Complementary and Alternative Medicine: Holistic Wellness Treatment Outcomes

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1. Define Complementary and Alternative Medicines (CAM) / Complementary Integrative Health (CIH).

2. Review three CAM/CIH approaches: mindfulness, acupuncture, and yoga.

3. Present the integration of CAM in health care and summarize efficacy research.

4. Describe a recent pilot study that examined the effect of yoga on PTSD.
My Background
Terminology

* Complementary and Alternative Medicine (CAM)
* Complementary and Integrative Health (CIH)
* Integrative Health
* National Center for Complementary and Integrative Health
Complementary Health Approaches

- Natural products
- Mind/Body Practices
- Other
  - Spirituality and Religious Practices
Who is Using Mind Body Therapies (MBTs)?

- Used by 16.6% of adults in the United States
- Most commonly used for anxiety/depression and musculoskeletal pain syndromes.
- More than 50% of respondents used MBT in conjunction with conventional medical care
- 20% used MBT for conditions they thought conventional medicine would not help.
- High rates (68–90%) of perceived helpfulness of MBT for specific medical conditions were found.

Bertisch 2009
Let’s Talk Treatment

Mindfulness
Acupuncture
Yoga
What is Mindfulness?
Mindfulness means paying attention in a particular way; on purpose, in the present moment, and non-judgmentally.

- Jon Kabat-Zinn
What is Mindfulness?

Mind Full, or Mindful?

Your body is present. Is your mind?

Past Present Future
Mindfulness in Clinical Practice

* Mindfulness Based Therapies (MBT) = Dedicated protocols
* 8-10 weeks, 1.5-2.5 hours each week; homework
* Mindfulness Based Stress Reduction (MBSR)
* Mindfulness Based Cognitive Therapy (MBCT)
* Mindfulness Based Relapse Prevention (MBRP)

Fjorback 2011
Khoury 2013
Interventions (MBI) = Other protocols use mindfulness as a component
* Breathing exercises, body scan meditations, and guided imagery, gentle yoga movements,
* “Zone in”
* Acceptance and Commitment Therapy (ACT)
* Dialectical Behavior Therapy (DBT)

Fjorback 2011
Khoury 2013
Mindfulness in Research

**MBTs in Primary Care Meta-analysis**

* 6 RCTs n= 553
* MBI compared with control conditions
  * Conditions:
    * Chronic musculoskeletal pain, mood disturbance, stress and chronic illness, recurrent depression, medically unexplained symptoms
  * Adults, mostly female, aged 43—69
  * Moderate effects for improving general health
  * Moderate effects for mental health outcomes
  * Small effects for improving quality of life

**MBTs Comprehensive Meta-analysis**

* 209 studies; n= 12,145
* Pre-/post- or controlled effects of MBTs
  * Conditions:
    * Mood disorders and cancer, anxiety, pain, alcohol/substance use, fibromyalgia, overweight/obesity, social anxiety, HIV, PTSD, and headache.
  * Population: Diverse age, gender, clinical profile
  * Moderate effects in pre-/post- studies
  * Small to Moderate effects compared with other active treatments
  * Not more efficacious than CBT
  * Effects for psychological disorders (g = 0.57) > physical or medical conditions (g = 0.43)
  * Mindfulness improved and gains were maintained at follow up

Demarzo 2015
Khoury 2013
Mindfulness in Research

* Treatment Outcomes (RCTs)
  * Associated with lower negative and higher positive affect
  * Improved Emotion Regulation
  * Neurophysiological Changes
    * Increases in gray matter
    * Increased left side cortical activation
    * Increased immune response
    * Structural changes in the amygdala

Brockman 2016
Davidson 2003
Hölzel 2010
Khoury 2013
What is Acupuncture?
What is Acupuncture?

- Ancient treatment method practiced in China, Japan, Korea, and Taiwan... and now the US!
- Fine gauge, sterile, stainless steel needles placed at acupoints beneath the skin’s surface
- ~365 acupoints located at meridians
- Restore balance & regulate the body’s energetic system

Sierpina 2005
What is Acupuncture?
Types of Acupuncture
* Traditional acupuncture
* Electro-acupuncture
* Laser acupuncture
* Auricular acupuncture
* Reflexology
* Acupressure
* Battlefield Acupuncture (VAMC and DoD)

Format
* Needles placed and left to sit before being removed
* Sessions are 30-75 minutes
* Can be administered as a group

Sierpina 2005
Acupuncture in Research

Meta-analyses and Systematic Reviews

**Physical Health Conditions**
- Spinal cord injury
- Pain
- Muscle spasticity / cognitive impairment following stroke
- Post-operative back pain
- Military personnel performance
- Headache
- Carpal tunnel syndrome

**Mental Health Conditions**
- Substance use disorders/smoking cessation
- Depression
- ASD
- Insomnia
NIH, WHO and American Academy of Medical Acupuncture have identified conditions effectively treated with acupuncture based on the research.

Health care utilization study: "Acupuncture is an economic substitute for some medical services and pharmaceuticals."

Sierpina 2005
Acupuncture in Research Summarized

* Divided into 3 groups:
  * Diseases in which acupuncture efficacy had been previously proven
    * back pain, neck pain, headaches, migraine, nausea and vomiting, labor pain
  * Conditions needing further investigation
    * induction of labor, primary dysmenorrhea, cancer pain, rheumatoid arthritis, joint osteoarthritis
  * Conditions for which efficacy has not yet been confirmed
    * insomnia (4 studies), epilepsy, VD, depression, schizophrenia, cocaine dependence, ASD, smoking cessation, bell’s palsy, dysphagia in stroke, asthma, shoulder pain, RLS, glaucoma, myopia, IBS, elbow pain, Polycystic ovarian syndrome, uterine fibroids, pain in endometriosis, IVF
What is Yoga?
What is Yoga?

Mantras
- OM
- HAM
- YAM
- RAM
- VAM
- LAM

Names
- Sahasrara
- Ajna
- Vishuddha
- Anahata
- Manipura
- Swadhisthana
- Muladhara

[Image of a person meditating in the background]
What is Yoga?

* Yoga
  1. Postures/poses/asana
  2. Breath work/pranayama
  3. Meditation/mantra
  4. Relaxation

* The creation of balance, strength, and flexibility through performance of poses or postures, each of which has specific physical benefits.
Yoga in Clinical Practice

* Postures: flexibility, strength, coordination, balance, respiratory function, self-efficacy

* Breathing: emotion regulation, stress regulation, resilience, equanimity, self-efficacy

* Meditation: transcendence, unitive state, flow, transformation, sense of purpose

* Relaxation: attention, mindfulness, concentration, cognition, meta-cognition

Khalsa 2016
Yoga in Clinical Practice

Format
* May use all or some of the components
* ~1 hour a week
* 60-90 minutes
* Take home components
* Modifications tailored to ability level

Types of Yoga
* Chair yoga
* Trauma sensitive yoga
* Individual/group
* Caregiver Yoga
* Nidra/iRest
# Yoga in Research

**Meta-analyses and Systematic Reviews**

## Physical Health Conditions
- Various Pain Conditions
- Fatigue
- Cardiovascular endurance
- Pulmonary functioning
- Glucose regulation
- Menopause
- Cancer
- Epilepsy
- Physical functioning/fitness
- Blood pressure/HTN
- MS

## Mental Health Conditions
- Quality of life
- Stress
- Depression
- PTSD
- Schizophrenia
- Anxiety
- HRV
- Cognition
- Managing chronic disease
- Substance Use
Yoga in Research

**Yoga Systematic Review and Meta-analysis**

* 25 RCTs n= 1,339
* Yoga with poses and breath work
* Control conditions: exercise, attention, psychotherapy, untreated controls
* Adults (18-65) with mental health conditions
* Outcome: disorder specific symptom severity
  * Large and significant effect with respect to symptom severity
  * Small but significant effects compared to attention control
  * Small but significant effects compared to exercise control
  * No difference found compared to standard psychotherapy
Yoga in Research

* Treatment Outcome Research:
  * Gene transcription
  * Quality of life improvements
  * Neurophysiological changes
  * Immunology improvements
Limitations

- No set treatment – “yoga” can mean many different things
- Small studies with instances for bias
- Limited accessibility to much research
- Overlap with other complementary health approaches, esp. mindfulness
- Quality of the studies needs improvement

As a curative treatment, much remains to be determined; As an adjunctive treatment there is ample support
The Impact of Trauma Sensitive Yoga on Response Inhibition and Cortisol Levels in Veterans with PTSD

A Pilot Study
Aim and Methods

Aim

* Examine the effect of yoga on the body’s stress response system via:
  * Cognitive Performance
  * Self-report Measures
  * Saliva Cortisol Samples

Method

* Providers referred Veterans to the study;
* **Inclusion Criteria:** PTSD diagnosis in their chart, physically able, followed by MH provider
* **Exclusion Criteria:** Psychosis and recent/current substance dependence
* 10 weeks of outpatient Trauma Sensitive Yoga
* Pre and Post-Intervention Assessment
# Pre and Post Measures

## Cognitive Performance
- DKEFS-CWIT
- Trail Making Test
- Digit Span

## Self-Report MH
- PCL-5
- BDI-II
- MSNQ
- SLS
- PSQI
- PBYQ
- TPQ

## Cortisol
- 3 samples
  - Wakening
  - 30 min post
  - Bedtime
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<th></th>
<th>Men (n = 10)</th>
<th>Women (n = 7)</th>
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<td>Age in Years, Mean (SD), (Range 43-69)</td>
<td>56.1 (9.47)</td>
<td>58 (4.32)</td>
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<td>Non-Hispanic</td>
<td>10</td>
<td>9</td>
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<td>Years of Education, Mean (SD), (Range 12-21)</td>
<td>14 (2.64)</td>
<td>15.14 (2.73)</td>
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<td>Comorbid Psychiatric Conditions</td>
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<td>Anxiety Disorders</td>
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Cognitive Outcome Measures

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<th>Measure</th>
<th>Pre</th>
<th>Post</th>
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<tr>
<td>Response Inhibition</td>
<td>65.88</td>
<td>60.36</td>
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<tr>
<td>Switching Set</td>
<td>10.11</td>
<td>10</td>
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<tr>
<td>Concentration/Memory</td>
<td>24.35</td>
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*p = 0.05
**Self-Report Outcome Measures**

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<th>Pre</th>
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<tr>
<td>PTSD*</td>
<td>44.24</td>
<td>36.77</td>
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<tr>
<td>Depression**</td>
<td>25.06</td>
<td>18.88</td>
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<tr>
<td>Cognitive Complaints**</td>
<td>33.59</td>
<td>29.29</td>
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<tr>
<td>Life Satisfaction**</td>
<td>14</td>
<td>18.41</td>
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<tr>
<td>Sleep Complaints**</td>
<td>13.88</td>
<td>12.06</td>
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</tbody>
</table>

*p = 0.017; **p ≤ 0.05
Perceived Benefits

- Shape
- Improves mood
- Togetherness
- Happiness
- Cope with stress
- Insecurity
- Relaxed
- Spiritual meaning
- Soul nourishment
- Communication worsens
- Coordination
- Harmony
Feedback and Qualitative Responses

Positive themes:
* Change
* Calming/Relaxation
* Optimism

Negative Themes:
* Soreness
* Logistics
* Access

Suggestions:
* More frequent classes
* Longer classes
* Handouts for take home

Quotes:
* “That affirmation – ‘I own my place on this earth’ changed my life. I want that emblazoned everywhere I look.”
* “Nancy was awesome and made sure we honored our bodies”
Conclusions

**Treatment Outcomes**
* Verbal inhibition improves
* Subjective cognitive complaints decreased
* Symptoms of PTSD, depression improved
* Ratings of sleep quality improved
* Ratings of quality of life improved

**Helpfulness/ Likeliness to Use & Benefits**
* High ratings of helpfulness
* Moderate ratings of likeliness to use
* Perceived benefits highlight functional, social, and emotional difficulties
Limitations & Discussion

- All of these veterans were involved with additional PTSD treatments
- They were self or provider-referred for the study
- Screen score at the time of entrance to the study vs. diagnosis in the chart
- Regression Modelling
- Control or comparison group
Summary

- Defined CAM/CIH
- Described Mindfulness, Acupuncture, Yoga
  - Used often as adjunctive therapies for physical and mental health conditions
- Efficacy and Effectiveness data is emerging showing preliminary support
- Yoga pilot presented
Research on CAM is growing; clinical presence of CAM is growing.

IH approaches have direct benefits to emotion, behavior, biological, and symptom change for mental and physical health.

There is research supporting quality of life improvements.

These treatments are not disease specific, and are appropriate for clinical and non clinical populations.

High quality research is still needed.
CIH at the Portland VA

* 15 minute guided imagery health break
* Acupuncture/Battle-Field Acupuncture
* Aromatherapy
* Cooking Classes
* Employee Wellness
* Gardening
* Healing Touch
* MBSR
* Music/Sound Therapy
* Spiritual Care
* Tai Chi
* Yoga
* Biofeedback
CIH at OHSU

* OHSU Brain Institute/Neurology Wellness Institute
  * CAM for neurological disorders:
    * Acupuncture
    * Electro-acupuncture
    * Cupping
    * Supplements assessment/recommendations

* ORCCAMIND –
  * NCCAM funded center for mind-body medicine research for various conditions
CIH in Portland

- School of Traditional Western Herbalism
- The Wellspring School for Healing Arts
- East West College
- Oregon College of Oriental Medicine
- National University of Natural medicine
Thank you!

Contact Me with Questions or Comments

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