangsheng (herbal supplement) only, second arm was given the supplement plus acupuncture & massage.
- Outcome measures via the Opioid Withdrawal Syndrome Scale (OWS) at time of baseline, post-intervention, 12-days follow-up & 3-month follow up.
- Results showed that withdrawal symptoms in the acupuncture & massage group were superior to the mono-therapy group, particularly for reduction in abdominal pain, musculoskeletal pain, and insomnia regulation during withdrawal.
- The retention rate was also higher (37.5%) in the Ac.+Massage group vs. (28.5%) in the mono-therapy group. There was a statistically significant difference between the two groups (P<0.05).
MASSAGE THERAPY


- RCT comparing massage therapy to a "rest" control condition in patients undergoing alcohol detoxification in an in-patient setting
- N = 50, all patients with alcohol dependence (41 males, 9 females)
- Intervention used chair massage that covered back, shoulder, head, and neck massage
- Outcome measures included: Alcohol Withdrawal Scale, respiration, pulse rate, and subjective patient evaluation
- Massage group showed reductions in pulse rate on 3 of the 4 days of treatment. Massage was also more effective in reducing Alcohol Withdrawal Scale scores in the early stages of the detoxification process.
- Respiration in the massage group was reduced toward the end of the detoxification admission.