The Road to Incorporating Yoga Therapy Into Healthcare: The Role of Science and Research

IAYT Symposium on Yoga Therapy and Research
June 16, 2017

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Yoga and Yoga Therapy
Yoga Alliance/Yoga Journal Survey 2016

Practicing = 36.7 M
Likely to try = 83.3 M

From: http://www.yogajournal.com/yogainamericastudy/
Yoga Alliance/Yoga Journal Survey 2016

Yoga Practitioners
(in millions)

From: http://www.yogajournal.com/yogainamericastudy/
The Professional Transformation of Yoga into Mainstream Society

Public Schools, Workplaces, Healthcare

Ashrams, Studios, Yoga Centers, Gyms, Spas
The Professional Transformation of Yoga into Mainstream Society

Public Schools, Workplaces, Healthcare

Research

Ashrams, Studios, Yoga Centers, Gyms, Spas
Rationale for Yoga in Modern Healthcare
Non-communicable Diseases (NCDs)

…NCDs are the leading cause of death in the world…

In most middle- and high-income countries NCDs were responsible for more deaths than all other causes of death combined...

Noncommunicable Diseases, Country Profiles, World Health Organization, 2011

…NCD deaths are projected to increase by 15% globally between 2010 and 2020 (to 44 million deaths).

Global status report on noncommunicable diseases 2010 World Health Organization
Stress Awareness Worldview
The Acute Care Model

- Focused on treatment and/or intentional suppression of symptoms at the expense of underlying causes and contributing factors
- Dominated by a disease-focused approach rather than a patient-centered holistic approach
- Highly invested in pharmaceutical, surgical and other highly technological diagnostic and treatment strategies
- Incentivized to emphasize speed, high volume, and immediate symptom relief
- Responsibility for healthcare is primarily on the provider
- Prevention and health maintenance is not emphasized
Health Care/System Redesign

Health care/system redesign involves making systematic changes to primary care practices and health systems to improve the quality, efficiency, and effectiveness of patient care.

Why Is Health Care/System Redesign Important?

Chronic diseases such as heart disease, stroke, cancer, and diabetes are among the most common, expensive, and preventable health problems Americans experience. According to the Institute of Medicine, evidence has shown that half of these Americans are not receiving good care for chronic diseases. The current structure of America's health care system makes it difficult for patients to access affordable, effective care.
Exhibit 1. Health Care Spending as a Percentage of GDP, 1980–2013

Life expectancy vs. health expenditure over time (1970-2014)

Health spending measures the consumption of health care goods and services, including personal health care (curative care, rehabilitative care, long-term care, ancillary services and medical goods) and collective services (prevention and public health services as well as health administration), but excluding spending on investments. Shown is total health expenditure (financed by public and private sources).

Data source: Health expenditure from the OECD; Life expectancy from the World Bank. Licensed under CC-BY-SA by the author Max Roser. The data visualization is available at OurWorldinData.org and there you find more research and visualizations on this topic.
FIGURE 1. Risk of noncommunicable disease increases along a trajectory through the life course, contrasting with models on the basis of infectious disease. The inherited, fixed genetic variation makes only a small contribution to later risk. In addition, because they occur too late, adult lifestyle interventions reduce risk to only a small degree or transiently. The maximum effect will be gained from timely interventions in early life when plasticity permits a sustained reduction in the trajectory of risk to be attained.
Research on Yoga for Stress, Awareness, Worldview
Reasons for Practice in a Beginners Program

Stress in Beginner Yoga Students

Stress in Occupational Setting

Stress in Frontline Professionals

N=71 from fields of education, healthcare, and corrections in a residential 5-day Kripalu program

Yoga as an Alternative and Complementary Approach for Stress Management: A Systematic Review

Manoj Sharma, MBBS, MCHES, PhD, FAAHB

Abstract
Stress has become a global public health problem. Yoga offers one possible way of reducing stress. The purpose of this study was to look at studies from 2011 to May 2013 and examine whether yoga can be an efficacious approach for managing stress. A systematic search of Medline, CINAHL, and Alt HealthWatch databases was conducted for quantitative articles involving all schools of yoga. A total of 17 articles met the inclusion criteria. Six of these were from the United States, 3 from India, 2 from the United Kingdom, and 1 each from Australia, Brazil, Germany, Iraq, Sweden, and Taiwan. Of the 17 studies, 12 demonstrated positive changes in psychological or physiological outcomes related to stress. Despite the limitations, not all studies used a randomized controlled design, had smaller sample sizes, had different outcomes, had nonstandardized yoga intervention, and had varying lengths, yoga appears to be a promising modality for stress management.

Keywords
yoga, mind-body interventions, stress, anxiety

Received May 28, 2013. Accepted for publication August 1, 2013.
Mindfulness in Yoga Practitioners

Positive Psychological Changes in Musicians with Kripalu Yoga

Kripalu Rise Program in the Workplace

From: Trent N, Dusek J, Miraglia M, Pasalis E, Khalsa SBS, unpublished data.
Subjective Effects

- Became aware of a new reality
- Felt a personality change
- Experience resulted in change in life
- Experience of oneness
- In touch with divine or spiritual

### Table 4: Bivariate correlations: Hatha yoga experience with psychological outcomes

<table>
<thead>
<tr>
<th>Measure</th>
<th>Current hours per week</th>
<th>Total lifetime hours</th>
<th>Total calendar years</th>
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<tbody>
<tr>
<td>Positive psychological attitudes</td>
<td>209 0.28***</td>
<td>201 0.32***</td>
<td>201 0.19**</td>
</tr>
<tr>
<td>Transcendence</td>
<td>211 0.33***</td>
<td>203 0.28***</td>
<td>203 0.18**</td>
</tr>
<tr>
<td>Mental mastery</td>
<td>211 0.19**</td>
<td>203 0.18**</td>
<td>203 0.08</td>
</tr>
<tr>
<td>Subjective vitality</td>
<td>211 0.22***</td>
<td>203 0.20**</td>
<td>203 0.13</td>
</tr>
</tbody>
</table>

**P ≤ 0.01; ***P < 0.001

Self-transcendence in Yoga Practitioners

Spirituality in Yoga Practitioners

Positive Psychological Changes in Musicians with Kripalu Yoga

Yoga Practices
Postures, Breathing, Relaxation, Meditation

Fitness
↑Flexibility
↑Strength
↑Coordination/Balance
↑Respiratory Function
↑Self-Efficacy

Self-Regulation
↑Emotion Regulation
↑Stress Regulation
↑Resilience
↑Equanimity
↑Self-Efficacy

Awareness
↑Attention
↑Mindfulness
↑Concentration
↑Cognition
↑Meta-cognition

Spirituality
↑Transcendence
↑Unitive State
↑Flow
↑Transformation
↑Life Meaning/Purpose

Global Human Functionality
↑Physical & Mental Health, ↑Physical, Mental, Emotional Performance,
↑Positive Behavior Change, ↑Social Responsibility, Values, Relationships,
↑Quality of Life, ↑Life Purpose & Meaning, ↑Spirituality
Yoga Therapy Research
Chronology of Yoga Therapy Research

Yoga Research Journals

- Yoga Mimamsa (1924)
- International Journal of Yoga Therapy (1990)
- Journal of Yoga and Physical Therapy (2011)
- International Scientific Yoga Journal SENSE (2011)
- International Journal of Yoga and Allied Sciences (2012)
- Journal of Advanced Research in Ayurveda, Yoga, Unani, Siddha and Homeopathy (2014)
- Journal of Yoga and Physiotherapy (2016)
- International Journal of Advanced Ayurveda, Yoga, Unani, Siddha and Homeopathy (2016)
- International Journal of Yoga, Physiotherapy and Physical Education (2016)
- MOJ Yoga & Physical Therapy (2016)
- International Journal of Yoga Natural Therapy (newly founded)
Yoga Therapy Research by Disorders

SYR 2017
October 16 - 18, 2017
Kripalu Center for Yoga & Health

SYR, Symposium on Yoga Research, is the West's foremost academic yoga research conference. SYR showcases some of the best new research and offers multiple poster sessions as well as ample opportunities to interact with other scientists, experts and professionals in the field. SYR 2017 will be held at the Kripalu Center for Yoga & Health in the beautiful Berkshires in western Massachusetts.
THE PRINCIPLES AND PRACTICE OF YOGA IN HEALTH CARE

The Principles and Practice of Yoga in Health Care is a professional-level textbook with contributions by multiple expert researchers and therapists in the field.

The book:
- brings together the science and the practice of yoga therapy
- supports the emergence of yoga therapy as a credible profession
- comprehensively summarizes research findings and their practical implications for professionals who use yoga in their practices
- includes chapters contributed by leading biomedical researchers of yoga
- reviews the scientific evidence base for yoga for a wide variety of medical conditions
- provides brief contributions by expert yoga therapists describing practical implementation issues relevant to yoga for specific conditions.

The editors include three eminent yoga therapy researchers and one renowned practitioner in the field. They have brought together an experienced team of researchers and yoga therapist contributors.

This book will prove essential to yoga therapists, physical therapists, medical doctors, psychologists and other health professionals interested in yoga as a therapeutic intervention.

Sat Bir Khalsa • Lorenzo Cohen
Timothy McCall • Shirley Telles

- 23 chapters with theory, rationale, research & practice
- ~60 chapter contributors, ~30 yoga therapist contributors
“…decrease use of medications, resulting in substantial cost savings for hospitals in the care of oncology patients.”
“Mind body interventions … have the potential to substantially reduce healthcare utilization at relatively low cost and thus can serve as key components in any population health and health care delivery system.”
Key Points

- From the perspective of the NHS, yoga intervention yields an incremental cost-effectiveness ratio of £13,606 per QALY, with the probability of being cost-effective of 72% at £20,000 per QALY.
- From the perspective of the society, yoga intervention is a dominant treatment over usual care alone.
- On the basis of this trial, 12 weekly group classes of specialized yoga are likely to be a cost-effective intervention for treating patients with chronic and recurrent low back pain.

Economic Evaluation

Ling-Hsiang Chuang, PhD,* Marta O. Soares, MSc;† Helen Tilbrook, MSc,‡ Helen Cox, MSc,§ Catherine E. Hewitt, PhD,∗ John Aglin, PhD,† Anna Semyonov, MSc,§ Alison Trewella, DBL, CSt,§ Ian Watt, MB, CHB,‡ and David J. Torgerson, PhD∗

Study Design. Multicentered randomized controlled trial with quality of life and resource use data collected.

Objective. The objective of this study was to evaluate the cost-effectiveness of yoga intervention plus usual care compared with usual care alone for chronic or recurrent low back pain.

Summary of Background Data. Yoga has been shown as an effective intervention for treating chronic or recurrent low back pain. However, there is little evidence on its cost-effectiveness. The data are extracted from a pragmatic, multicentered, randomized controlled trial that has been conducted to evaluate the effectiveness and cost-effectiveness of a 12-week progressive program of yoga plus usual care in patients with chronic or recurrent low back pain.

Methods. With this trial data, a cost-effectiveness analysis during the time period of 12 months from both perspectives of the UK National Health Service and the society is presented. Again, outcome measures are an incremental cost per quality-adjusted life-year (QALY).

Results. From the perspective of the UK National Health Service, yoga intervention yields an incremental cost-effectiveness ratio of £13,606 per QALY. Given a willingness to pay for an additional QALY of £20,000, the probability of yoga intervention being cost-effective is 72%. From the perspective of the society, yoga intervention is a dominant treatment compared with usual care alone. This result is surrounded by fewer uncertainties—the probability of being cost-effective reaches 95% at a willingness to pay for an additional QALY of £20,000. Sensitive analyses suggest the same results that yoga intervention is likely to be cost-effective in both perspectives.

Conclusion. On the basis of this trial, 12 weekly group classes of specialized yoga are likely to be a cost-effective intervention for treating patients with chronic or recurrent low back pain.

Keywords: yoga, low back pain, cost-effectiveness analysis.

Back pain represents a significant burden to the UK National Health Service (NHS) and society as a whole. Based on estimates in 1998 and updated to 2008, back pain costs the NHS and the health care sector £1.37 billion and £2.10 billion a year, respectively. In the UK health care system, the NHS is the main health care provider and the vast majority of services are free of charge at point of use, financed mostly by taxpayers’ money. However, there also exists a sector of private health care providers offering services at charge. Back pain is one of the most common conditions treated in primary care in the United Kingdom—about 2.6 million people seek advice about back pain from their general practitioner (GP) each year. It is also the main cause for work absenteeism, which results in productivity loss to society. Accounting for these productivity loss and non-health care costs, the burden of back pain increases £8.57 to £15.84 billion to the UK economy as a whole.

Yoga has been shown to be an effective intervention for improving back function in patients with chronic or recurrent low back pain. A recently conducted UK-based randomized controlled trial showed that on average, participants who received an intervention consisting of 1 yoga class per week during 12 weeks had improved back function at the end of 3 months (measured by Roland-Morris Disability Questionnaire, RMDQ), and the improvement remained at 12 month postrandomization. Other smaller randomized controlled trial studies in the literature also suggest the positive effects of yoga for patients with low back pain.** However, there is little evidence on its cost-effectiveness.

From the *York Trials Unit, Department of Health Sciences, The University of York, Heslington, York, United Kingdom; K Centre for Health Economics, The University of York, Heslington, York, United Kingdom; †Centre for Health Economics, University of York, Heslington, York, United Kingdom; ‡Multinational Efficacy Evaluation Project, York, United Kingdom; and ††Yoga Research Lab, York, United Kingdom.


The manuscript submitted does not contain information about medical device/drug trials.

Arthritis Research UK grant funds were received to support this work.

One or more of the authentic back/received or will receive benefits in personal or professional capacity from a commercial party related directly or indirectly to the subject of this manuscript, e.g., honoraria, gift, consultations, royalties, stocks, stock options, and/or decision-making position.

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“...if all 3 interventions are constrained by resources, medical yoga treatment is the optimal choice.”
Yoga for Health and Prevention
Yoga Practice Associations

<table>
<thead>
<tr>
<th>Health variable</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health</td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>38.8</td>
</tr>
<tr>
<td>Very good</td>
<td>46.3</td>
</tr>
<tr>
<td>Good</td>
<td>13.0</td>
</tr>
<tr>
<td>Fair</td>
<td>1.6</td>
</tr>
<tr>
<td>Poor</td>
<td>0.3</td>
</tr>
<tr>
<td>Smoking history</td>
<td></td>
</tr>
<tr>
<td>Never smoked</td>
<td>54.7</td>
</tr>
<tr>
<td>Quit smoking</td>
<td>43.3</td>
</tr>
<tr>
<td>Still smoking</td>
<td>2.0</td>
</tr>
<tr>
<td>Physical activity category</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>16.8</td>
</tr>
<tr>
<td>Moderate</td>
<td>37.9</td>
</tr>
<tr>
<td>High</td>
<td>45.3</td>
</tr>
</tbody>
</table>

Figure 2  Comparison of mental health (mental health measured using Mental Health Continuum-short form) of yoga practitioners to national norms (national norms from the Midlife in the United States (MIDUS) study).

Perceptions of Yoga on Health

Belief about Yoga and Health

- Yoga has helped me to attain or maintain a healthier weight
- My energy level is better because of yoga
- My sleep is better because of yoga
- I am happier because of yoga
- My health has improved because of yoga

Percent of Respondents Agreeing or Strongly Agreeing with the Belief

Medications in Yoga Practitioners

“The acute-feeling responses to the yoga classes were favorable and may have been a key contributor to participants' improved perceptions of ability, which may have further fostered adherence.”

“The participants reported an increased self-awareness as a result of their experience.”

Yoga in Medicine
United States
"Advancing integrative medicine and health through academic institutions and health systems."

WHO WE ARE

We've changed our name! The Consortium of Academic Health Centers for Integrative Medicine is now the Academic Consortium for Integrative Medicine & Health (The Consortium).

As an organization we are committed to sharing information and ideas, meeting challenges together in a process grounded by the values of integrative medicine, supporting member institutions, and providing a national voice for the advancement of integrative principles.

WHAT WE DO

The mission of the Consortium is to advance integrative medicine and health through academic institutions and health systems.
Bridging Research, Clinical Care, Education, and Policy
Green Valley Ranch Resort | Las Vegas, Nevada | May 17 - 20, 2016

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What does NCCIH do?
We conduct and support research and provide information about complementary health products and practices.

Research Results

- Human Body Microbes Make Antibiotics, Study Finds (September 11, 2014)
- Genetically Modified Yeast Strains Produce Opioid Drugs (August 24, 2014)
- Multiple 60-Minute Massages per Week Offer Relief for Chronic Neck Pain (June 2, 2014)
NCCIH Interactions
Medicare covers yoga for heart disease

By William Hudson, CNN

updated 8:26 PM EST, Mon February 27, 2012

(CNN) -- Frank Korona lives near the West Virginia-Pennsylvania border with his wife Kathy, in a house that he built with his own hands, on the same property where he grew up.

He served in the Army Special Forces in Vietnam. The Koronas have a long, proud tradition of military service, but then family’s...

STORY HIGHLIGHTS

- Dean Ornish Program for Reversing Heart Disease is covered by Medicare
- Patients do yoga, eat a plant-based, meatless diet and...
Yoga in Medicine
Veterans Administration
Yoga as a Tier 1 Intervention for Pain

Office of The Army Surgeon General

Pain Management Task Force

Final Report
May 2010

Providing a Standardized DoD and VHA Vision and Approach to Pain Management to Optimize the Care for Warriors and their Families
The topic was therapies such as meditation, massage, and yoga to help Veterans with PTSD. The goal was to explore the existing evidence on complementary and alternative medicine (CAM) for PTSD and forge a future research agenda.
Yoga Now Standard Treatment for Vets with PTSD

Yoga's not usually the first thing that springs to mind when thinking about treatment for post traumatic stress disorder in veterans. But from the Veterans Administration to the
Meditation, imagery, acupuncture, and yoga are the most frequently offered mind and body practices in the Department of Veterans Affairs.

Future research should include yoga as it is currently understudied among veterans and military personnel. [6 of 89 studies reviewed]
Participants rated massage, meditation, acupuncture, and yoga as priorities for promotion across the VHA.
...specific complementary therapies can help to alleviate symptoms such as pain and fatigue as well as help with psychological issues like post traumatic stress disorder (PTSD) and depression. Recognizing this, Veterans Administration (VA) hospitals and the War Related Illness and Injury Study Center (WRIISC) have made Integrative Medicine a high priority.
Complementary and Integrative Health

Complementary and Integrative Health (CIH) also referred to as Complementary and Integrative Medicine (CIM) is a growing area of Health Services Research in the Veterans Health Administration (VHA). Veterans are interested in having access to CIH as a part of their VHA health care, continuing CIH therapies established before VHA enrollment or initiating new CIH approaches within VHA. The Health Services Research and Development (HSR&D) service is interested in funding studies that examine the organization, delivery, and financing of CIH in VHA. This is especially true where there is sufficient evidence to support the efficacy, reliability, and safety of a CIH modality to improve the quality of healthcare for veterans, as noted from the perspectives of patients, caregivers, providers, and managers. Areas of focus include research on innovative methods to establish the efficacy of CIH approaches, comparative effectiveness research on CIH, and cost-effectiveness studies. Studies are encouraged that examine patient preferences for CIH therapies, work force preparation for the delivery of CIH, Veterans utilization of CIH within and outside the VA health care system, current incorporation of CIH in VHA clinical settings, barriers and facilitators of CIH in clinical practice within the VHA, and new methods of CIH implementation in VHA. The underlying objective of health services research in CIH/CIM is to understand and improve clinical decision-making and care, inform patients, provide additional treatment options to patients, evaluate changes in the health care system, and inform VA policymaking.

For general information about Complementary and Integrative Health, please contact:

Jeffrey P. Haibach, PhD, MPH  
Scientific Portfolio Manager  
Health Services Research and Development ()  
Email: Jeffrey.Haibach@va.gov
VA Patient Centered Care

Advancing Complementary and Integrative Health

Including CIH approaches into your daily health and wellness program is one way to help improve your overall health and well-being.
War Related Illness and Injury Study Center

STAR Well-Kit

The STAR Well-Kit: Tools for Healing (‘Simple Tools to Aid and Restore’) is a web-based toolkit for learning about wellness practices and Integrative Medicine tools for Veterans. The toolkit features Veterans describing their experiences of how Integrative Medicine tools and techniques may help. You can also follow along with brief demonstrations of various practices.

The STAR Well-Kit was created by the Veteran’s Health Administration’s (VHA) War Related Illness and Injury Study Center (WRIISC) with funding and support from the Office of Patient Centered Care and Cultural Transformation (OPCC&CT).

Introduction

If you’re not sure about trying Integrative Medicine practices and want to learn more, we encourage you to start with the 16 minute Introduction... (Scroll down if you are ready to try it out or view it on YouTube).

STAR Well-Kit: Complete Introduction

- Captions (SRT format)
- Captions (WebVTT format)
James Gordon – Soft Belly Breathing
James Gordon demonstrates a breathing exercise.
- Captions (SRT format)
- Captions (WebVTT format)

Richard Miller – Guided Meditation
Richard Miller demonstrates a guided meditation.
- Captions (SRT format)
- Captions (WebVTT format)

Nan Lu – Qigong and Energy Gates
Nan Lu demonstrates Qigong practices.
- Captions (SRT format)
- Captions (WebVTT format)

Danny O’Brien – Chair Yoga
Veteran Danny O’Brien demonstrates chair yoga.
- Captions (SRT format)
- Captions (WebVTT format)

Kim Wade – Mindful Hatha Yoga
Kim Wade demonstrates mindful hatha yoga, a type of yoga.
- Captions (SRT format)
- Captions (WebVTT format)

Amy Dickinson – Yoga, Breathing, Stretching
Veteran Amy Dickinson discusses benefits of yoga breathing.
- Captions (SRT format)
- Captions (WebVTT format)

Ben King – Deep Breathing
Veteran Ben King discusses benefits of deep breathing.
- Captions (SRT format)
- Captions (WebVTT format)

Patrick Crehan – Mindfulness Meditation
Veteran Patrick Crehan discusses benefits of mindfulness meditation.
- Captions (SRT format)
- Captions (WebVTT format)

Brian Bittings – Qigong
Veteran Brian Bittings discusses benefits of Qigong, a practice similar to Tai Chi.
- Captions (SRT format)
- Captions (WebVTT format)

Nina Knight – Yoga, Breathing
Veteran Nina Knight discusses benefits of yoga breathing.
- Captions (SRT format)
- Captions (WebVTT format)
Evidence-Based Research

There is a growing body of evidence supporting the cultural shift to whole health and this personalized, proactive, patient-driven approach. Explore the research below to review these findings:

- Personal Health Inventory: An Analysis of Veteran Responses
- Building the Body of Evidence
- Evidence Maps
- Editorial
- Commentaries
- Brief Reports
- Original Research
[CAM] strategies such as yoga are widely available in the private sector, and some Veterans have requested that the VHA make them available in the VA system. Determining the state of evidence on the benefits and harms of yoga and other CAM modalities is a priority for the VHA.
Kripalu Yoga for Military Veterans With PTSD: A Randomized Trial

Kristen M. Reinhardt, 1 Jessica J. Noggle Taylor, 1,2 Jennifer Johnston, 3 Abida Zameer, 4 Seetal Cheema, 5 and Sat Bir S. Khalsa 1

1 Brigham and Women’s Hospital, Harvard Medical School
2 Emory University
3 Lowell Vet Center
4 Northeastern University
5 Kaiser Permanente

This study was supported by U.S. Department of Defense Awards W81XWH-08-2-0203 and W81XWH-10-1-1066 to S. B. S. Khalsa at Brigham and Women’s Hospital from the Telemedicine & Advanced Technology Research Center of the US Army Medical Research and Material Command and by the Institute of Extraordinary Living of the Kripalu Center for Yoga & Health.

The investigators are solely responsible for the contents of the manuscript and they do not represent official views of the U.S. Department of Defense, the U.S. Department of Veterans Affairs, or the United States Government. Please contact the first author for further protocol and intervention details. This study is registered at www.clinicaltrials.gov, #NCT00962403.

Kristen Reinhardt is now at the University of Oregon Department of Psychology, Eugene, OR.

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JOURNAL OF CLINICAL PSYCHOLOGY, Vol. 00(0), 1–16 (2017) © 2017 Wiley Periodicals, Inc. Published online in Wiley Online Library (wileyonlinelibrary.com/journal/jclp). DOI: 10.1002/jclp.22483
A Yoga Program for the Symptoms of Post-Traumatic Stress Disorder in Veterans

Julie K. Staples, PhD*†; Michelle F. Hamilton, PhD*; Madeline Udo, PhD*‡§

ABSTRACT The purpose of this pilot study was to evaluate the feasibility and effectiveness of a yoga program as an adjunctive therapy for improving post-traumatic stress disorder (PTSD) symptoms in Veterans with military-related PTSD. Veterans (n = 12) participated in a 6 week yoga intervention held twice a week. There was significant improvement in PTSD hyperarousal symptoms and overall sleep quality as well as daytime dysfunction related to sleep. There were no significant improvements in the total PTSD, anger, or quality of life outcome scores. These results suggest that this yoga program may be an effective adjunctive therapy for improving hyperarousal symptoms of PTSD including sleep quality. This study demonstrates that the yoga program is acceptable, feasible, and that there is good adherence in a Veteran population.

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†Awareness Technologies, Inc., 147 Windmill Trail N, Placitas, NM 87043.
‡Tulane University, 1430 Tulane Avenue, New Orleans, LA 70112.
§South Central Mental Illness Research Education and Clinical Center (MIRECC), 3500 Canal Street, New Orleans, LA 70119.

The contents of this report do not represent the views of the Department of Veterans Affairs or the United States Government.

doi: 10.7205/MILMED-D-12-00536
Issues in Yoga Therapy

The Use of Yoga in Specialized VA PTSD Treatment Programs

Daniel J. Libby, PhD, RYT\textsuperscript{1,2,3,4} Felice Reddy, MA\textsuperscript{2}
Corey E. Pilver, PhD\textsuperscript{3} & Rani A. Desai, PhD, MPH \textsuperscript{1,2,3}

1. Office of Academic Affiliations, Advanced Fellowship Program in Mental Illness Research and Treatment, Department of Veterans Affairs (MIRECC)
2. VA Connecticut Healthcare System, West Haven (VACHS)
3. Evaluation Division, National Center for PTSD (NCPTSD)
4. Veterans Yoga Project, Newington, CT
Issues in Yoga Therapy

Implementing Yoga Therapy Adapted for Older Veterans Who Are Cancer Survivors

Katherine King, PsyD, RYT 200,1 Jeffrey Gosian, BS,2 Kelly Doherty, BA,2 Jnani Chapman, BSN, RN, E-RYT 500,3 Christina Walsh, E- RYT 200,3 Jill Pokaski Azar, DPT, GCS,3 Suzanne C. Danhauer, PhD,3 Jennifer Moye, PhD4

1. VA Boston Healthcare System and Harvard Medical School, Boston, Massachusetts, drkateking@gmail.com, 2. VA Boston Healthcare System, Boston, Massachusetts, 3. Wake Forest School of Medicine, Winston-Salem, North Carolina, 4. VA Boston Healthcare System and Harvard Medical School, Boston, Massachusetts

Objectives: This goal of this paper is to describe the reach, application, and effectiveness of an 8-week yoga therapy protocol with older cancer survivors within a Veterans Health Administration setting.

Conclusions: A minority of older veterans express an interest in yoga, but those who do have high rates of class attendance and home practice. Careful physical pre-assessment and attentive therapists are required to undertake the adaptations required by participants with multiple comorbidities. The effectiveness of yoga in this setting requires additional study.
A Pilot Study of a Randomized Controlled Trial of Yoga as an Intervention for PTSD Symptoms in Women

Karen S. Mitchell, Alexandra M. Dick, Dawn M. DiMartino, Brian N. Smith, Barbara Niles, Karestan C. Koenen, and Amy Street

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Posttraumatic stress disorder (PTSD) is a debilitating condition that affects approximately 10% of women in the United States. Although effective psychotherapeutic treatments for PTSD exist, clients with PTSD report additional benefits of complementary and alternative approaches such as yoga. In particular, yoga may downregulate the stress response and positively impact PTSD and comorbid depression and anxiety symptoms. We conducted a pilot study of a randomized controlled trial comparing a 12-session Kripalu-based yoga intervention with an assessment control group. Participants included 38 women with current full or subthreshold PTSD symptoms. During the intervention, yoga participants showed decreases in reexperiencing and hyperarousal symptoms. The assessment control group, however, showed decreases in reexperiencing and anxiety symptoms as well, which may be a result of the positive effect of self-monitoring on PTSD and associated symptoms. Between-groups effect sizes were small to moderate (0.08–0.31). Although more research is needed, yoga may be an effective adjunctive treatment for PTSD. Participants responded positively to the intervention, suggesting that it was tolerable for this sample. Findings underscore the need for future research investigating mechanisms by which yoga may impact mental health symptoms, gender comparisons, and the long-term effects of yoga practice.
Research

Delivering Integrative Restoration-Yoga Nidra Meditation (iRest®) to Women with Sexual Trauma at a Veteran’s Medical Center: A Pilot Study

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Author Note
This research was conducted at the VA Long Beach Healthcare System. Pamela G. Pence, Cristi Huffman, and Geta Cojucar are currently affiliated with the Women's Mental Health Center, VA Long Beach Healthcare System. Lori S. Katz, former director of the Woman's Mental Health Center is now at VA Puget Sound Health Care System.

The research reported does not reflect the views of the VA Long Beach Healthcare System or the VA Puget Sound Health Care System. The authors respectfully thank all the women who participated in this study.

results for delivering iRest to women with sexual trauma in a VA medical center. Further research is warranted.

Key Words: military sexual trauma, female veterans, PTSD, sexual trauma, meditation, yoga, yoga nidra, iRest

This study was designed to explore the efficacy of Integrative Restoration (iRest) in reducing trauma-related symptoms in women with sexual trauma and military sexual trauma (MST) in particular. iRest is a guided mindfulness meditation intended to induce deep relaxation; from
Results from a clinical yoga program for veterans: yoga via telehealth provides comparable satisfaction and health improvements to in-person yoga

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Abstract

Background: Yoga is increasingly popular, though little data regarding its implementation in healthcare settings is available. Similarly, telehealth is being utilized more frequently to increase access to healthcare; however we know of no research on the acceptability or effectiveness of yoga delivered through telehealth. Therefore, we evaluated the feasibility, acceptability, and patient-reported effectiveness of a clinical yoga program at a Veterans Affairs Medical Center and assessed whether these outcomes differed between those participating in-person and those participating via telehealth.

Methods: Veterans who attended a yoga class at the VA Palo Alto Health Care System were invited to complete an anonymous program evaluation survey.

Results: 64 Veterans completed the survey. Participants reported high satisfaction with the classes and the instructors. More than 80% of participants who endorsed a problem with pain, energy level, depression, or anxiety reported improvement in these symptoms. Those who participated via telehealth did not differ from those who participated in-person in any measure of satisfaction, overall improvement (p = .40), or improvement in any of 16 specific health problems.

Conclusions: Delivering yoga to a wide range of patients within a healthcare setting appears to be feasible and acceptable, both when delivered in-person and via telehealth. Patients in this clinical yoga program reported high levels of satisfaction and improvement in multiple problem areas. This preliminary evidence for the effectiveness of a clinical yoga program complements prior evidence for the efficacy of yoga and supports the use of yoga in healthcare settings.

Keywords: Yoga, Telehealth, Feasibility, Effectiveness
Yoga for veterans with chronic low back pain: Design and methods of a randomized clinical trial

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ABSTRACT
Chronic low back pain (CLBP) afflicts millions of people worldwide, with particularly high prevalence in military veterans. Many treatment options exist for CLBP, but most have limited effectiveness and some have significant side effects. In general populations with CLBP, yoga has been shown to improve health outcomes with few side effects. However, yoga has not been adequately studied in military veteran populations. In the current paper we will describe the design and methods of a randomized clinical trial aimed at examining whether yoga can effectively reduce disability and pain in US military veterans with CLBP. A total of 144 US military veterans with CLBP will be randomized to either yoga or a delayed treatment comparison group. The yoga intervention will consist of 2 x weekly yoga classes for 12 weeks, complemented by regular home practice guided by a manual. The delayed treatment group will receive the same intervention after six months. The primary outcome is the change in back pain-related disability measured with the Roland-Morris Disability Questionnaire at baseline and 12-weeks. Secondary outcomes include pain intensity, pain interference, depression, anxiety, fatigue/energy, quality of life, self-efficacy, sleep quality, and medication usage. Additional process and/or mediational factors will be measured to examine dose response and effect mechanisms. Assessments will be conducted at baseline, 6-weeks, 12-weeks, and 6-months. All randomized participants will be included in intention-to-treat analyses. Study results will provide much needed evidence on the feasibility and effectiveness of yoga as a therapeutic modality for the treatment of CLBP in US military veterans.
Yoga in Medicine
United Kingdom
An open letter to the NHS by Dr. Matt Joslin:
“I want to see whether there is a way to marry the amazing healing sustaining practice that is Yoga with the services offered by the NHS.”
Programs and Activities

- Started October, 2016: in association with All Party Parliamentary Group on Indian Traditional Sciences
- Support of Lord Andrew Stone of Blackheath, increasing awareness in Parliament of the value of yoga
- Motion read in the House of Commons
- A 10-week social prescribing course for patients as early intervention
- An NHS staff well-being program
- Brochures for all GPs and GP associations
- Yoga program for junior doctors
- All Party Parliamentary Group on Yoga

Heather Mason
Research Activities

• Governmental funding for research on the prescribing program on patients (N>200)
• Research on the prescribing program on NHS staff
• A completed consumer survey (N = 2,000) on perceptions of therapeutic benefits of yoga (50% indicated that if yoga was available on the NHS they would gladly try it)
• Yoga survey to social prescribing network (N~4,000) NHS staff, researchers, patients
SYR 2017
October 16 - 18, 2017
Kripalu Center for Yoga & Health

SYR, Symposium on Yoga Research, is the West's foremost academic yoga research conference. SYR showcases some of the best new research and offers multiple poster sessions as well as ample opportunities to interact with other scientists, experts and professionals in the field. SYR 2017 will be held at the Kripalu Center for Yoga & Health in the beautiful Berkshires in western Massachusetts.
Research Funding
Kripalu Institute for Extraordinary Living

Changing the World Through Yoga Research

What if we were to make yoga widely available to schoolchildren and their teachers? To those who are sick as well as their caregivers?

Yoga has the potential to change our world—both through the alleviation of suffering and the creation of vast opportunities for self-fulfillment. Those of us who practice yoga know this is true. But in order to imbue the transformational effects of yoga deeply into our society, we must combine the gifts of yoga with scientific validation. This is what the IEL is doing!

Did you know that the IEL is developing and rigorously evaluating yoga-based programs to transform schools and health care? Teams of Kripalu yogis and leading scientists are joining together to make the case that yoga can transform our world and build the programs to make it happen.

Please find out more about our work by reviewing the information throughout this website. If you can, we urge you to make a donation (at right) to support one of our projects. You can bring the gift of yoga to schoolchildren and to so many others who might not otherwise have access to yoga.
About The Kundalini Research Institute

Established on February 1, 1972 by Yogi Bhajan, Ph.D., Master of Kundalini Yoga, the Kundalini Research Institute is entrusted with the Teachings of Yogi Bhajan. KRI, a non-profit corporation, safeguards the purity, integrity, and accuracy of the Teachings of Yogi Bhajan by:

- Developing 3 levels of International Yoga Teacher Certification
- Preserving the teachings legacy for the future online Library of the Teachings
- Awarding the KRI Seal of Approval to products that successfully meet the standards of KRI Review
- Providing services and resources for Kundalini Yoga students and teachers via online services and upgraded Yoga Bhajan Products

Kundalini Yoga, the Yoga of Awareness, was brought to the West by Yogi Bhajan in 1968. Yogi Bhajan taught that, through the practice of Kundalini Yoga and meditation, your glandular and nervous systems are stimulated, and your capacity for creative potential is heightened. You gain inner vitality to compensate for the adverse effects of stress so you can excel in life.

Kundalini yoga classes are a dynamic blend of postures, pranayam, mantra, music and meditation, which teach you the art of relaxation, self-healing and elevation. Balancing body and mind enables you to experience the clarity and beauty of your soul. No previous experience in yoga is required for you to achieve results with your very first class.