Accepted Abstracts

In alphabetical order by presenting author's last name. Abstracts are unedited.

Congratulations to the 2024 Abstract Award Winners!

Young Investigator Award

- Renee Harrington: Effect of Yoga Style on Flexibility, Mobility, and Functional Movement in Healthy Adults

Overall Abstract Awards

- **TOP SCORE** | Rosangela Silva | Yoga for Patients Undergoing Radiotherapy and Their Spousal Caregivers: Results of a 3-Arm Randomized Controlled Trial
- Karen Cornelius | Exploring the Impact of an Adapted Virtual Yoga Program for Persons with Aphasia on Psychosocial Outcomes

Swami Kuvalyananda India Travel Grant Award

- Aanchal Satija | Preliminary Effects of Rajyoga Meditation on Cognitive Correlates of Cardiac Rehabilitation in Patients of Surgical Repair for Congenital Heart Disease—A Randomized Control Trial

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Review process:

The chair of the abstract committee oversees blinded evaluation and scoring of abstracts by three independent, well-published yoga research reviewers. The reviewers are most often current or previous SYR Scientific Program Committee Members or current or previous invited SYR research presenters.

★ **Young Investigator Award**

➢ **Overall Abstract Award**

1. YOGA VS PT/EXERCISE ON BACK-RELATED FUNCTION FOR THE TREATMENT OF CHRONIC LOWER BACK PAIN

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Background: Chronic low back pain (cLBP) is low back pain without specific pathology that lasts three months or more. Yoga is one approach often used to help manage cLBP symptoms. In 2022, an updated Cochrane systematic review on yoga for cLBP found that yoga, compared to other exercises resulted in similar improvements in back-related function at 3 months. We investigated whether the similar effects might be based on similarities in the physiological and biomechanical approaches between these two interventions and mapped both interventions in the primary studies to the recommendations of the Journal of Sports Physical Therapy (JOSPT) 2021 Clinical Practice Guidelines (CPG) for cLBP.

Methods: The Cochrane review included 8 studies comparing yoga and back-focused exercise, of which 6 provided outcome data on back-related function. We selected the 5 studies with detailed intervention descriptions allowing the comparison of yoga and exercise, and extracted the intervention characteristics. The yoga and exercise interventions were compared and analyzed for similarities in muscular activation, movement control, and relaxation. Intervention protocols were also individually compared using JOSPT 2021 CPG guidelines categories: muscle strengthening and endurance, specific trunk muscle activation, movement control, and trunk mobility.

Results: The results demonstrate that all 5 studies had treatment similarities with regard to trunk activation, trunk strengthening, movement control, trunk mobility, and relaxation. In addition, comparisons with JOSPT CPG 2021 guidelines demonstrated that both yoga and exercise interventions have similar movement strategies that align with the recommended guidelines for the treatment of cLBP. Many studies had at least one practice in common, which was performed in both yoga and exercise groups, and both the yoga and exercise protocols met the CPG guidelines for cLBP treatment.

Conclusions: Yoga and exercise led to a similar improvement in back-related function in cLBP at 3 months. This may be due to the similarity between the yoga and exercise protocols in physiological goals and movement practices. These findings warrant more yoga studies on cLBP to determine the comparative effectiveness of other aspects of yoga practice for outcomes such as pain and quality of life and to explore the potential benefits of integrating yoga therapy with traditional PT management of cLBP.

2. FEASIBILITY OF ONLINE YOGA FOR PATIENTS WITH POST-TREATMENT LYME DISEASE SYNDROME

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Keywords: yoga, Lyme disease, online, teleyoga, feasibility study

Objective: Lyme disease is a tick-borne illness caused by the bacterium *Borrelia burgdorferi* and can cause debilitating symptoms in infected individuals. Patients with Lyme disease are typically treated with antibiotics. Despite antibiotic treatment, some patients develop post-treatment Lyme disease syndrome (PTLDS), which is characterized by chronic pain, fatigue, cognitive impairment, and mood changes. Complementary therapies, including yoga, have demonstrated efficacy in managing PTLDS symptoms in non-PTLDS patient populations. However, patients who may benefit from yoga can encounter challenges to treatment, such as location, travel costs and time, health conditions, and caregiver responsibilities. Online yoga can help mitigate these challenges by providing access to individuals who face barriers to traditional healthcare, including geographic isolation, financial constraints, risks to health, and lack of support. The purpose of this study was to evaluate the feasibility and acceptability of an online yoga protocol suitable for patients with PTLDS.
Methods: Based on a previous online yoga protocol that demonstrated efficacy in treating veterans with chronic pain and fatigue, 13 patients with PTLDS (aged 21-60 years; 12 = female, 1 = male) participated in a 12-week synchronous online yoga program using existing HIPAA-compliant telehealth software (i.e., Doxy.me). The program included 75-minute weekly sessions led by certified yoga instructors, and 15-20 minutes of daily homework on five non-treatment days per week. The yoga protocol incorporated seated, standing, and supine postures, breathing exercises, and meditation, with standard modifications provided for patients with limited mobility.
Results: Primary feasibility goals (target vs. actual) were met, including retention rate (≥ 65% of participants at end-of-treatment vs. 92.5%), treatment adherence (≥ 65% of treatment sessions attended vs. 82.7%), treatment satisfaction (≥ 2 points on the 5-point Multi-Dimensional Treatment Satisfaction Measure vs. 3.4 points), and missing data rate (≤ 15% vs. 3.9%).
Conclusions: Results suggest that online yoga for patients with PTLDS is feasible and may provide an accessible, scalable, and cost-effective treatment for individuals with PTLDS.

3. BUILDING RESILIENCE: THE ROLE OF TRAUMA-ADAPTED YOGA IN STAFF WELLNESS INITIATIVES

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Keywords: trauma-adapted yoga, healthcare worker, wellness program

Objective: Chronic stress in healthcare workers (HCW) can lead to various illnesses including mental health disorders, cardiovascular disease, and shift work sleep disorder. Distressing patient outcomes can also traumatize HCWs. HCWs additionally develop musculoskeletal disorders related to patient handling, positioning, and sustained awkward postures in patient care delivery. Trauma Adapted Yoga (TAY) adapts yoga to be gentle and avoids re-traumatization by individualizing the practice. We explored TAY training as a staff well-being intervention to grow a trauma-informed community and integrate TAY into clinical practice for patients and staff.
Methods: The study protocol was submitted and deemed exempt by the IRB. In collaboration with TAY founder Josefin Wikstrom, a TAY training program was offered to Upstate staff and interest sought via hospital TAY offerings by trained clinicians. The training was five full days in both virtual and in-person formats. Interest was measured by enrollment number. Changes in wellbeing were assessed using pre- and post-training WellBeing Index (WBI) scores and the post-training Connor-Davidson Resilience Scale. TAY practice small groups were created based on job locations, such as pediatric and inpatient adolescent units, and the community hospital. Participants were encouraged to practice together and co-lead TAY for patients and staff with previously trained clinicians.
Results: 24 staff members, including physicians, residents, nurses, social workers, administrative staff, and medical students, are being trained in TAY. Initial WBI scores showed elevated stress, burnout, and suicidal ideation compared to staff not in training. At the in-person training, 60% of participants found the group aspect most helpful, highlighting interdisciplinary community building. Motivations for training included personal trauma and coping with patient loss, and usage in clinical practice; we hypothesize that the group was self-selecting based off this. TAY practice has expanded within Upstate with various session formats, times, and locations. This is an on-going pilot program to evaluate TAY's effects on staff wellbeing, so findings are preliminary.
Conclusions: HCWs can be trained to provide TAY to colleagues and patients, fostering a culture of wellbeing, community, and connection. Training staff in TAY may be an effective wellbeing intervention, particularly due to its trauma focus and potential for interdisciplinary connection.

4. ENGAGING CLINICAL PARTNERSHIPS TO IMPLEMENT AN ADAPTED YOGA PROGRAM AT AN IN-PATIENT REHABILITATION FACILITY FOR PERSONS WITH ACQUIRED BRAIN INJURY

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Keywords: yoga therapy, acquired brain injury, stroke, aphasia, in-patient rehabilitation

Objective: Through the implementation science process, this study explores the delivery of an evidence-based, chair yoga program for individuals with physical and communication impairments, resulting from acquired brain injury (ABI) into an in-patient rehabilitation facility.
Methods: The research team, Yoga Therapist (first author) and researcher + clinical aphasiologist (second author) collaborated with healthcare professionals at the Orlando Health In-Patient Rehabilitation Hospital (OH team) to create a feasible and acceptable yoga program for patients recovering from an ABI. The OH team includes specialists in Physical Therapy, Occupational Therapy, Speech Language Pathology, and Recreational Therapy. Stages 1-2 of the implementation process, Exploration and Installation, have been completed. Stage 3, Initial Implementation, is underway. Members of the OH team connected with the research team with a desire to implement an existing evidence-based, chair yoga protocol (established by the research team) into their in-patient rehabilitation program. The research team reviewed the protocol with the OH team and asked for initial feedback to address program fit. Areas of change were identified, and adjustments were made. Next, a trial yoga session was held at Orlando Health. Following the trial session, the teams met to discuss the successes and challenges. Adjustments were made to the protocol based on feedback and the experience gained in the trial session. This cycle was repeated over the course of 6 sessions led by the Yoga Therapist. Once the protocol was deemed feasible and acceptable by the OH team, members were trained in the implementation of the updated protocol. Currently, a trained member of the OH team leads the yoga session (6 session so far), additional team members assist patients in their yoga practice, and the research team observes the sessions.
Results: A video library was created for the OH team to use during the 60-minute yoga sessions (including social time), featuring seated and standing yoga poses, breathwork, and meditation. Aphasia-friendly PowerPoint prompts were created for additional support. Response from the OH team and patients has been positive.
Conclusions: Our current results indicate it is possible to implement an adapted chair yoga program into an in-patient rehabilitation facility for patients in the acute stages of ABI recovery.

➢ 5. EXPLORING THE IMPACT OF AN ADAPTED VIRTUAL YOGA PROGRAM FOR PERSONS WITH APHASIA ON PSYCHOSOCIAL OUTCOMES

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Keywords: yoga therapy, acquired brain injury, stroke, aphasia

Objective: This work aimed to replicate our prior feasibility study with the addition of an experimental control (delayed cohort design). Outcome measures examined the impact of yoga on resilience, stress, sleep disturbance, and pain management, and an additional measure of aphasia impact.
Methods: Fourteen people with aphasia (PWA) across two cohorts (cohort 1, n = 7; cohort 2, n = 7) participated in an 8-week synchronous virtual yoga program. Participants were 60.4 (SD = 10.4) years old, had 15.6 (SD = 1.8) years of education, demonstrated a range of aphasia severity, and represented 7 states and Bermuda. The Comprehensive Aphasia Test was used to assess aphasia. Sessions were 60 minutes (including social time), offered once weekly for eight weeks and led by a certified yoga therapist via Zoom. The instructor trained with a speech-language pathologist to facilitate an aphasia-friendly environment while administering the yoga program. Patient-reported outcome measures (PROMs) were administered pre- and post-yoga programming to assess stress, resilience, sleep disturbance, pain management, and aphasia impact. After program completion, participants were asked to provide feedback about their experience. Descriptive statistics and effect sizes were used to analyze results of self-report measures.
Results: In the delayed group (cohort 2), no significant differences in self-reports of stress ($p = 0.87$), resilience ($p = 0.28$), sleep disturbance ($p = 0.95$), pain management ($p = 0.14$), or aphasia impact ($p = 0.14$) were found when comparing the two baseline pretests. Therefore, data for all outcome measures for both cohorts were combined for analysis and interpretation. Comparisons of group means on self-report measures pre- vs post-participation following the 8-week yoga program revealed a medium effect on measures of perceived resilience ($d = -0.51$) and sleep disturbance ($d = 0.56$), small effects on measures of perceived stress ($d = 0.41$) and aphasia impact ($d = 0.41$), and no effect on pain interference ($d = 0.04$).
Conclusions: This study is an important step in addressing the benefit and accessibility of an adapted, aphasia-friendly, virtual yoga program on a larger scale. Results are in line with our feasibility study. Future work includes further replication of the program, offering an on-line asynchronous yoga study, protocol delivery by other Yoga Professionals and expanding yoga therapy into post-stroke rehabilitation.

6. IMPACT OF A COMMUNITY-BASED YOGA THERAPY PROGRAM ON QUALITY OF LIFE FOR IMMIGRANT AND REFUGEE WOMEN

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Consistent physical activity (PA) has been shown to mitigate the harmful effects of chronic illness and stress and empower preventative health practices. Yoga is a holistic practice addressing physical, mental/emotional, and spiritual health through physical postures, breath control, meditation, and relaxation, and can be adapted to meet the unique needs of an individual or group. Barriers to successful acculturation of immigrants and refugees includes limitations in health care education and access. Limited research exists on the best practices for engaging immigrant and refugee women in consistent physical activity, pointing toward the need to identify effective communication, education, and instruction, while incorporating social opportunities, to positively affect adherence and overall health. The purpose of this mixed methods intervention study was to assess the impact of a community-based yoga therapy program for immigrant and refugee women on overall health and well-being, from the perspective of the participants. Twenty-two out of 40 participants completed the pre- and post-surveys and a post-program focus group. Significant measures included overall wellbeing ($p = .02$), daily yoga practice ($p = .01$), fatigue ($p = .01$), social satisfaction ($p < .001$), ease in daily physical activities ($p = .04$) and general QoL ($p = .03$), physical health ($p = .02$), mental health ($p = .02$), and emotional health ($p = .01$). Qualitative analysis illuminated 4 themes: improved overall well-being, accessible yoga as the common thread, self-regulation empowerment, and a felt sense of belonging, for all participants, whether attending a few or all classes. From these findings, participation in a community yoga therapy program may serve as a framework for improving physical, mental/emotional and social health outcomes for immigrant and refugee women, while contributing to successful resettlement and stakeholders' focus on community and healthcare equity.

7. YOGA IN MEDICINE: A SYSTEMATIC REVIEW OF YOGA FOR CARDIOVASCULAR DISORDERS

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Keywords: cardiovascular disease, coronary artery disease, angina, hypertension, atrial fibrillation, vasovagal syncope, meditation, diyana, yoga postures, asana, diaphragmatic breathing, pranayama, deep breathing

Objective: Cardiovascular disease remains the leading cause of death worldwide. Psychosocial stress could carry a magnitude of risks for cardiovascular health. There is a need for mind-body interventions to reduce psychosomatic stress, mental health stress and related cardiovascular pathologies.
This study analysed the effect of yoga techniques on cardiovascular health.
Methods: The search of clinical studies has been performed using one of the following keywords (for WOS and Scopus) or Medical Subjects Headings (for PubMed): Cardiovascular Disease; Myocardial Infarction; Stroke; Coronary Artery Disease; Arrythmias; Myocardial Ischemia; Left Ventricular Dysfunction; Angina; Blood Pressure; Hypertension Atrial Fibrillation; Vasovagal Syncope in association (AND) with one of the different yogic techniques: Yoga; Meditation; Diyana; Yoga Postures; Asana; Breathing; Diaphragmatic Breathing; Pranayama. The eligible papers must be available online, in English, providing full data and indexed in WOS, Scopus and PubMed. Literature reviews, technical notes, case reports, letters to editors, and instructional courses were excluded.
Results: A total of 1805 patients were analyzed across 17 studies, mostly randomized trials (11/17, 64%) and prospective studies (6/17, 36%). Six studies included a control group with no interventions, while in 2 studies control group used pharmacological therapy.
No randomized studies were found on yoga versus arrythmias, myocardial ischemia, left ventricular dysfunction, angina.
Yoga interventions led to significant improvements in various clinical outcomes: hypertension (n = 684 patients, 11/11 studies, 100%) namely improved quality of life, diastolic and systolic blood pressure, arterial pressure; atrial fibrillation (n = 52 patients, 1/1 studies, 100%) namely significant reductions symptoms, psychological distress, fatigue; vasovagal syncope (n = 97 patients, 4/4 studies, 100%) i.e. peripheral vascular resistance, parasympathetic tone, syncope burden; cardiovascular disease (n = 488 patients, 3/5 studies, 100%) as heart rate, Reynold risk score, diastolic and systolic blood pressure, arterial pressure, lipid metabolism, body mass index. Only 2 yoga studies (n = 392 patients) for cardiovascular disease reported no significant improvements on severity and symptoms.
Conclusions: Mind-body interventions as yoga techniques are evidence-based holistic approaches useful in prevention and integrative therapies for cardiovascular health.

8. YOGA THERAPY IMPROVES SYMPATHOVAGAL BALANCE AND PSYCHOLOGICAL SYMPTOMS IN THE WOMEN WITH PREMENSTRUAL SYNDROME

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Keywords: sympathovagal balance, premenstrual syndrome, yoga therapy

Background: Eighty to ninety percent of menstruating women report having one or more premenstrual symptoms. Autonomic disturbances are seen in premenstrual syndrome (PMS). Yoga is known to improve autonomic functions.
Objective: Present study was conducted to assess the effect of three months of yoga therapy on premenstrual symptoms, sympathovagal balance and cardiovascular autonomic function tests (CAFT) parameters in women with PMS.
Methods: The study was conducted in a tertiary care institute in, South India.
Participants: Hundred women (18- 25 years) with mild PMS were recruited and randomized into two groups i.e. yoga group and control group using simple random sampling technique. Sixty women completed the study, thirty in each group. Yoga group participants were given customised yoga therapy for three months comprising of asanas, pranayama, mudra and bandha.
SPAF score was used to determine the severity of premenstrual symptoms. CAFT parameters were recorded using BIOPAC MP 36 system, handgrip dynamometer and automated blood pressure monitor (Omron MX3, Japan) in the department of Physiology.
Results: The majority of the premenstrual symptoms significantly decreased in severity after yoga therapy in yoga group participants when compared with the control group ($P < 0.001$). There was a significant decrease in the heart rate in yoga group participants after 3 months ($P < 0.05$). 30:15 ratio did not change significantly but E:I ratio of yoga group participants increased significantly in both luteal ($P < 0.01$) and follicular phase ($P < 0.05$) and $\Delta DBP_{(ihg)}$ dropped significantly in the luteal phase ($P < 0.05$) when compared to control group after 3 months of yoga therapy. HRV parameters were compared before and after three months of study period, recorded during follicular and luteal phases in both the groups. SDNN, RMSSD, LF, HF and TP of yoga group participants improved significantly in both the phases when compared to the control group.
Conclusions: Yoga therapy given for three months in women with PMS improved cardiovascular autonomic functions by increasing the vagal tone, decreasing the sympathetic activity and reactivity. It also decreased severity the premenstrual symptom. The yoga therapy module developed for present study can be recommended for women with PMS to alleviate their suffering during the luteal phase and to improve their overall health.

★ 9. EFFECT OF YOGA STYLE ON FLEXIBILITY, MOBILITY, AND FUNCTIONAL MOVEMENT IN HEALTHY ADULTS

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Keywords: FMS, range of motion, mobility, functional movement, yin, kundalini, vinyasa

Background: Flexibility, mobility, and functional movement are important for an injury-free and physically active lifestyle. Yoga is associated with numerous health benefits including improving health-related aspects of physical fitness. Different styles of yoga place varying focus on the physical aspect of the practice with the difference between them largely being the number of postures included in the practice, the duration a posture is held, and if there is repetition of the posture in the practice. Most studies assessing the impact of yoga on flexibility only measure general flexibility; very few studies have assessed mobility and functional movement. In addition, the specific style of yoga is rarely indicated. To date no study has compared different styles of yoga to improve these measures. Thus, the current study aimed to fill these gaps in knowledge by examining and comparing the effect of three different styles of yoga on improvement in flexibility, mobility, and functional movement.
Methods: Twenty-one healthy adults (age: 45.9 ± 9.3 years) who did not regularly practice yoga were recruited for this randomized, single-blind design study. Subjects were randomly assigned to a yoga treatment (vinyasa, kundalini, or yin) and completed a 55-minute yoga practice twice a week for 4-weeks. Mean values for sit and reach, multi-site joint angle range of motion in three yoga postures (chair, downward facing dog, and lunge), and a functional movement screen were computed for pre-test and post-test.
Results: A paired samples t-test showed a significant improvement in sit-and-reach scores (pre-test: $M = 27.95$, $SD = 10.45$; post-test: $M = 11.33$, $SD = 2.06$; $t = -3.286$, $p = 0.004$), total FMS (pre-test: $M = 15.57$, $SD = 1.63$; post-test: $M = 30.19$, $SD = 9.59$; $t = -7.683$, $p = < 0.001$), each of the seven individual FMS tests, and hip flexion in downward facing dog (pre-test: $M = 96.49$, $SD = 15.64$; post-test: $M = 103.89$, $SD = 13.57$; $t = -2.531$, $p = 0.002$) for all participants combined. There was no significant improvement in any other joint measurement in chair, downward facing dog, or lunge. A one-way ANCOVA was

conducted to compare the effectiveness of the style of yoga while controlling for pre-test scores. Levene's test and normality checks were carried out and the assumptions met. A one-way ANCOVA showed no significant effect of yoga style on sit and reach scores ($F(2,17) = 0.262$, $p = 0.773$), total FMS scores ($F(2,17) = 0.196$, $p = 0.824$), or any of the individual FMS tests after controlling for pre-test scores. There was a significant difference in hip joint angle from pre-test to post-test in chair pose [$F(2,17) = 5.398$, $p = 0.015$]. Post hoc comparison using Bonferroni correction showed a significant difference between Kundalini and Vinyasa treatment groups ($p = 0.029$) and Kundalini and Yin treatment groups ($p = 0.043$). However, improvement in hip joint angle did not significantly differ between Vinyasa and Yin treatment groups ($p = 1.000$). Comparing the estimated marginal means showed that the least amount of change in hip angle occurred in the Kundalini group ($M = 64.825$) compared to Vinyasa and Yin ($M = 81.490$ and 81.585, respectively) suggesting that Kundalini is the least effective at improving hip mobility. There was also a significant difference in the right ankle in lunge [$F(2,17) = 3.48$, $p = 0.05$]. Post hoc comparison using Bonferroni correction showed a significant difference between Kundalini and Vinyasa (treatment groups $p = 0.05$). There was no significant difference between Kundalini and Yin treatment groups ($p = 0.618$) or Vinyasa and Yin treatment groups ($p = 0.625$). Comparing the estimated marginal means showed the greatest improvement in ankle angle (dorsiflexion) occurred in the Kundalini group ($M = 89.889$) compared to Vinyasa and Yin ($M = 99.841$ and 94.899, respectively) suggesting that Kundalini is the most effective at improving ankle mobility.

Conclusions: The present study found a significant improvement in flexibility and functional movement from pre-test to post-test for all participants, however, there was no significant effect of yoga style on these measures. Aside from a significant change in hip angle in chair and right ankle in lunge, there was no significant improvement in any other joint angle measurements in downward facing dog, lunge, or chair. This is likely due to the high level of coordination throughout the kinetic chain that is needed in many yoga postures. The results of this study suggest that an individual should select the style of yoga that is most accessible or enjoyable to gain the benefits of yoga for improved flexibility, mobility, and functional movement.

10. A PILOT UNDERGRADUATE COURSE IN YOGA ASANA AND PHILOSOPHY: QUALITATIVE RESULTS FROM STUDENTS STUDYING HEALTH SCIENCE

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Keywords: ashtanga yoga education, undergraduate programming

Objective: The objectives of this work were to educate full-time undergraduate students in the practice of yoga beginning with the yamas, niyamas, asana and pranayama. Furthermore, students were introduced to the five koshas and the three gunas. During the period of education, it was hypothesized that students would better understand the larger context of a yoga practice rather than it being reduced to a physical exercise and a different means to achieve a workout. Furthermore, the course was developed to use modern reading material that effectively demonstrated a yoga practice is appropriate for everyone to take up and should not be considered appropriate for only a subset of the general population (e.g., physically fit, able bodied, economically advantaged, Caucasian, women). Lastly, primary and secondary literature of the health benefits were included to educate students on the quantitative research demonstrating yoga as a holistic health practice.

Methods: A 14-week course in which undergraduate students were introduced to ashtanga (8-limbed philosophy) yoga was developed. Pre-requisite courses for enrollment in the course were at least one semester of human anatomy and physiology with the second semester able to be taken concurrently. Each week was broken into an asana and/or pranayama session, with the latter being ~15% of the practice time, for 65 minutes and a dedicated yoga philosophy session for 75 minutes. Outside of classroom reading included *Yoga Revolution: Building a Practice of Courage & Compassion* (J. Heyman, 2021). Asanas, their sequence each week, and the teaching methodology came from *Yoga in Action: Preliminary Course* (G.S. Iyengar, 2000).

Reflective journal entries for each student were collected twice/week. Journaling subject matter was open-ended, and students were encouraged to write about their experiences with the practice and aspects they found interesting in readings. Journal entries of the later week's material (when the Yoga Revolution outside book was assigned) were combed for student impressions and self-reported benefits.

Results: A total of 42 undergraduate students registered for and completed the course. The self-reported gender and race were as follows: 71.4% female, 26.2% male, 2.4% gender not indicated, 7% Black/African American, 7% Asian, 2% American Indian/Alaskan, 79% White, and 5% race not indicated. Benefits to students were reported as such: Understanding ahimsa (as a moral discipline and restraint) allowed students a reason to be kind and compassionate to themselves. Students reported performing asanas helped their mental health, generally. They reported asanas

helped ease anxiety. Others reported performing asanas helped alleviate physical pain they had been dealing with. Students found that repeating asanas during the course allowed them a sense of accomplishment as their body became more familiar with the posture and they could perform it "better" than previously. Many students reported benefits of learning about their body and themselves through the practices. Students reported that understanding aparigraha (as a moral discipline and restraint) gave them a means to lessen their self-criticism. Students also reported using yogic practices outside of class to decrease feelings of stress. Finally, students reported practicing asana outside of class and an acknowledgement that the holistic practice is beneficial for health and well-being.
Conclusions: Students at the undergraduate level studying health science are interested in learning classical yoga asana and yoga philosophy as a combined course and found surprising benefits for themselves.

11. STATE AND TRAIT ANXIETY SCORES AMONG WOMEN WITH OBESITY IN LATE PREGNANCY: A RANDOMIZED INTERVENTION STUDY COMPARING WALKING AND YOGA GROUPS

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Background: Risk for anxiety increases during late pregnancy due to factors like impending delivery, transitioning to parenthood, and fear of the unknown. Anxiety is characterized by heightened worry, tension, and apprehension about potential future events. It can be classified into state, a transient reaction to adverse events, and trait, a more enduring personality trait. Low-intensity exercise interventions, such as gentle yoga, have been proposed to alleviate anxiety symptoms, but the effectiveness remains inadequately studied, especially in this demographic.
Objective: This study aimed to investigate the impact of a randomized intervention comparing moderate-intensity exercise (walking) and low-intensity exercise (gentle yoga) groups on state and trait anxiety levels among obese pregnant women in the late stages of pregnancy.
Methods: Fifty-nine obese pregnant women in late pregnancy were randomly assigned to either a walking or gentle yoga group. State and trait anxiety levels were assessed using the State-Trait Anxiety Inventory (STAI) at 28 weeks' gestation, 32 weeks, and 36 weeks.
Results: An inverse correlation was observed in mean scores between these groups; however, the findings revealed no statistically significant differences in state anxiety scores between the walking and yoga groups throughout late pregnancy (p = 0.64). Similarly, there was no significant difference in trait anxiety scores between the walking and yoga groups throughout late pregnancy (p = 0.39), although a notable difference in mean trait anxiety scores was observed between the two groups during this period.
Conclusions: These results suggest that low or moderate-intensity exercise does not have a greater impact on anxiety levels during late pregnancy. Further investigation is needed to compare state and trait anxiety levels between women engaging and not engaging gentle yoga during late pregnancy, providing deeper insights into the impact of yoga on anxiety symptoms. Such insights could inform enhancing maternal mental well-being and optimizing pregnancy outcomes.

12. CORTICAL ACTIVITY DIFFERENCES BETWEEN A YOGA AND BODY SCAN MEDITATION AND THE CORRELATES WITH INTEROCEPTIVE AWARENESS AND EVOKED PAIN

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Keywords: yoga, body scan, cortical activity, interoceptive awareness, healthy emotionality, pain tolerance

Introduction: There is a paucity of knowledge regarding the relationship between self-perceived interoceptive awareness and mindfulness, the cortical response to mindfulness-based interventions (MBIs). There is a further lack of information on the association between enhancement-based psychological factors and pain sensitivity profiles based on tolerance and analgesia markers.
Methods: A 2-armed randomized cross-sectional experimental pilot study of yogis which involved: (i) self-report outcomes of mindfulness, interoceptive awareness, healthy emotionality, and psychological wellbeing, (ii) cortical hemodynamic responses acquired during the sequentially delivery of 2 brief MBIs: standing yoga and seated body scan meditation, and (iii) experimentally evoked pressure pain threshold and tolerance pre- and post-MBI. Baseline self-report outcomes included: Five Facet Mindfulness Questionnaire – Short Form (FFMQ-SF), Multidimensional Assessment of Interoceptive Awareness (MAIA-2), Emotional Styles Questionnaire (ESQ), Scales of Psychological Well-Being

(SPWB). Repeated pressure pain threshold and tolerance testing applied over the ventral thenar eminence of the nondominant hand pre- and post-MBI. Cortical hemodynamic responses (Oxygenated Hemoglobin, HbO) were acquired using functional near infrared spectroscopy (fNIRS). Pressure pain threshold and tolerance were acquired over the ventral thenar eminence using digital algometry.
Results: Interoceptive awareness (MAIA-2) was not correlated with psychological wellbeing (SPWB) but was positively correlated with healthy emotionality (ESQ) at a moderate to good level of magnitude (n = 14, p-value = .01, r = .66). Cortical activity across the 2 MBIs were not correlated with mindfulness (FFMQ-SF) or interoceptive awareness (MAIA-2). Pain threshold and tolerance were not associated with the acceptance in action or regulatory awareness clusters. Most yogis (n = 10) experienced hyperalgesia immediately after participation in the MBIs (Mean change = 419.84, SD ± 158.89), however, a subset of yogis (n = 3) experienced hypoalgesia (Mean change = 562.1, SD ± 129.42). Cortical activity was higher during the yoga practice compared to the body scan practice, as represented by β values of HbO levels of the same channels across participants (Ch_7: n = 10, p-value = .03, t_{18} = -2.43; Ch_8: n = 10, p-value = .02, t_{18} = -2.69).
Discussion: Interoceptive awareness was related to healthy emotionality, which contains the constituents of outlook, resilience, social intuition, self-awareness, sensitivity to context, and attention. Mindful awareness and interoceptive awareness were not related to hemodynamic responses derived during brief exposures to MBIs with the form of focus-awareness practice. Psychologically based 'acceptance in action' and 'regulatory awareness' clusters were not related to pain threshold or tolerance. Increased pain sensitivity was observed for most participants after exposure to the MBIs. Higher cortical activity was demonstrated in the movement-based yoga practice compared to the resting-based body scan practice.

13. TRENDS OF USE OF YOGA AND OTHER FITNESS MEASURES IN PATIENTS WITH PARKINSON'S DISEASE—A PILOT CROSS SECTIONAL STUDY

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Keywords: yoga, Parkinson's disease

Objective: The purpose of the study is to compare various types of fitness measures among people with Parkinson's Disease and to observe if Yoga has any advantage over other exercises.
Methods: A cross-sectional observation study was conducted on a sample population in Denver metro. Senior adults of both genders diagnosed with Parkinson's disease who were actively engaged in some form of regular exercise one or more times a week were recruited. A one-time survey was done that included researcher's questions and two standard measures Parkinson's Anxiety Scale (PAS-12) and the CDC Health Related Quality of Life (CDCHRQOL-14). PAS-12 measured three subscales that included persistent, episodic and behavior avoidance anxiety levels. The CDCHRQOL-14 measured the data healthy days core module, healthy days symptoms module and activity limitation module. The data included preference in the type of exercise chosen, the rationale behind the choice, preference of online or in person mode of instructions and effect of regular Yoga on specific Parkinson's related symptoms.
Results: 13 participants (*n* = 13) participated in the survey and Yoga was one of the top chosen fitness measures among people diagnosed with Parkinson's disease in this sample population. The most popular reasons to choose Yoga included reduction for stiffness (*n* = 9), mental stress (*n* = 7) and feeling active throughout the day (*n* = 7). The data showed effect on Parkinson's specific symptoms by those practiced Yoga, the top responses included improvement in balance (*n* = 8) and impaired coordination (*n* = 5) and reduction in tremors (*n* = 7). There was a higher Healthy Days Score (HRQOL) of 27.44 out of 30 and lower anxiety levels in all three subscales of PAS-12 among those who participated in Yoga. Yoga scored higher in mental strength (*n* = 9) and emotional relaxation (*n* = 10) component and dynamic exercises like circuit training and kick boxing scored higher on physical strength component (*n* = 8).
Conclusions: The study showed improved physical strength with exercises like circuit training and kickboxing. Tia chi and Yoga showed an improvement in overall quality of life and reduced anxiety levels along with improved strength and specific symptom relief. This study can be extended with a larger sample size for better results.

14. YOGA AS COMPLEMENTARY INTERVENTION IN LUNG CANCER TREATMENT: A SYSTEMATIC REVIEW

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Keywords: yoga, lung cancer, systematic review

Objective: Lung cancer is the leading cause of cancer death worldwide, is common, with 1 in 17 being diagnosed in their lifetime, and, due to sequelae of the disease, treatment, and stigma related to the disease, patients and survivors report one of the lowest quality of life (QoL) ratings of all cancer survivors. Yoga is a promising intervention increasingly used as a complemen-

tary approach to manage symptoms and increase QoL in cancer patients, but research on its effects for lung cancer is limited and recently growing. In order to summarize the data so far and point to directions for future research, we conducted a rigorous systematic review and meta-analysis about effects of yoga on health-related outcomes in lung cancer patients.

Methods: Following PRISMA guidelines, we conducted a systematic review and meta-analysis of studies published in the past 10 years. Databases searched included PubMed, PsycINFO, Embase, Cochrane, Medline, and Scopus. Inclusion criteria were studies involving yoga interventions for lung cancer patients and survivors (pre- and post-treatment), measuring health-related outcomes and QoL. Primary outcomes included QoL, fatigue, sleep disturbances, depressive and anxiety symptoms, spirometry measures, and 6-minute walk test (6MWT).

Results: Nine studies met inclusion criteria. Yoga interventions were varied, including yoga breathing, laughter yoga, and vinyasa yoga. Some studies involved both lung cancer patients and their caregivers. Findings indicated that yoga positively impacts physical functioning, mental health, and overall QoL for lung cancer patients and survivors, as well as their caregivers. Effect size for primary outcomes ranged from small to large, with significant reductions in anxiety and improvements in QoL. Specifically, yoga had a large impact on reducing anxiety and improving 6MWT performance (Cohen's $d \geq 0.81$ and 1.19). Effects on QoL varied from small to large ($d = 0.34$ to 0.84), while the effects on sleep disturbances and depression symptoms ranged from small to moderate ($d = 0.36$ to 0.71 and 0.39 to 0.53).

Conclusions: Yoga shows promise as a valuable complementary intervention in lung cancer treatment and management, positively impacting QoL, mental health, and physical functioning despite variability in the types of yoga practices and small sample sizes in many studies. Future research should focus on establishing standardized yoga protocols tailored for lung cancer care.

15. A CASE REPORT OF YOGA IN A PEDIATRIC PATIENT WITH FUNCTIONAL ABDOMINAL PAIN ADMITTED TO A MED-PSYCH PARTIAL HOSPITALIZATION PROGRAM

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Background: Patients admitted to med-psych programs with functional disorders often have limited insight into the mind-body connection. In addition to psychotherapy and treatment of co-morbid psychiatric diagnoses, yoga therapy may provide additional benefits on anxiety.

Case Description: A 17 year-old female with chronic abdominal pain consistent with disorders of gut brain interaction, including functional constipation, anxiety, depression, ADHD was admitted to an inpatient med-psych unit at a children's hospital in the setting of suicidal ideation secondary to her physical symptoms and later transitioned to a med-psych partial hospitalization program. She described general abdominal pain and constipation and over time gained understanding about the relationship between anxiety and the physical symptoms she described.

As part of her treatment course, an integrative medicine referral for yoga nidra was placed on the med-psych inpatient unit at a children's hospital; goals were to improve insight into the mind-body connection and decrease pain, anxiety, and stress. While inpatient, she was able to participate in diaphragmatic breathing and yoga nidra.

She transitioned to a family-based, integrated day program for youth with medical and psychiatric presentations, where she continued yoga through restorative yoga sessions biweekly. As part of a research study, on admission, she was given the STAI-C Trait scale and took surveys before and after each yoga session including the State Trait Anxiety Inventory for Children (STAI-C) State scale, a self-report measure of a child's anxiety level.

She completed 6 yoga sessions. Her RCADS improved from 11 to 9, with decreased frequency of reporting "I worry about things" and "I worry about what is going to happen" from "always" to "often". Her STAI-C trait remained stable at 48 to 47 from admission to discharge. The mean of her anxiety scores from STAI-C state improved from 44.7 before yoga sessions to 36.3 after. Discharge qualitative responses included noticing a "positive effect" of yoga, "[allowing her] to relax and stabilize" making "[her] head [feel] clearer", and planning to use "breathing and letting negative energy go" at home.

Discussion: This case highlights potential additive benefits of yoga therapy, along with psychotherapy and medication management for co-morbid psychiatric diagnoses, in patients with disorders of mind-gut interaction while admitted to med-psych inpatient units and partial levels of care.

16. CULTURAL YOGA THERAPY: COMBINING YOGA AND TRADITIONAL CHINESE MEDICINE TO PROMOTE HEALTHY AGING FOR WOMEN IN CHINESE ENCLAVES

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Keywords: cultural yoga therapy, healthcare, barriers to healthcare, language barriers, wellbeing, Chinese women, Chinese enclaves, buddhism, taoism, traditional Chinese medicine, aging

Objective: Chinese immigrants to the United States are often considered well educated and financially secure when compared

to the general American population. However, settled in ethnic enclaves, there exist localized populations of Chinese immigrants that go against these perceptions. These enclaves, many times referred to as Chinatowns, are often home to dense concentrations of low income, working class, linguistically isolated immigrants. Within these enclaves' Chinese immigrant women report disproportionate rates of chronic disease (including) various cancers, and mental health issues, and ideas of suicide when compared to their male counterparts and Caucasians. Language, culture, and a distrust of Western healthcare are but a few barriers to these women's well-being. This study introduces a yoga centric approach to well-being for the target population. The purpose is to evaluate the effectiveness of yoga while using similarities between yoga and the more familiar Traditional Chinese Medicine (TCM) to bridge cultural gaps to gain the trust of the participants.
Methods: This study was an eight-week group yoga therapy program for ten women between the ages of 45 and 75 years residing in a Chinese enclave. The study also included individual yoga therapy sessions for one of the group participants. The goals of the program were expected to evolve based on results as determined by the Profile of Mood States (POMS) assessment, the instructor's observations, and the needs expressed by the participants. Each week consisted of a 90-minute in-person session with guidance and support for independent practice in the form of handouts, video, and text messaging. The sessions included theme-of-the-week mantra, *mudrā*, and philosophical reading, gentle *āsana* and *prānāyāma* with at least one new element added to the exercises each week, and meditation for relaxation. The individual yoga therapy sessions were based on the same general approach as the group with some exceptions: The focus was on relaxation, attention to incontinence, and discomfort on the right side of the participant's body.
Results: Each of the participants reported the class as an enjoyable experience and requested an extension of the program. They also expressed a preference for in-person sessions, considering them most enjoyable. Due to their cultural expectation of being industrious, the participants reported learning to relax, breathe, and to meditate as new experiences. Two participants were not previously aware of their high blood pressure and accepted referred to a healthcare provider for treatment. One participant was embarrassed by their incontinence and was encouraged to seek medical treatment. This participant was invited to individual yoga therapy sessions and experienced improvement in their condition and a corresponding lack of embarrassment. By becoming more self-aware, one participant reported losing 15 pounds. A follow up discussion revealed the participant has continued the practice, lost a total of 30 pounds and is feeling healthier.
Conclusions: The pilot eight-week group yoga therapy program and the individual yoga therapy sessions demonstrated benefits of a yoga therapy program that is delivered in a manner that focuses on traditional Chinese culture. Yoga is often considered a fitting practice for aging populations, yet the traditional Chinese population has not embraced the benefits of yoga. Combing the philosophies of Buddhism and Taoism with Yoga Sutras breaks down resistance to the foreign aspect of yoga as does using qigong terms when instructing *āsana* and *prānāyāma.* This combined approach offers a potential path for introducing yoga centric wellness practices to this population by bridging the cultural differences through focusing on the intent and functionality of yoga and how it can relate to the practitioner regardless of their belief system.

17. IMPLEMENTATION OF VIRTUAL YOGA THERAPY SHARED MEDICAL APPOINTMENT (VYSMA) PILOT AT ACADEMIC MEDICAL CENTER WITHIN MIXED DIAGNOSIS ONCOLOGY POPULATION

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Keywords: yoga, shared medical appointment, telehealth, cancer

Objective: Yoga therapy is highly sought-after by patients and endorsed by leading cancer organizations; yet barriers of access, time, cost, and availability of quality providers remain. Shared Medical Appointments (SMA), a group healthcare model where patients with similar medical conditions participate in a collective appointment with healthcare providers, are associated with increased access to quality care, patient satisfaction, and clinician satisfaction. This unique insurance-covered virtual yoga shared medical appointments series (VYSMA) involving a mixed diagnosis population was piloted to assess feasibility and acceptability.
Methods: In this prospective cohort pilot, a trauma-informed Hanna Somatic yoga teacher and an integrative medicine physician from a large urban academic medical institution co-led VYSMA via live web-based conferencing with patients participating from city center and surrounding areas. SMA content included conscious self-regulating mind-body integrating practices including breathing, movement, visualization, meditation, chanting, and guided relaxation. Qualitative and quantitative data were gathered to assess satisfaction.
Results: 88 sessions of yoga SMA were offered over 33 months. 69 unique participants of diverse demographics (gender, race/ethnicity, primary residence, diagnoses) attended a total of 500 visits. Class attendance ranged from 2-11 participants (mean: 6 participants). Participants attended an average of 7 sessions (range 1-63 sessions). Interest varied with 36% attending 2-6 sessions,

and 27% attending 7-63 sessions over 33 months. Participants' diagnoses/symptoms included: Cancer (77%), Anxiety/Depression (38%), Pain (38%). Pre-series participants reported pain, weakness, neuropathy, lymphedema, sleep, and fatigue. Post-series survey results suggested improvements in anxiety/fear, pain, fatigue, sleep, neuropathy, brain fog, isolation, weakness, flexibility, and balance. Post-series, participants also reported incorporating mindfulness, breathing techniques, somatic skills, weight training, and yoga into daily routine. Participants (91%) reported goals were met. 67% preferred telehealth, 34% hybrid, and 0% preferred in-person format for the future. Participants appreciated remote delivery, new skills, community, and instructors.
Conclusions: VYSMA among diverse population with mixed diagnoses is feasible, acceptable, and shows promising positive impact in this pilot. RCT with longer follow-up is recommended.

18. PRELIMINARY EFFICACY OF ONLINE YOGA FOR POST-TREATMENT LYME DISEASE SYNDROME

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Keywords: yoga, post-treatment Lyme disease syndrome, pain, cognitive functioning

Objective: Post-treatment Lyme disease syndrome (PTLDS) affects 10–20% of patients despite antibiotic treatment, with women being more likely than men to develop chronic symptoms. In addition to physical symptoms such as musculoskeletal pain, cognitive symptoms are common and include impairments in executive function and working memory. Yoga has shown efficacy in treating similar symptoms in other patient populations, such as pain and cognitive impairments. However, few studies have explored yoga as a treatment for PTLDS. The purpose of this study was to evaluate the feasibility of online yoga for treating PTLDS symptoms and to gather preliminary evidence of its efficacy.
Methods: A synchronous online yoga protocol suitable for addressing the major symptoms of PTLDS was developed, building on an existing protocol designed for treating chronic pain and fatigue. The yoga protocol comprised 12 weekly 75-minute sessions, complemented by homework on five non-treatment days each week. Thirteen participants diagnosed with Lyme disease and concurrently exhibiting PTLDS symptoms were recruited (aged 21-60 years; 92% female). All study measures were administered online, including the Brief Pain Inventory (BPI), the Health-Related Quality of Life - Short Form (SF-36), and the Cambridge Neuropsychological Test Automated Battery (CANTAB).
Results: At the end of the treatment, significant improvements were observed in pain levels, as measured by the SF-36 pain scale ($t[11] = -3.193$, $p = 0.009$, $d = -0.922$). Pain interference with daily activities, measured by the BPI, also significantly decreased ($t[11] = 2.607$, $p = 0.024$, $d = 0.752$). Additionally, there were significantly fewer limitations posed by general physical health on personal activities ($t[11] = -2.462$, $p = 0.032$, $d = -0.711$; SF-36). Cognitive improvement was evidenced by a significant reduction in total errors on the CANTAB Spatial Working Memory task ($t[8] = 3.105$, $p = 0.015$, $d = 1.035$). While other tasks assessing memory and sustained attention in the CANTAB battery showed trends toward improvement, they did not reach statistical significance.
Conclusions: Online yoga treatment was associated with significant improvements in pain, pain interference with personal activities, and cognitive function. These findings highlight the potential of yoga to alleviate symptoms of PTLDS.

19. FEASIBILITY AND ACCEPTABILITY OF YOGA FOR ADOLESCENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

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Keywords: yoga, juvenile idiopathic arthritis, feasibility

Background: Juvenile idiopathic arthritis (JIA) is a chronic disease affecting over 300,000 youth in the United States. It is a systemic inflammatory disease associated with pain, fatigue, and physical limitations. Patients with JIA have lower activity levels and different psychosocial challenges from their healthy peers. Yoga is effective for improving symptoms and quality of life in adults with inflammatory arthritis but unstudied in adolescents with JIA.
Methods: A pilot study assessed the feasibility and acceptability of an 8-week group yoga intervention for adolescents ages 14–18 with JIA. Each 75-min session included breathing techniques, relaxation, mindfulness, and modified yoga postures, using yoga props and a rope wall. An online video was available for home practice. The outcome measures administered at the baseline and at 8 weeks were physician global assessment with joint count, visual assessment with a joint damage assessment index, the Pediatric Quality of Life Arthritis Module 3.0 (Peds QL), and the visual analog scale for pain.
Results: Thirteen out of 25 participants attended ≥1 class with a mean of 5.7 ± 2.2 classes. Common reasons for non-enrollment included distance, schedule, and lack of interest. The average distance to classes was 29.0 ± 41.7 miles. There was a trend toward improvement for joint count ($p = 0.07$), global assessment ($p = 0.10$), and the Pain and Hurt domain of the Peds QL ($p = 0.13$),

but no other outcomes approached significance. Satisfaction data from an anonymous survey (n = 8) were high in all areas.
Conclusions: Adolescents with JIA who attended yoga reported enjoyment, pain reduction, and interest in continued practice with no adverse events. Future studies should consider stakeholder engagement to reduce barriers and larger sample sizes to test the effectiveness.

20. ADAPTING YOGA THERAPY FOR DIVERTICULITIS, ABDOMINAL PAIN, AND ANXIETY: A CASE STUDY ON CULTURAL SENSITIVITY AND PATIENT-CENTERED CARE

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Objective: The objective of this case study was to explore the challenges and considerations involved in adapting yoga practices for an individual with diverticulitis, abdominal pain, and anxiety, while also addressing cultural and religious sensitivities.
Methods: A 59-year-old Asian Urdu-speaking female suffering from anxiety, abdominal pain, and diverticulitis was referred to a yoga therapy program. A 24-hour therapy module was designed over four weeks to meet her needs. After attending the initial 4 hours of yoga classes, she expressed discomfort with certain aspects of the practice, such as chanting "OM" and the use of Sanskrit names for yoga poses, citing religious reasons.
In response, the researchers adjusted the module by removing chanting and Sanskrit terminology and reframing the practice as "mindful practices" instead of using the term "yoga." Laughter yoga was introduced to help the participant "LET GO" of stress and anxiety. Counseling sessions were also incorporated into the program.
Results: There was a significant improvement in pain during the therapy, and the quality of life survey also showed improvement. After the modifications to the module, the participant attended 4 hours of sessions and completed 8 hours of yoga/mindfulness therapy and counseling before discontinuing her participation due to an upcoming family wedding. The researchers acknowledged her decision to take a break and reflect on the practice. The upcoming sessions will be called mindfulness sessions and will be completed with her consent.
Conclusions: This case study highlights the importance of cultural sensitivity and adaptability when introducing yoga or mindfulness practices to individuals from diverse backgrounds. It also underscores the potential challenges that may arise when personal beliefs or perceptions conflict with certain aspects of the practice. The researchers' willingness to modify the module and respect the participant's decision to discontinue demonstrates a patient-centered approach. However, the case also raises questions about finding a balance between adapting practices to respect cultural and religious sensitivities and maintaining the therapeutic integrity of the interventions. Future research should explore ways to accommodate diverse beliefs while ensuring the effectiveness of therapeutic modalities

21. INDIVIDUALIZED YOGA THERAPY FOR BENIGN POSITIONAL VERTIGO AND SCIATICA IN PERIMENOPAUSAL WOMEN

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Objective: The objectives: To assess the efficacy of personalized yoga therapy in alleviating symptoms of vertigo in 50-year-old women with sciatica and knee pain. 2. To evaluate the impact of yoga therapy on the patient's stress levels. 3. To enhance the patient's quality of life through the integration of complementary holistic yoga practices.
Methods: The intervention consisted of twelve 1-hour yoga sessions over three weeks (four sessions per week). The therapy philosophy was to correct the imbalance of Prana (energy flow) through graduated yoga sessions with an experienced yoga therapist and the supervision of a physician. Yogic Asanas: Head/neck practices for vertigo, gentle back and hamstring stretching, and knee/ankle flexing. Chair Yoga: Adapted poses for sciatica. Pranayama: Basic breathing exercises to address stress and support the balance of Prana. Deep Relaxation Techniques (DRT) and OM-chanting, additionally, short sessions of Laughter Yoga and daily meditation.
Results: The Quality of Life (WHOQOL-BREF): Overall score increased from 88 to 99. General health score improved from 4 to 8 (range 2-10). Physical domain score increased from 21 to 28 (range 7-35). Psychological domain score improved from 21 to 25 (range 6-30). Social domain score increased from 11 to 13 (range 3-15). The environmental domain score remained unchanged. The pain severity score decreased from 5 to 2. Pain interference score decreased from 6 to 2. Significant improvement in dizziness and balance. No vertigo attacks during the 15 hours of therapy. Before therapy, the patient experienced weekly dizziness attacks. Improved balance during standing, looking up/down, head-turning, and walking. Allergies showed improvement, though some itching and nasal congestion persisted. Revised Life Orientation Test (LOT-R) Score improved from 21 to 23 (range 0-25).
Statistical Analysis: T-test for quality-of-life scores: t = -3.57, p = 0.023, indicates that the improvement in quality-of-life scores is statistically significant, suggesting that the yoga therapy had a meaningful positive effect on the patient's quality of life.
Conclusions: Individualized yoga therapy significantly improved the patient's vertigo, sciatica, knee pain, and stress levels. Yoga asanas targeting the neck and shoulders, synchronized with

breathing, were effective for vertigo. Chair yoga was beneficial for sciatica, and stress relief through laughter yoga, and meditation helped reduce pain and vertigo.

22. RECUMBENT ISOMETRIC YOGA IMPROVES FATIGUE, PSYCHOLOGICAL OUTCOMES AND POTS IN PATIENTS WITH ME/CFS

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Background: We developed a recumbent isometric yoga program taking into account the limitations of myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) patients and the characteristics of their illness, such as orthostatic intolerance, and this program was demonstrated to be feasible (Oka T et al., Biopsychosocial Med 2017,11:5).
Purpose: The aim of the present study was to investigate the efficacy of recumbent isometric yoga in patients with ME/CFS including its effect on postural orthostatic tachycardia syndrome (POTS).
Methods: Twenty-four adult patients with ME/CFS (20 women and 4 men, ages 37.9 ± 10.4 years) practiced recumbent isometric yoga for approximately 3 months, consisting of regular 20-min sessions with a yoga instructor and daily home sessions. The following parameters were compared between pre- and post-intervention periods: the 11-item Chalder's fatigue scale (CFQ-11) scores for severity of fatigue, the Profile of Mood States (POMS) Vigor score for energy levels, the Hospital Anxiety Depression Scale (HADS) scores for anxiety and depression, and the Shitsu-taikan-sho Scale (STSS) score for alexisomia. In 10 patients, changes in blood pressure and the pulse rated after standing were compared during active standing test.
Results: After the intervention period, the CFQ-11 score (from 26.3 ± 4.7 to 14.2 ± 5.9, $p < 0.01$), the HADS anxiety score (from 8.2 ± 5.2 to 5.8 ± 3.6, $p < 0.01$) and depression score (from 10.2 ± 3.9 to 7.5 ± 3.7, p <), and the STSS score (from 64.7 ± 11.8 to 59.0 ± 11.4, $p < 0.05$) reduced significantly and POMS Vigor score increased (from 14.0 ± 5.8 to 17.7 ± 6.1, $p < 0.01$) significantly. Two patients who showed POTS demonstrated normal orthostatic pattern after the intervention. There were no serious adverse events. No patients reported post-exertional malaise.
Conclusions: This study suggests that recumbent isometric yoga is a beneficial adjunctive therapy for patients with ME/CFS, including the improvement of fatigue, negative affects, and POTS.

23. YOGA IN MEDICINE: A SYSTEMATIC REVIEW OF YOGA FOR GASTROINTESTINAL AND METABOLIC DISORDERS

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Keywords: gastroesophageal reflux disease, gastric disease, belching, metabolic syndrome, diabetes, gastrointestinal inflammation, irritable bowel syndrome, yoga, meditation, diyana, postures, asana, diaphragmatic breathing, pranayama, deep breathing

Introduction: There is a worldwide increase of gastrointestinal and metabolic issues, with a significant discomfort, impact and reduced quality of life.
Recent evidences highlighted the therapeutic effect of mind-body interventions towards these burdens.
This study analysed the clinical articles on yoga therapy for gastrointestinal and metabolic disorders.
Methods: Clinical studies have been searched using one of the following keywords (for WOS and Scopus) or Medical Subjects Headings (for PubMed): Gastroesophageal Reflux Disease; Gastric Disease; Gastrointestinal Reflux; Dysphagia; Pyrosis; Belching; Odynophagia; Heartburn; Metabolic Syndrome; Diabetes; Gastrointestinal Inflammation; Irritable Bowel Syndrome in association (AND) with one of the different yogic techniques namely Yoga; Meditation; Diyana; Postures; Asana; Diaphragmatic Breathing; Pranayama; Deep breathing; Breathing.
Only prospective clinical studies in English, published in peer-reviewed indexed journals, and reporting full data were included.
Results: A total of 1933 patients were analyzed across 25 studies, mostly randomized trials (19/25, 76%) and prospective studies (6/25, 24%). Six studies included a control group with no interventions, while in 4 studies the control group used pharmacological therapy.
No randomized studies were found on yoga for dysphagia, pyrosis, odynophagia and heartburn.
Yoga interventions led to significant improvements in various clinical outcomes: diabetes (n = 484 patients, 5/5 studies, 100%) namely improved quality of life, reduced blood glucose levels, BMI, enhanced lipid profiles; irritable bowel syndrome (n = 75 patients, 4/6 studies, 80%) as significant reductions of symptoms, psychological distress, fatigue; metabolic syndrome (n = 589 patients, 4/4 studies, 100%) i.e. reductions in salivary cortisol, BMI, waist circumference, LDL cholesterol, blood pressure, and

carotid intima thickness; digestive disorders (n = 494 patients, 10/10 studies, 100%) namely quality of life, lower esophageal sphincter pressure, symptom frequency and severity, reflux disease score, pH levels, drugs assumption. Only 2/6 yoga studies (n = 215 patients) on irritable bowel syndrome reported no significant improvements on severity and symptoms.
Conclusions: Yoga and in particular yogic breathing reduced the symptoms, incidence and disease progression of functional gastrointestinal and metabolic distress, psychosomatic disorders, and stress-related digestive ailments.

24. THE EFFECTS OF SLEEP HYGIENE VS. PRANAYAMA ON SLEEP QUALITY: AN AUTOMATED, VIRTUAL, ASYNCHRONOUS RANDOMIZED CONTROLLED CROSSOVER TRIAL

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Objective: Virtual, asynchronous yoga, with its increased accessibility, scalability, standardization, and reduced research costs, is becoming increasingly prevalent. This study evaluates the effects of a virtual, asynchronous pranayama intervention compared to sleep hygiene education control on sleep quality and anxiety.
Methods: In this automated randomized crossover trial, participants (aged 18-65) signed up and paid a $30 fee, receiving $15 back upon completing all study components. The study was offered in English, Italian, and Spanish. The intervention was a 10-minute virtual, pre-recorded, nightly pranayama practice (Samvritti pranayama, or square breathing) vs a control of 10-minute virtual, pre-recorded, nightly sleep hygiene education program, each lasting one week with a one week washout period in between. Participants were randomized to either start with the pranayama intervention or the sleep hygiene education intervention. Sleep quality and anxiety were assessed weekly using the PSQI and STAI. Analyses focused on within-participant comparisons using means and standard errors.
Results: Out of 54 randomized participants, 25 completed the study, with attrition mainly due to missed communications. Those completing the study showed significant improvements in sleep quality and state anxiety following the pranayama intervention (PSQI mean change = -0.92 ± 0.90, $p < 0.05$; SAI mean change = -4.29 ± 3.69, $p < 0.05$), but not following the sleep hygiene education control (PSQI mean change = -0.58 ± 1.21; SAI mean change = -1.13 ± 3.78, $p > 0.05$). No significant changes were observed in trait anxiety. The effect sizes were small for PSQI (Hedge's g = 0.20) and large for SAI (Hedge's g = 1.02).
Conclusions: A short virtual, asynchronous nightly pranayama intervention may offer an effective alternative to sleep hygiene education for improving sleep quality and reducing state anxiety. This study underscores the potential of automated online yoga research to recruit participants and reduce administrative costs effectively. It also highlights the challenges of participant attrition and suggests that future studies include adaptive, real-time engagement strategies to improve adherence. Future research should explore longer durations, broader participant recruitment, and more outcome measures.

25. YOGA THERAPY TO IMPROVE QUALITY OF LIFE IN A FEMALE VETERAN WITH SEXUAL ASSAULT RELATED PTSD: A CASE STUDY

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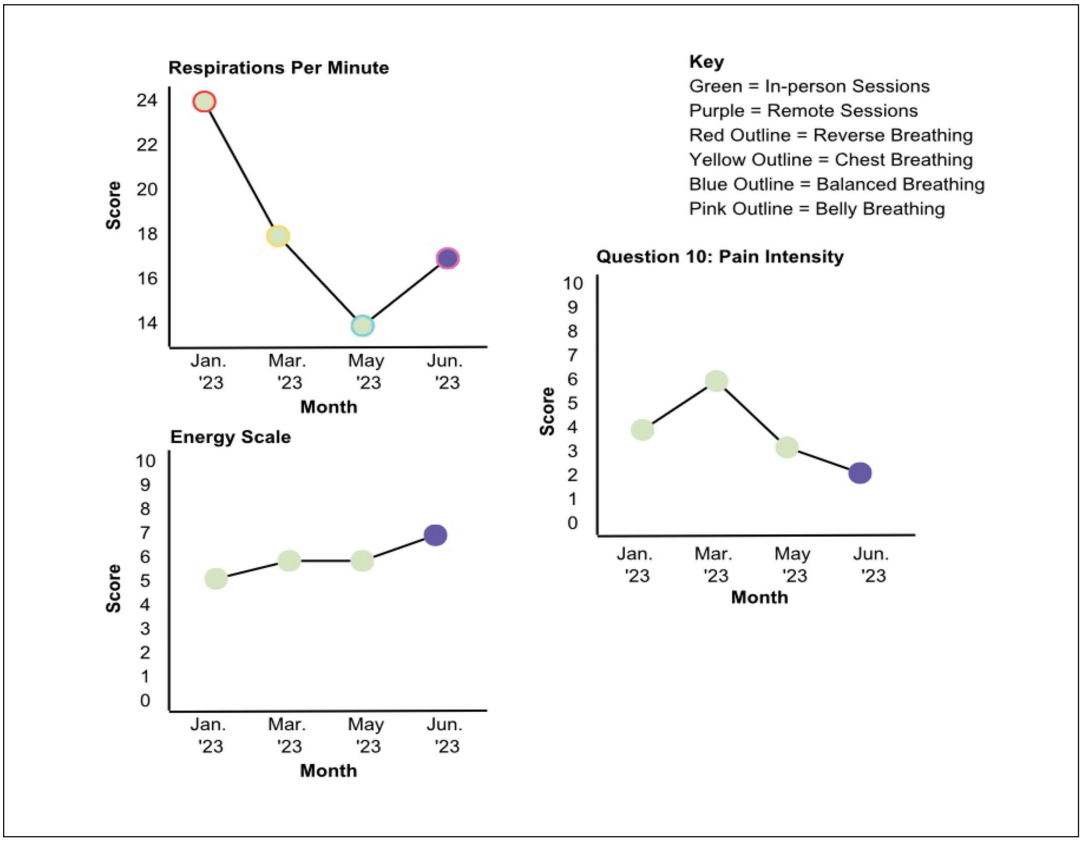
Keywords: yoga, PTSD, sexual assault

Background: One in 16 women in the military and 1 in 6 women attending military academies are subjected to sexual assault each year; 45% are diagnosed with Post Traumatic Stress Disorder (PTSD) as a result of the event. Recommendations based on current research urge the Department of Defense to change their current protocols to implement evidence-based interventions which promote self-agency, reduce victimization, and improve survivor care to increase stability throughout the military. Yoga therapy meets these recommended revisions by improving quality of relationships between soldiers to prevent victimization and by positively affecting PTSD symptoms.
Case Description: The case of one 22-year-old, female veteran diagnosed with PTSD after being sexually assaulted demonstrates the validity of using yoga therapy to achieve these goals of supporting and empowering women in the military after such violence. This client reported subsequent fatigue, pain, and decreased meaning and purpose, along with vocal cord dysfunction, migraines, insomnia, anxiety, and depression. Multiple pharmacological treatments were prescribed in addition to psychotherapy to manage her symptoms. After three yoga therapy sessions and moderate adherence to the protocols including mindful postures, breath, and meditation practices, the client reported increased energy, awareness, meaning and purpose, and decreased pain.
Results: Study findings suggest yoga therapy positively affects physical and psychological outcomes of PTSD (see figure) and improves interoceptive capability, confidence, and assertiveness, making this a viable option to meet the RAND corporation's recommendations and support female veterans. Significant changes have been noted when the practice includes mindful movement, breath, and meditation as this client experienced. Yoga therapy



has also been shown to reduce PTSD symptoms more quickly than cognitive processing therapy, highlighting the promising results experienced despite the limitation of duration and frequency of sessions. It should be included for consideration in the changes to protocol by the Department of Defense to empower and support female veterans and increase stability within military units.

➢ 26. PRELIMINARY EFFECTS OF RAJYOGA MEDITATION ON COGNITIVE CORRELATES OF CARDIAC REHABILITATION IN PATIENTS OF SURGICAL REPAIR FOR CONGENITAL HEART DISEASE—A RANDOMIZED CONTROL TRIAL

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Keywords: congenital heart disease, cognitive, rajyoga meditation, rehabilitation

Background: The diagnosis of Congenital Heart Disease (CHD), need for multiple surgeries, residual defects, high morbidity and mortality rates lead to psychological sufferings to both the child and the parents. Advancement in peri-operative care for children with CHD over past several decades has resulted in ever increasing number of these children, reaching adulthood with their cardiac ailments being palliated or repaired. In this study, Rajyoga meditation was introduced as a tool for stress management in the patients with CHD for age group 8-18 years.
Aim: To evaluate the efficacy of Rajyoga meditation on cognitive function of children operated for CHD
Methods: Patients aged 8-18 years, undergoing surgery for CHD at the Cardiothoracic centre, All India Institute of Medical Sciences (AIIMS), New Delhi, India were randomly allocated to two groups after providing written informed consent and ensuring compliance to the study procedures. The control group received rehabilitation as per institutional protocol. The intervention group received Rajyoga meditation sessions by certified meditation instructors of Brahmakumaris spiritual university at designat-

ed high energy meditation room at Cardiothoracic centre, AIIMS along with the standard cardiac rehabilitation. Post Hospitalization Behavior Questionnaire (PHBQ), Visual Analog Scale (VAS) and Happiness Index were used to assess psychological behaviour for both groups. The mean questionnaire scores were compared using paired t-test between groups and using independent sample t-test within the groups. Statistical analyses were done using STATA version14.
Results: A total of 30 patients were enrolled in control and intervention group each. Those who underwent Rajyoga meditation training had significantly lower pain levels [10.6(8.4,12.8)], higher PHBQ [-9.0(-15.6,-2.5)] and higher happiness index [-8.7(-10.2,-7.0)]; $p < 0.05$, in comparison to the control group.
Conclusions: This is the first study to demonstrate the effectiveness of Rajyoga meditation in children undergoing surgery for repair of CHD.
Acknowledgment: This study is supported by grant from DST-SATYAM.

27. YOGAFUN NIDRA TOOLS FOR ADDICTION RECOVERY ON AND OFF THE MAT

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Overview: This qualitative self-report study examines the transformative potential of Yoga Nidra as a complementary intervention alongside cognitive-based therapy for individuals undergoing substance abuse treatment. Conducted over six months at an in-patient addiction treatment center, the study gathered data through semi-structured interviews and reflective exercises. Key findings underscore the multifaceted benefits of Yoga Nidra in supporting sustained addiction recovery. Participants reported positive shifts in negative cognitions, improved sleep quality, and the acquisition of portable self-regulation tools for sobriety maintenance and stress management beyond treatment.
Study Design: Utilizing semi-structured interviews and reflective exercises, data was collected from over 200 individuals undergoing substance abuse treatment over a six-month period. This methodology provided rich insights into participants' perceptions of themselves and their experiences with Yoga Nidra before and after practice sessions. The study emphasizes Yoga Nidra's potential as a valuable adjunctive therapy in addiction treatment programs, synergizing with cognitive-behavioral and relapse prevention interventions.
Key Findings:

1. Enhanced Emotional Regulation: Participants reported improved control over reactive emotions, attributing it to the somatic sense of calm and relaxation induced by Yoga Nidra sessions.
2. Heightened Self-Awareness: Participants experienced greater control over their thoughts, increased focus, and a deeper connection with their inner selves, empowering them to navigate their recovery journey with greater introspection.
3. Stress Reduction and Coping Skills: Yoga Nidra sessions equipped participants with effective tools to handle life's challenges, leading to a noticeable reduction in stress levels and enhanced coping mechanisms.
4. Adjusting for Various Populations: Strategies for engaging clients in Yoga Nidra sessions were discussed, including brief psychoeducation, offering modifications, and using attuned language to cater to diverse population needs.

Conclusions: This qualitative self-report study provides compelling insights into the multifaceted benefits of Yoga Nidra in addiction recovery. The findings underscore its potential as a valuable adjunctive therapy, offering holistic support for individuals striving towards sustained sobriety and emotional well-being. Through its effects on emotional regulation and stress reduction, Yoga Nidra emerges as a promising tool for promoting lasting transformation and empowerment in the journey of addiction recovery.

➢ 28. YOGA FOR PATIENTS UNDERGOING RADIOTHERAPY AND THEIR SPOUSAL CAREGIVERS: RESULTS OF A 3-ARM RANDOMIZED CONTROLLED TRIAL

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Introduction: Radiotherapy (RT) as a definitive or adjuvant cancer treatment improves localized cancer outcomes at the cost of debilitating toxicities and functional problems. Yoga therapy delivered concurrently to RT may buffer against treatment-related sequelae. Given the high distress rates in patients' partners/spouses and interdependence of distress in couples, involving a spousal caregiver in the intervention may have additional benefits. We randomized patient-caregiver dyads to either a dyadic yoga (DY), patient yoga (PY) or usual care (UC) control arm. We hypothesized that patients in both yoga arms report improved quality of life (QOL) and perform better on an objective physical function test than those in the UC arm. The comparison between the DY vs PY group was considered exploratory.
Methods: Patients with a primary diagnosis of head and neck or breast cancer scheduled to undergo at least 25 fractions of RT completed the 6-minuate walk test (6MWT) at baseline. Additionally, patients and caregivers completed standard QOL assessments (SF-36) and were then randomized to the DY, PY or UC arm. Both yoga programs consisted of 15 sessions

delivered parallel to the RT schedule via videoconference (i.e., Zoom). In the DY arm, both patients and caregivers jointly attended the sessions. In the PY program, patients individually attended the sessions. All participants were reassessed at the last day of patients' RT and again 3 months later.
Results: 150 patients and caregivers were randomized (DY: n = 50; PY: n = 50, UC: n = 50). Although 4 dyads and 6 patients randomized to the DY and PY, respectively, did not start the interventions, adherence in both yoga arms was still high (mean session attendance: DY = 12.0; PY = 12.1). Patients in both yoga arms thought the program was helpful (scale 1-5, means: DY = 4.76; PY = 4.85). Intent to treat analyses using multi-level modeling across the follow-up period revealed that patients in the DY arm performed significantly better on the 6MWT than those in the UC arm (F = 4.91, p = .03). The planned comparisons between the PY vs UC (F = 3.44, p = .07) and DY vs PY (F = .05, p = .82) were not significant (least square means (LSM) in meters: DY = 517; PY = 513; UC = 487). Both the DY vs UC and PY vs UC comparisons yielded clinically significant differences in the 6MWT distance in favor of the yoga arms. Surprisingly, none of the comparisons for the self-reported physical QOL scores (PCS of SF-36) were significant (LSM: DY = 42.7; PY = 44.4; UC = 42.8). Regarding mental QOL (MCS of SF-36), the comparison between the DY and UC arms was significantly different (F = 4.61, p = .04) favoring the DY group. The DY vs PY and PY vs UC comparisons were not significant (LSM: DY = 50.3; PY = 48.5; UC = 46.5). No significant group differences for the caregiver mental and physical QOL scores were found.
Conclusions: Yoga, particularly when delivered to patient-caregiver dyads, appears to be a beneficial behavioral supportive care strategy for patients undergoing RT. We revealed significantly improved patient physical performance and mental QOL relative to a UC comparison group. An effectiveness trial is the next logical step in this program of research.

29. EVALUATION OF YOGA INTERVENTION PILOT STUDY FOR CHILDREN WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER (ADHD)

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Keywords: yoga, cognitive flexibility, ADHD, children

Objective: The purpose of this study is Evaluation of the Efficacy of an Integrated Yoga practice Intervention to Treat Attention-Deficit Hyperactivity Disorder (ADD, ADHD) in Children.
Methods: 42 participants between the ages of 8 and 12 completed the tests and intervention. The mean age of participants was 9.62. Participants with symptoms of ADHD included Group A (N = 26, 18 male, 8 female); and Group B was without ADHD symptoms (N = 16, 10 male, 6 female). Eight weeks of yoga intervention was given, and pre and post-assessments were administered in the form of the Wisconsin Card Sorting Inspired Task (WCST) and NICHQ Vanderbilt questionnaire (parent informant) to evaluate attention, hyperactivity, school performance, and overall symptoms.
Results: Independent sample T-tests showed statistically significant improvements in total error count for the entire group, decreasing from an average of 23 (SD = 7.7) to 13.3 (SD = 6.8) after completing the intervention, indicating an enhancement in cognitive performance. Statistically significant improvement in attentiveness from the score of 5.5 (SD = 3.3) to 3.7 (SD = 3.3). These results demonstrated the yoga intervention enhanced executive functioning in kids with or without ADHD symptoms. The group-wise scoring showed a statistically significant improvement in total error count and inattention scores in both ADHD and non-ADHD groups. The inattention scores showed statistically significant improvements in both categories as well. Additionally, the ADHD group (Group A) showed statistically significant improvement in total symptom scores of ADHD from (M = 12.3, SD = 3.7) to (M = 9.9, SD = 4.0). The improvements observed throughout this clinical trial supports the potential of yoga to enhance cognitive flexibility, reduce symptoms, and improve overall functioning in children with ADHD.
Conclusions: These results indicate that yoga has a positive impact on executive functioning and attention in children with ADHD at par with children without ADHD. Additionally, yoga has a positive impact on the overall symptoms of ADHD in children with ADHD. The findings of this study indicate that yoga could be considered as a promising alternative first-line treatment modality for managing attention-deficit hyperactivity disorder, by offering a natural approach to enhance cognitive performance in children with ADHD.

30. YOGA THERAPY FOR THE MANAGEMENT OF MEDICAL TRAUMA: A CASE STUDY

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Background: Medical trauma, characterized by psychological and physiological responses to pain, injury, illness, medical procedures or treatment can lead to symptoms of depression and anxiety, with lasting effects on wellbeing. Its prevalence is higher in individuals with a history of anxiety, trauma, or other mental-health concerns, high stress, women and people of color. Yoga, a mind-body practice which serves as a gateway pro-health

behavior, can help cope with trauma-related symptoms outside of a medical context and may be especially helpful for those with medical trauma.
Case Description: A 61-year-old female Caucasian medical assistant with congenital cervical stenosis, dystonia, and a history of surgery, including laminectomy, discectomy, C2 thru T1 fusion, and a spine stimulator, experienced persistent pain due to incorrect placement of a stimulator. This was followed by corrective laminectomy and stimulator reinsertion, resulting in symptoms of medical trauma. Comorbidities include rheumatoid arthritis (RA), Hashimoto's thyroiditis and celiac disease. The patient has a history of addiction, loss of parents, and personal addiction. She is 31 years sober and receives weekly physical therapy. Baseline measures include pain, 8.5/10 (Wong-Baker Pain Scale), "extreme fatigue" 9/10 (Rating of Fatigue Scale), depression, 1.5/10 (10-pt mood scale) and inability to get up and down from the floor.
Purpose: To apply multi-kosha yoga therapy practices to improve pain, fatigue and mood for a client with medical trauma and support coping with future healthcare utilization.
Methods: The care involved 12 weekly sessions, regular practice and medical appointments. Most sessions were in-person but online during schedule conflicts or RA flares. Practices included gentle joint freeing, restorative movements with yoga props, pranayama, loving kindness meditation, and Raja yoga to address pain, fatigue and mood.
Results: Over 12 sessions, she could get up and down from the floor unassisted. Pain improved to 4.5/10, fatigue was "mild" 5/10 and mood score increased to 5.5/10. She reported using the practices to feel energized, lift mood and cope with personal and professional stress.
Discussion: Medical trauma is complicated when healthcare is required to manage chronic disease, and can amplify trauma symptoms. Yoga therapy practices, including movement, breath, focus, meditation and relaxation may alleviate these symptoms and provide an aid for ongoing medical care.

31. MERGING THE KOSHAS AND PAIN REHABILITATION: PROTOCOL AND PRELIMINARY ACCEPTABILITY OF A 6-WEEK YOGA INTERVENTION FOR CHRONIC PAIN

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Keywords: chronic pain, koshas, yoga, interoception

Objective: Focusing on the whole person, yoga is optimally positioned to address the complex nature of chronic pain. The *kosha* model provides a useful framework to deliver yoga for chronic pain and provides a means by which to train interoceptive skills. The *koshas* overlap with biopsychosocial-spiritual models of care and interdisciplinary treatment approaches for chronic pain. Herein we describe the protocol and preliminary feasibility and acceptability of an ongoing 6-week yoga intervention merging the *koshas* with pain rehabilitation strategies to target interoception in chronic pain.
Methods: A sample of N=11 enrolled in the first cohort at the time of analyses and attended twice weekly yoga classes for 6 weeks. Feasibility and acceptability measures after program completion include retention, attendance, and acceptability rated on a 7-point Likert scale. The intervention protocol is designed to provide progressive journey through the *koshas*, beginning with the physical body (*annamayakosha)* and moving sequentially inwards towards the bliss body (*anandamayakosha)* and *kosha* integration. Each week uses 1-2 *koshas* as the attentional focus. *Pranayama* and *dhyana* are selected to target the primary *kosha* theme and *asana* are selected to enhance the attentional focus of that *kosha*. For example, week 1 focuses on the *annamayakosha*, integrating body scanning, progressive muscle relaxation, and *asana* selected to facilitate postural awareness (e.g. *tadasana*) and habitual asymmetries (e.g. *virabhadrasana I*) with cueing to attend to sensations, left/right differences and alignment. Pain management strategies include pain education, postural mechanics, tension reduction, pacing, and graded exposure.
Results: A total of 7/11 (63.6%) participants completed the program with 72.6% average attendance. Dropout reasons included change in work schedule prior to intervention (N = 1), change in family care needs (N = 2), and no show (N = 1). The intervention was highly acceptable, with participants reporting high overall satisfaction (6.6/7), enjoyment (6.4/7), finding yoga beneficial (5.9/7) and appropriateness for chronic pain 6.9/7).
Conclusion: These findings show that a yoga protocol integrating the *koshas* with pain rehabilitation strategies to train interoceptive skills demonstrates initial feasibility and acceptability for chronic pain.
Funding: This study is funded by the National Institutes of Health award AG066630.

32. EVALUATION OF A NOVEL YOGA THERAPY PROGRAM FOR RESIDENTS, FAMILY MEMBERS AND STAFF IN A RESIDENTIAL CARE SETTING

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Keywords: yoga therapy, residential care, program evaluation, quality of life, cognition, mood, meaningfulness, well-being, social connection

Background: Sunnybrook Veterans Centre in Toronto, Canada offers long-term and complex hospital care to over 250 veterans. We introduced novel yoga therapy program for residents to support independence, increase mobility, reduce falls, and improve mood and quality of life. Programming was also offered to family members and staff to alleviate stress and promote well-being.
Objectives: The primary objective was to evaluate whether the program objectives were met. A secondary objective was to assess program successes, challenges and opportunities, providing direction for establishing yoga therapy programs in residential care.
Methods: We used mixed methods to evaluate the program's impact on residents who participated in weekly classes. Median Minimum Data Set (MDS) scores of regular resident participants (n=31) were compared longitudinally with median scores of non-participants (n=84) over three time periods (0, 6, 12 mos). We analyzed scores of nine domains: Cognitive Performance Scale (CPS), Depression Rating Scale (DRS), Changes in Health End Stage Disease and Signs and Symptoms (CHESS), Pain Scale, Index of Social Engagement (ISE), Activities of Daily Living (ADL) Short-Form, ADL Self-Performance Hierarchy Scale, ADL Long Form, Aggressive Behavior Scale (ABS), and Personal Severity Index (PSI).
To further evaluate the program's impact on residents, we conducted three focus groups with residents (n = 20) and a focus group (n = 3) and interviews (n = 2) with staff members.
To evaluate the therapeutic yoga program for family members, we administered an online survey (n = 3). To evaluate the therapeutic yoga program for staff, we conducted a focus group (n = 6).
We used thematic analysis to analyze transcripts and survey responses.
Results: Resident program - CPS, DRS, Pain Scale, ADL Self-performance, ABS and PSI scores of resident participants showed statistically significant improvements. Themes: meaningfulness, improved physical and mental well-being, independence, social connection. Contributors: tailored approach, rapport with yoga therapist, safety, accessibility.
Family member and staff programs - Themes: stress reduction, improved physical and mental well-being, self-care, positive outlook, increased productivity (staff). Contributors: social connection, adaptability, calm manner.
Conclusions: Quantitative data indicate the resident program had a beneficial impact on cognitive function, mood, pain, and quality of life. Qualitative themes provide context and guidance for future programs.

The following abstract was presented at the 2023 Symposium on Yoga Research.

AN EXPLORATION OF THERAPISTS' EXPERIENCES OF WORKING WITH YOGA-INTEGRATED PSYCHOTHERAPY

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Keywords: yoga, psychotherapy, counselling, integration

Objective: The purpose of this study is to explore the therapeutic benefits of integrating yoga into psychotherapy sessions through the lens of psychotherapists in their practices with adults.
Methods: A qualitative study took place among seven yoga-integrative counsellors/psychotherapists using semi-structured interviews. Participants came from UK, Canada and USA and had backgrounds in various psychotherapeutic modalities. Their experiences of using yoga within their therapeutic practice ranged from 6 to 40 plus years. Data was analysed using the Thematic Analysis approach.
Results: Three main themes emerged from the findings: Understanding of Yoga-integrated Psychotherapy (YiP); In-session Practices; and The Impact of YiP. Participants spoke of the connection between the body and the mind and how traditional psychotherapy's cognitive approach can fail to address the body's need to heal. They spoke of yoga's role in regulating the nervous system, enabling deeper insight processing, and releasing repressed emotion and trauma. The necessity of supplementing psychotherapy qualifications with training in yoga teacher training or yoga therapy was emphasised by all seven participants in the absence of a specific YiP model. Therapists' embodied yoga practice was also stressed as vital to YiP, whereby the mindful presence of the therapist enables nervous system co-regulation and deeper connection with the client. There was unanimous agreement on delivering YiP through employing a person-centred, client-led approach, with each session tailored to the client's presenting needs as they arose. Participants differed on their set-up of the therapy space, some offering chairs, some yoga mats while others brought YiP outdoors. The placement of yoga within the session appeared to have different effects on clients. Yoga before the talk therapy enhanced psychotherapy outcomes while yoga afterwards managed symptoms of distress. All participants saw clients' self-agency enhanced as learned yoga skills allowed them to manage their psychological difficulties inside and outside of the therapy room.
Conclusions: Yoga positively enhances the therapeutic process and clients' well-being. More research to inform an evidence-based YiP model would provide useful training, supervision and guidelines to those interested in this modality.