Complementary and Alternative Medicine and Occupational Therapy

Franklin Stein, PhD, OTR/L, FAOTA, Editor
Occupational Therapy International
fstein@usd.edu

Introductory Questions Relating CAM to Occupational Therapy

- Is CAM congruent with the underlying values of occupational therapy?
- How does CAM fit into the use of meaningful and purposeful activities that defines occupational therapy?
- "Who owns CAM?" What health professions are duly prepared and legally certified to carry out CAM?
- What are the specific expertise, licensing and certification requirements for using CAM?
Factors in Treatment Effectiveness

- Therapeutic relationship, alliance
- Client diagnosis, symptoms, problems
- Intervention, operational definition
- Context, environment, socio-economic

American Occupational Therapy Association Position Paper (2011)

- "Occupational therapy practitioners may utilize CAM in the delivery of occupational therapy services when they are used as preparatory activities to facilitate the ability of clients to engage in their daily life occupations"

Learning Objectives

- Define Complementary and Alternative Medicine (CAM)
- Describe six principles underlying CAM
- Discuss the origins of CAM
- Discuss the major CAMs used in occupational therapy and recent research evidence
Definition of Complementary and Alternative Medicine (2013)

- Complementary and alternative medicine (CAM), as defined by NCCAM, is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine and the Allied Health professions.

Increasing Prevalence of CAM

- WHO estimates 80% of world population uses CAM
- In the US, over 38% use CAM annually
- Herbal use and vitamin supplements widely used
- Eighty three million adults in the US (2007) spent 33.9 billion dollars on CAM

Reasons for CAM

- Rising costs of conventional medicine
- Scientific evidence for CAM
- Impersonal care by primary physician
- Recognition of life style factors in disease
- Patient control of treatment
Client Therapist Relationship

- The therapist should establish an alliance with the client in using CAM. In this partnership the therapist recognizes the client’s needs and wishes regarding choices in interventions.

SIX PRINCIPLES

There are six principles underlying the practice of CAM that are generally accepted by holistic practitioners (Novey, 2000).

PRINCIPLE 1: Innate healing

The body has an innate healing response that can be reinforced through nutrition, exercise, occupation and mind-body medicine. There is a wisdom of the body.
This ethical principle is important when applying CAM as well as traditional medicine. The interactions between CAM and other interventions such as supplements and medications can potentially cause adverse effects.

PRINCIPLE 2: “Do no harm”

The clinician should attempt to identify and treat the causes of illnesses since symptoms are usually expressions of the body’s attempt to heal itself. Causes may be related to physical, mental-emotional and spiritual factors.

PRINCIPLE 3: Treat the cause

Prevention, the ultimate goal of CAM is accomplished by a change of life-style in diet, stress, exercise and taking responsibility for one’s health. The emphasis is on building health.

PRINCIPLE 4: Prevention
PRINCIPLE 5:  Be a teacher

The clinician applying CAM is a teacher and encourages the client to incorporate healthy practices into one’s lifestyle and everyday schedule.

PRINCIPLE 6: Treat the whole person

The clinician treats the whole person by taking into consideration the interaction of the physical, spiritual, mental, emotional, genetic, environmental and social factors in a person’s life.

Historical Origins of CAM

- Chinese Medicine
- Naturopathic Medicine
- Ayurveda
- Osteopathy, Chiropractic
- Homeopathy
- Mind/Body Medicine
- Folk Medicine
### Naturalistic Approaches Related to CAM

- Exercise
- Diet
- Family support
- Continuity of Daily Life Patterns
- Health Perspective
- Realistic life goals
- Music and Dance

### CAM Related to Occupational Therapy

- Active body work,
- Passive body work,
- Cognitive control,
- Physical agent modalities,
- Creative arts.

### Active Body Work

- Constraint Induced Movement Therapy
- Yoga
- Tai Chi
- ROM Dance
- Aqua Therapy
- Progressive Relaxation
- Pet and Hippotherapy
Passive Body Work

- Massage
- Myofacial Release
- Acupuncture and acupressure
- Passive Range of Motion Exercises
- Therapeutic Touch
- Reiki

Cognitive Control

- Biofeedback
- Behavioral Relaxation Training
- Meditation
- Guided Imagery
- Dream Therapy
- Humor

Physical Agent Modalities (PAMS)
AOTA Position Paper (2012)

Electrotherapeutic agents:
- Neuromuscular electrical stimulation
- Trancutaneous electrical nerve stimulation
Physical Agent Modalities (PAMS)  
AOTA Position Paper (2012)

- Superficial thermal agents: 
  Hydrotherapy, fluidotherapy
- Deep thermal agents: 
  Ultrasound, Diathermy,
- Mechanical devices: 
  Exercise machines

Creative and Related Arts

- Storytelling
- Psychodrama
- Music
- Dance
- Poetry
- Art Therapy
- Bibliotherapy
- Horticulture

Credentialing and Therapist Expertise

- Credentialing refers to the process of establishing practitioners’ qualifications for providing services to patients. In both conventional medicine and CAM, states and professional organizations have this responsibility. It varies greatly from state to state and from one profession to another.
Credentialing

- Licensure by states varies widely and currently includes Acupuncture, Chiropractic, Massage, Homeopathy, Naturopathy
- Registration is the process of registering a practice and disclosing information about training and experience to a state consumer protection agency and consumers
- Certification by professional organizations is independent of state licensing efforts

Some of the Most Common Conditions Treated by CAM as reported by NIH

- Back problems
- Age Related disabilities
- Pregnancy related
- Rheumatology and Joint Pain
- Cancer
- Psychosocial

Rationale for Applying CAM

- CAM should be conservative with little side effects
- Clients give positive feedback
- CAM should have a standardized protocol
- CAM should be easily implemented
- CAM should not be expensive
- There should be a scientific explanation underlying intervention
Levels of Evidence Applied to OT

- **Level I**: Systematic review or meta-analysis of randomized controlled trials (RCT's)
- **Level II**: Single Randomized Controlled Trial (RCT)
- **Level III**: Well-designed studies without randomization, quasi-experimental, or correlational
- **Level IV**: Systematic reviews of descriptive and qualitative studies
- **Level V**: Evaluation by clients, occupational therapists, family, and other health professionals

Evidence-Based Practice

- Theory explains CAM
- Case study evidence
- Case study with control
- Retrospective studies
- Single-blind studies
- Double-blind with random selection

Evidence–based practice (EBP)

- EBP is the scientific use of current best evidence in consultation with the client to decide upon the most effective options.
- Current best evidence is up–to–date information from relevant, valid, research about the efficacy of different interventions and the cost benefit ratio
EBP Methods

- Purpose: To help identify which forms of health care work, which does not, and which are even harmful.
- Results from similar randomized trials are brought together and assessed to evaluate and demonstrate treatment effectiveness.

Meta-analysis

- Are the results of combining studies of random controlled trials (RCT) to produce an overall statistic. The effect size is used in pooling the data from related studies.

The Cochrane Collaboration?

The Cochrane Collaboration published by Wiley produces and disseminates systematic reviews of healthcare interventions and promotes the search for evidence in the form of clinical trials and other studies of interventions.
Tai chi as an intervention to improve balance and reduce falls in older adults: A systematic and meta-analytical review


---

Tai chi and Balance

A systematic review was carried out by two independent reviewers among nine electronic databases to identify randomized controlled trials (RCTs) that examined the effects of tai chi on balance improvement and fall reduction in older adults using such key words as tai chi, falls, balance, and randomized trial.

---

Results of Tai Chi Study

Based on 13 RCTs, indicated that tai chi was effective in improving balance of older adults but may not necessarily be superior to other interventions. Results also showed that in the absence of other interventions, tai chi reduced falls in the non-frail elderly. Tai chi is recommended as an alternative treatment for improving balance to reduce falls.
Constraint-induced movement therapy (CIMT) for young children with cerebral palsy: Effects of therapeutic dosage


CIMT for Children

To compare effects of 2 dosage levels of constraint-induced movement therapy (CIMT) for children with hemiplegic cerebral palsy (CP). It was hypothesized that high-dosage CIMT would produce larger benefits than moderate-dosage. Three sites enrolled a total of 18 children (6 children per site from 3-6 years) with CP.

Children were randomly assigned to CIMT for 21 days for either 6 hours/day (high-dosage=126 hours) or 3 hours/day (moderate-dosage=63 hours); both groups wore a long-arm cast. Evaluators (blind to dosage) assessed children 1-week prior, then 1-week and 1-month after treatment with the Assisting Hand Assessment (AHA), and other standardized measures.
CIMT for Children: Results
Overall, both groups, moderate and high dosages showed comparable improvements at 1-week and 1-month post-treatment. The findings refuted the hypothesis of differential dosage benefits. Future research should address long-term effects, enroll larger and more diverse samples.

Effects of progressive muscle relaxation on state anxiety and subjective well-being in people with schizophrenia: a randomized controlled trial


Progressive Muscle Relaxation
Purpose: To examine the efficacy of a single progressive muscle relaxation session compared with a control condition on state anxiety, psychological stress, fatigue and subjective well-being in patients with schizophrenia.
PMR Participants

- Sixty-four out of 88 eligible patients with schizophrenia were randomly assigned to either a single progressive muscle relaxation session during 25 minutes or a resting control condition with the opportunity to read for an equal amount of time.

PMR Results

Progressive muscle relaxation, was highly effective in decreasing state anxiety, psychological stress and fatigue and in increasing subjective well-being in individual participants (n=27), with a diagnosis of schizophrenia.

Effect of guided relaxation and imagery on falls self-efficacy: a randomized controlled trial.

Guided Relaxation and Imagery

PURPOSE: To examine the effects of guided relaxation and imagery (GRI) on improvement in falls self-efficacy in older adults who report having a fear of falling.

Guided Relaxation and Imagery: Subjects

- Ninety-one men and women aged 60 to 92. Participants were randomized to listen to a GRI audio compact disk (intervention group) or a guided relaxation audio compact disk and music of choice (control group) twice a week for 6 weeks for 10 minutes per session.

Results Guided Imagery (GRI)

- GRI participants reported greater improvements on the outcome measures than the guided relaxation and music-of-choice group. It is concluded that GRI is an effective, simple, low-cost tool for older adults to improve falls self-efficacy and leisure time exercise behaviors.
Comprehensive Review of Health Benefits of Qigong and Tai Chi.


Tai Chi and Qigong

This review examined the evidence for achieving outcomes from randomized controlled trials (RCTs) of both. The key words tai chi, and qigong were entered into electronic search engines for the Cumulative Index for Allied Health and Nursing (CINAHL), Psychological Literature (PsychInfo), PubMed, Cochrane database, and Google Scholar. RCTs reporting on the results of Qigong or Tai Chi interventions in peer reviewed journals published from 1993–2007.

Results Tai Chi Qigong

- 79 articles met the inclusion criteria. 9 outcome categories included: bone density (n=4), cardiopulmonary (n=19), physical function (n=16), falls and related risk factors (n=23), Quality of Life (n=17), self-efficacy (n=8), patient reported outcomes (n=13), psychological symptoms (n=27), and immune function (n=6).
- Research demonstrated consistent, significant results for a number of health benefits in RCTs, recognizing the similarity and equivalence of Qigong and Tai Chi.
Summary on CAMs and Occupational Therapy

CAMs and occupational therapy are evolving fields that in the last fifty years have changed dramatically in the selection of interventions and the application of scientific research to validate usage in OT practice.

Questions?

Thank you!

Contact info: fstein@usd.edu