Research at a Glance

COMPILED & EDITED

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PREFACE

Introduction

The library of the Central Council for Research in Homoeopathy has been circulating “Research at a Glance”. The main objective is to disseminate precise information/citation about scientific articles published in various journals/magazine other than the journals subscribed by this Council.

Scope

This volume covers articles on Homeopathy, Ayurveda, Unani, Yoga.

Arrangement of Entries

The articles are indexed under the name of the authors, arranged in alphabetical order. The entries have been made in the following order:

Author
Title
Name of Journal
year of publication; Volume (issue no.): pagination
Abstract

Acknowledgement

We are grateful to Dr. R.K. Manchanda, Director General, CCRH for his encouragement and valuable suggestions from time to time. We sincere acknowledge the cooperation of Mrs. Nisha Adhikari, DEO in compiling this bulletin.

(Meenakshi Bhatia)
Librarian
HOMOEOPATHY


Abstract:

Homoeopathy is widespread, and users claim to benefit from it. However, clear evidence of its efficacy over placebo is not available to date. As a consequence, a social separation between homoeopathy users and mainstream medicine exists, exposing these patients to many risks. Our primary objective is to assess homoeopathy efficacy by systematically reviewing existing systematic reviews and meta-analyses and to systematically review trials on open-label placebo (OLP) treatments. A secondary objective is to understand if homoeopathy as a whole may be considered as a placebo treatment.

PubMed/Medline, Embase, Google Scholar, and Cochrane Library were systematically searched for systematic reviews and meta-analyses on homoeopathy efficacy, and 61 studies were included. Same databases plus Journal of Interdisciplinary Placebo Studies (JIPS) were also systematically searched for randomised controlled trials (RCTs) on OLP treatments, and 10 studies were included. Databases were searched up to 24 February 2018. Two authors independently screened all retrieved articles and selected studies eligible for inclusion. The quality of reviews of included studies was evaluated with a dedicated NIH tool in the first review, whereas the risk of bias of trials of included studies was assessed with the specific Cochrane tool in the second review. Qualitative syntheses show that homoeopathy efficacy can be considered comparable to placebo, and that OLP treatments may be effective in some health conditions. Placebo effects like placebo itself, treatment context, physician-patient relationship, and other nonspecific factors can define the idea of placebo treatments, which may be effective in some conditions. If homoeopathy efficacy is comparable to placebo, and if placebo treatments can be effective in some conditions, then homoeopathy as a whole may be considered as a placebo treatment. Reinterpreting homoeopathy as a placebo treatment would define limits and possibilities of this practice. This perspective shift suggests a strategy to manage patients who seek homoeopathic care and to reconcile them with mainstream medicine in a sustainable way.

Abstract:

Background: It is presumed that pharmacological and non-pharmacological treatment of prenatal common mental disorders can mitigate associated adverse effects in offspring, yet strong evidence for the prophylactic benefits of treatment is lacking. We therefore examined the effect of prenatal treatments for common mental disorders on offspring outcomes.

Methods: For this meta-analysis, articles published up to August 31, 2017, were obtained from PubMed, PsycInfo, Embase, and Cochrane databases. Included studies needed to be randomized controlled trials (RCTs) on the effect of treatment of prenatal common mental disorders comparing an intervention to a control condition, including offspring outcome(s). Random effects models were used to calculate Hedges’ g in the program Comprehensive Meta-Analysis© (version 3.0).

Results: Sixteen randomized controlled trials among 2778 pregnant women compared offspring outcomes between prenatal interventions and control groups. There were zero pharmacological, 13 psychological, and three other interventions (homeopathy, relaxation interventions, and short psychoeducation). Birth weight (mean difference 42.88 g, g = 0.08, 95% CI -0.06 to 0.22, p = 0.27, n = 11), Apgar scores (g = 0.13, 95% CI -0.28 to 0.54, p = 0.53, n = 4), and gestational age (g = 0.03, 95% CI -0.06 to 0.54, p = 0.49, n = 10) were not significantly affected. Other offspring outcomes could not be meta-analyzed due to the inconsistent reporting of offspring outcomes and an insufficient number of studies.

Conclusions: Non-pharmacological interventions had no significant effect on birth outcomes, although this outcome should be considered with caution due to the risk of biases. No randomized controlled trial examined the effects of prenatal pharmacological treatments as compared to treatment as usual for common mental disorders on offspring outcomes. Present clinical guidelines may require more research evidence on offspring outcomes, including child development, in order to warrant the current recommendation to routinely screen and subsequently treat prenatal common mental disorders.

Bucyibaruta BJ, Eyles J, Harris B et al. Patients’ perspectives of acceptability of ART, TB and maternal health services in a subdistrict of
Abstract:

**Background:** The field of acceptability of health services is emerging and growing in coherence. But there are gaps, including relatively little integration of elements of acceptability. This study attempted to analyse collectively three elements of acceptability namely: patient-provider, patient-service organisation and patient-community interactions.

**Methods:** Mixed methods were used to analyse secondary data collected as part of the Researching Equity in Access to Health Care (REACH) study of access to tuberculosis (TB) treatment, antiretroviral therapy (ART) and maternal health (MH) services in South Africa’s public health sector.

**Results:** Provider acceptability was consistently high across all the three tracer services at 97.6% (ART), 96.6% (TB) and 96.4% (MH). Service acceptability was high only for TB tracer (70.1%). Community acceptability was high for both TB (83.6%) and MH (96.8%) tracers.

**Conclusion:** Through mixed methods, this paper provides a nuanced view of acceptability of health services.


Abstract:

**Background:** Complementary and alternative medicine (CAM) is frequently used in the treatment of chronic rhinosinusitis (CRS) in developed countries. With a plethora of CAM therapies available, their effectiveness and safety are poorly understood in the context of CRS.

**Objectives:** This article aims to critically appraise the evidence for CAM use in CRS through a systematic review of current literature that investigate the effects of CAM on symptoms and clinical status of adults with CRS.

**Study design:** Systematic review and qualitative analysis.

**Review methods:** A comprehensive systematic review of the literature was conducted by the authors using 5 databases from inception to July 2017:
CINAHL, Cochrane, Embase, PubMed, and SCOPUS. Inclusive medical subject headings and keywords consisted of, but were not limited to, sinusitis and complementary therapies, naturopathy, or traditional Chinese medicine. PRISMA guideline was followed. Using templates by Cochrane Public Health Group and Newcastle-Ottawa Scale, each author extracted data, assessed bias, and computed minimal clinically important difference. Any conflicts were resolved through discussion.

**Results:** In total, 7 of 7141 articles from 1995 to 2016 were included. Three randomized controlled trials and 4 observational studies were organized into 4 categories of CAM: naturopathy, Chinese medicine, homeopathy, and others. Limited evidence supported the use of Pimpinella anisum and crenotherapy for CRS. Data available on Chinese medicine, homeopathy, and liposomal therapy in CRS were inconclusive due to inherent flaws in the studies.

**Conclusion:** Overall, there is very limited evidence to support the use of CAM in the treatment of CRS. No significant adverse effects have been found. Given its widespread use, more rigorous data from high-quality research are needed before it can be routinely recommended.


**Abstract:**

**Background:** Diabetic nephropathy (DN) is the foremost cause of morbidity and has become the most recurrent cause of end-stage renal disease among diabetic patients. Thus, agents having antidiabetic effect along with safety potential in the kidneys would have a higher remedial value.

**Objective:** The present study aimed to investigate possible protective effect of homeopathic preparation of Cephalandra indica Mother tincture, 6C and 30 C potencies on DN in Wistar rats.

**Materials and methods:** DN was induced by intraperitoneal injection of STZ (60 mg/kg) 15 min after Nicotinamide (230 mg/kg, i.p.) administration. Rats were divided into six groups (n = 6). Group 1 and 2 was kept normal control and diabetic control respectively whereas Groups 3-5 consist of diabetic nephropathy rats treated with different doses of C. indica Mother tincture, 6C and 30 C potencies for 45 days. Glimepride (10 mg/kg) was used as standard. DN was assessed by determining serum glucose, urea, uric acid, creatinine
level and tissue histological examination. Tissue antioxidant enzymes (SOD, GSH, LPO) level was measured to assess the oxidative stress. Also, the level of advanced glycation end products in kidney was determined.

**Results:** Mother tincture, 6C and 30 C potencies of C. indica produced significant attenuation in the biochemical parameters used to assess diabetic nephropathy. Moreover, oxidative stress and AGE's level in kidney was also found to be significantly reduced.

**Conclusion:** We conclude that Mother tincture, 6C and 30 C potencies of C. indica confers protective effect against diabetic nephropathy via inhibition of Oxidative stress and AGE's.
AYURVEDA


Abstract:

Background: In traditional medicine, guduchi (Tinospora cordifolia) is considered as an adaptogen with immunomodulatory prowess. A 25 kDa protein from guduchi stem has been characterized as an immunomodulatory protein (ImP).

Objectives: The aim of this study was to evaluate the intrinsic immunogenicity of guduchi ImP and adjuvant activity using ovalbumin (OVA) as antigen in BALB/c mice.

Methods: Mice were given guduchi ImP (30 and 60 μg) by intranasal administration to respective groups (n = 6) on days 1, 14 and thereafter weekly till day 42. Immunogenic response was monitored by serum IgG/IgA levels (days 14, 35 and 50). The adjuvant activity was measured by serum anti-OVA IgG/IgA responses to administration of 30 μg OVA with guduchi ImP. The effect of guduchi ImP on the spleen status was examined by splenic weight (day 50).

Results: Guduchi ImP administration displayed a significant increase in anti-guduchi ImP IgG (5-7 fold) and anti-guduchi ImP IgA (3-4 fold) on day 50 vs. control. Guduchi ImP showed a significant increase in anti-OVA IgG (6-7 fold) and anti-OVA IgA (4-5 fold) on day 50 vs. control. The splenic index of guduchi ImP group increased significantly in both the immune and adjuvant response groups; however, the splenic index in the adjuvant response group was markedly higher.

Conclusions: The results indicate that guduchi ImP is a strong immunogen by itself and enhances the immunogenicity of mucosally-administered antigen in BALB/c mice. Based on the results of this animal study, it appears that guduchi ImP shows a potential for future studies in humans.

Background: Aldose reductase (AR) and Advanced glycation end product (AGE) are known to play important roles in the development of diabetic complications. The inhibitors of AR and AGE would be potential agents for the prevention of diabetic complications.

Objective: The present study was aimed to evaluate the aldose reductase (AR) and advanced glycation end product (AGE) inhibitory potential of pterostilbene for its possible role in the treatment of diabetic complications such as cataract.

Materials and methods: The compound was studied for its inhibitory activity against rat lens AR (RLAR) and rat kidney AR (RKAR) in vitro along with its ability to inhibit the formation of AGEs. Anticataract activity of pterostilbene was demonstrated using sugar induced lens opacity model in isolated cattle lens. Further, the involvement of pterostilbene in galactosemia in rats was investigated by assessing the key markers in the polyol pathway and the results were compared with that of a potent AR inhibitor, fidarestat.

Results: Pterostilbene exhibited inhibitory activity against RLAR and RKAR with IC50 values of 5.49 mg/ml (21.4 mM) and 6.40 mg/ml (25.02 mM), respectively. In sugar-induced lens opacity model, pterostilbene displayed a significant protective effect by preventing opacification and formation of polyols in cattle lens. Besides, the compound exhibited in vivo inhibition of galactitol accumulation in lens and sciatic nerves of galactose fed rats.

Conclusion: The results obtained in the study underline the potential of pterostilbene as possible therapeutic agent against long-term diabetic complications.

Abstract:

Background: Argyreia boseana Santapau and Patel commonly known as Kumbharao belongs to the family of Convolvulaceae. The plant is rare in distribution and found chiefly in the dediapada region of Gujarat. Traditionally it is used by the tribals of south Gujarat forest region in the treatment of
various diseases of the nervous system. In order to study the scientific basis of the plants effect we set out to investigate the effect of the plant on ageing organisms and used Caenorhabditis elegans as a model.

**Objective:** In the present study the objective is to evaluate the effect of crude extract of leaves, prepared from A. boseana on oxidative stress, thermal stress, longevity and in vivo gene expression of C. elegans.

**Material and methods:** Plant extracts was prepared by sonication based method using solvent ethanol:water. Longevity experiments were carried out in liquid S media. Oxidative stress was induced by paraquat.

**Result:** Results indicate no increase in the normal life span of C. elegans. However, A. boseana significantly induces stress tolerance and increased the mean lifespan of worms during thermal and oxidative stress. Additionally A. boseana was also able to up regulate the stress associated gene gst-4.

**Conclusion:** Thus the present study, for the first time, unravels the anti-stress and ROS modulating effect of A. boseana.


**Abstract:**

**Background:** Diabetic nephropathy (DN) is the foremost cause of morbidity and has become the most recurrent cause of end-stage renal disease among diabetic patients. Thus, agents having antidiabetic effect along with safety potential in the kidneys would have a higher remedial value.

**Objective:** The present study aimed to investigate possible protective effect of homeopathic preparation of Cephalandra indica Mother tincture, 6C and 30 C potencies on DN in Wistar rats.

**Materials and methods:** DN was induced by intraperitoneal injection of STZ (60 mg/kg) 15 min after Nicotinamide (230 mg/kg, i.p.) administration. Rats were divided into six groups (n = 6). Group 1 and 2 was kept normal control and diabetic control respectively whereas Groups 3-5 consist of diabetic nephropathy rats treated with different doses of C. indica Mother tincture, 6C and 30 C potencies for 45 days. Glimepride (10 mg/kg) was used as standard. DN was assessed by determining serum glucose, urea, uric acid, creatinine level and tissue histological examination. Tissue antioxidant enzymes (SOD,
GSH, LPO) level was measured to assess the oxidative stress. Also, the level of advanced glycation end products in kidney was determined.

**Results:** Mother tincture, 6C and 30 C potencies of C. indica produced significant attenuation in the biochemical parameters used to assess diabetic nephropathy. Moreover, oxidative stress and AGE’s level in kidney was also found to be significantly reduced.

**Conclusion:** We conclude that Mother tincture, 6C and 30 C potencies of C. indica confers protective effect against diabetic nephropathy via inhibition of Oxidative stress and AGE’s.


**Abstract:**

Ayurveda translates as ‘life science’. Its knowledge is not limited to medicine, cure or therapy and is for laypersons, households, communities, as well as for physicians. Throughout its evolutionary history, Ayurveda and Local Health Traditions have reciprocally influenced each other. In modern times, the influence of biomedicine on Ayurveda is leading to its medicalisation. Over the past century, the introduction and perspective of biomedicine into India has made the human being an object for positive knowledge, a being who can be understood with scientific reason and can be governed and controlled through medical knowledge. This paper explores how this shift towards medicalisation is affecting the knowledge, teaching, and practice of Ayurveda. It examines the impact and contribution of processes like standardisation, professionalisation, bio-medicalisation and pharmaceuticalisation on Ayurveda education, knowledge, practice and policies. To maintain health and wellbeing Ayurveda’s ancient knowledge and practice needs to be applied at individual, community and health care provider levels and not be limited to the medical system. The current over medicalisation of society is a potential threat to human health and well-being. Ayurveda and LHT knowledge can provide essential teachings and practices to counter-balance this current trend through encouraging a population’s self-reliance in its health.

**Nipate SS, Tiwari AH. Antioxidant and immunomodulatory properties of Spilanthes oleracea with potential effect in chronic fatigue syndrome**
Abstract:

Background: Chronic fatigue syndrome (CFS) holds a mystery for researchers due to its multifactorial nature; hence, its diagnosis is still based on symptoms and aetiology remains obscured. Number of scientific evidences regarding the role of oxidative stress, immune dysfunction in CFS and alleviation of symptoms with the help of nutritional supplements guided us to study effect of ethanolic extract of Spilanthes oleracea (SPE) in CFS.

Objectives: Present study was designed to evaluate antioxidant, immunomodulatory properties of S. oleracea flower to ameliorate CFS infirmity in mice.

Materials and method: In order to induce fatigue, experimental animals were stressed by chronic water - immersion stress model. Meanwhile, parameters like immobility period and tail withdrawal latency were assessed. On the 21st day, mice blood was collected and they were immediately sacrificed for biochemical estimations.

Results: Biochemical analysis results revealed that CFS elevates lipid peroxidation, nitrite level and diminishes the endogenous antioxidant enzyme like catalase level in stressed animal's brain homogenate. Stressful condition developed muscle fatigue leading in alteration of lactate dehydrogenase level (LDH), Blood urea nitrogen (BUN) and Triglycerides (TG) levels. Concurrent and chronic treatment of SPE for 21 days restored all these behavioural despairs and associated biochemical adaptation in mice in dose-dependent manner.

Conclusion: The outcome of this study indicates ability of SPE in amelioration of CFS by mitigating the oxidative stress and thus provide a powerful combat against CFS which may be due to its antioxidant and immunomodulatory properties.


Abstract:

Bioavailability of the well-known Ayurvedic drug Swarnabhasma (gold bhasma or calcined gold) is unknown. It is orally administered either sublingually or
directly with various Anupanas like black pepper powder (Piper nigrum Linn.) and cow ghee in the dose range of 15-240 mg by Ayurvedic physicians. Study of bioavailability of Swarnabhasma is necessary as this metal-derived drug is administered for long duration for rejuvenation. The pilot study was carried out in healthy human male participants to assess bioavailability of Swarnabhasma in three doses, viz. 30 mg plain sublingual, 30 mg oral dose mixed with black pepper powder (250 mg) and cow ghee (2.5 gm); and 240 mg oral dose mixed with black pepper powder (250 mg) and cow ghee (2.5 gm). Blood samples were withdrawn at 0, 1, 2 and 4 h after administration of dose. Estimation of gold levels in blood was carried out by inductively coupled plasma mass spectrometry (ICP-MS). Results show that gold is absorbed in traces from single dose of Swarnabhasma. Maximum concentration of gold was bioavailable from 30 mg sublingual dose with Cmax 0.983 μg/L at 2 h (Tmax). Oral dose of 30 mg Swarnabhasma mixed with black pepper powder and ghee showed faster absorption with Tmax at 1 h and Cmax 0.867 μg/L, and 240 mg dose with black pepper and ghee showed Cmax 0.668 μg/L and Tmax at 2 h.


Abstract:

Background: Vitiligo is not only a cosmetic problem, but also a social and psychological problem worldwide with the prevalence rate being highest in India. Treatment is unsatisfactory in Western System of Medicine. Unani System of Medicine (USM) possesses various drugs to treat vitiligo in both topical and oral dosage forms. Safoof-e-Bars (SB) is an important powdered dosage form used widely to treat vitiligo, internally as Zulal. Externally as Sufl (Sediment remained after decanting the soaked drug) is used. Babchi, a component of SB, is reported to contain psoralen, an important therapeutically active compounds for treating vitiligo. But as Psoralen - the active marker compound is very slightly soluble in water, so only negligible amount of it comes in zulal and most of the amount remains in sufl. That might be the reason for local application of sufl as recommended by Hakeems. But clinically it is observed that application of sufl is not followed by most of the patients, due to side effects associated with its application on skin.
Objectives: The present study is designed to convert Safoof-e-Bars into a more convenient and appealing newly evolved dosage form 'emulgel' of same composition as of SB, so that it can be used by the patients easily without any side effects.

Materials & methods: Various batches of emulgel were prepared as preliminary batches and final batches using hydro-alcoholic extract of SB and different excipients in different concentrations. Preliminary batches were formed for selecting composition and concentration of extract and excipients for final batches. Total eight batches (F1F8) were prepared as final batches. Among these eight batches, batch F7 was selected as final batch, which was further evaluated on various parameters. Comparative quantitative analysis was done in Zulal, Hydro-alcoholic extract of SB and emulgel using HPLC.

Results: Optimized emulgel showed good result in physicochemical parameters. Highest percentage of psoralen was found in SB extract while lowest percentage was found in zulal. No growth of yeast and mould, and viable aerobic were found in emulgel on microbiological analysis. Emulgel was found to be stable for 3 months at three different temperatures i.e., 4 °C, 25 °C and 40 °C.

Conclusion: Newly developed emulgel may be recommended with zulal instead of traditionally used sufl with zulal. In future emulgel will provide a solution for topical delivery of hydrophobic drugs and more convenient dosage form to apply locally.


Abstract:

Background: To protect the massive trust of patient in Ayurveda, a need aroused for the researches to ascertain the quality, safety & efficacy of herbo-mineral preparations on scientific lines. The rasa-aushadhis are having qualities such as instant effectiveness, requirement in very small dosage and ample therapeutic utility. Mahalaxmi Vilas Rasa [AFI, 20:27] has been used for treatment of a variety of ailments since time immemorial.
Objective: To prepare Mahalaxmi Vilas Rasa as per standard operating procedures (SoPs) mentioned in classical text and to characterize it chemically using modern analytical techniques.

Materials and Methods: The drug (Mahalaxmi Vilas Rasa) in three batches was prepared in GMP certified pharmacy. Physico-chemical analysis, HPTLC, Assay of elements by AAS & ICP-AES were carried out as per Ayurvedic Pharmacopoeia of India. Powder X-ray diffraction (XRD) was conducted using Rigaku Ultima-IV X-ray diffractometer.

Results: The elemental analysis shown the presence of Mercury, Sulphur, Calcium, Copper, Gold, Iron & Tin etc. and HPTLC revealed presence of organic constituents from plant material. The XRD had indicated that prepared drug contained free sulphur, cinnabar (mercury sulphide added as Kajjali), cassiterite (tin oxide, Vanga Bhasma), orpiment (Hartal, arsenic III sulphide) and mica (Leucite/ Zeolite, Abhrak Bhasma). The drug was also tested for residual pesticide and microbiological contamination which were found within permissible limits.

Conclusion: Classical pharmaceutical procedures of Mahalaxmi Vilas Rasa showed converting the macro elements into therapeutically effective medicines of micro form. Standards laid down in this study certainly utilized as an important tool for standardization and quality assurance of this herbo-mineral formulation.


Abstract:

Background: Withania somnifera, a high value medicinal plant is a major source of pharmaceutically important active compounds withanolides. Withania somnifera has been used in ayurveda as health restorative and anabolic agent besides having anti-arthritic, antidepressant, anti-microbial, anti-inflammatory, anti-diabetic, anti-stress, neuroprotective and cardio-protective activities.

Hypothesis/Purpose: The mining of the compound(s) of interest offers opportunity to identify desired attributes in the therapeutic area of interest. Metabolomic has become an important tool in the field of pharmacological and functional genomics of medicinal plants. The analysis supports the
information regarding differential outline of the gene expression for increasing important withanolides viz. withanolide A and withaferin A in W. somnifera.

**Study Design:** The bioinformatics and biotechnological approaches viz. tissue culture, genetic transformation, genomic, transcriptomic, proteomic, gene mining and metabolomic studies have opened new windows about engineering of withanolide production.

**Methods:** Target and network analysis for maximum therapeutic potential of Withania somnifera have been determined by employing Genemania software for finding interactions among various human genes that are being affected by active constituents.

**Results:** Some of the major bioactive compounds of Withania somnifera have been discussed on protein-protein, protein-DNA and genetic interactions with respect to gene and protein expression data, protein domains, metabolic profiling, root organ culture, genetic transformation and phenotypic screening profiles CONCLUSION: The implementation of latest bioinformatic tools in combination with biotechnological techniques for breeding platforms are important in conservation of medicinal plant species in danger. The current review is based on molecular and in vitro methodologies employed in W. somnifera for accepting their importance in the improvement of this valuable medicinal species.
UNANI MEDICINE


Abstract:

Opium has found great use medicinally for its analgesic properties and has been witnessed as one of the most popular medications used in psychiatry. Opium derivatives have been shown as efficacious for relieving pain and the treatment of epileptic seizures, but progressive research toward their use in the treatment of neurodegenerative diseases remain elusive. To gain more insight into the other properties of opium such as anti-inflammatory properties, herein we discuss basic information regarding opium, opium content and mechanism of action, pharmacology of opium derivatives, the role of opium in the prevention of neurodegeneration, and adverse effects of opium derivatives on neuronal health.


Abstract:

Premna integrifolia (Agnimantha brihat) is a traditional medicinal plant with a prominent place in Ayurveda, Siddha and Unani systems of medicine. In this study we have evaluated the anti-inflammatory and immunomodulatory properties of the Premna integrifolia root extracts employing cyclooxygenase-1 (COX-1), cyclooxygenase-2 (COX-2), and 5-lipoxygenase (5-LOX) enzyme-based assays, lymphocyte proliferation assay, pro-and anti-inflammatory cytokines measurement. Petroleum ether extract (PEE) of Premna integrifolia showed potent inhibition of COX-2 and 5-LOX with IC\textsubscript{50} values of 6.15 μg/mL and 11.33 μg/mL respectively. In in vitro studies on RAW 264.7 cell line, PEE showed inhibition in the formation of nitric oxide (NO), pro-inflammatory cytokines (IL-1β, IL-6), prostaglandin E\textsubscript{2} (PGE\textsubscript{2}) production, induction of anti-inflammatory cytokine (IL-2) and down-regulation of expression of COX-2, 5-LOX, TNF-α, IL-1β and iNOS. PEE also significantly reduced carrageenan-induced paw edema in mouse model of inflammation. Further, attempts in isolating the active principle(s) involved in these anti-inflammatory effects of
PEE by separation on RP-HPLC resulted in the isolation of four active peaks, H1, H2, H3 and H5, inhibiting COX-1, COX-2 and 5-LOX, out of which H3 was identified as 6-hydroxy salvinolone (6-HS). Present findings reveal that PEE of roots of Premna integrifolia exhibits potent anti-inflammatory and immunomodulatory activities, which could form a potential source for development of anti-inflammatory drugs. 6-HS, a COX-2/5-LOX dual inhibitor along with other lead molecules isolated from PEE of Premna integrifolia may form lead molecules for the development of COX-LOX dual inhibitors.


Abstract:

Background: Habbe Gule Aakh is extensively used in Unani medicine for anti-inflammatory and analgesic activity.

Objective: To evaluate anti-inflammatory and analgesic effects of Habbe Gule Aakh on Wistar rats and Swiss mice of either sex.

Materials and methods: The study was carried out in Wistar rats for anti-inflammatory activity while Swiss mice were used for analgesic activity. In both the tests animals were divided into five groups of six animals each which served as control, standard and test groups A, B and C. For anti-inflammatory activity, method reported by Amman was followed. For analgesic activity, Koster’s protocol was adapted.

Results: Significant (P < 0.01) reduction in the paw volume was noted in all the test groups but less than the standard drug. Mean writhes of group B and C reduced significantly (P < 0.01) demonstrating analgesic effect.

Conclusion: The study validated the claim of Unani medicine of use of Habbe Gule Aakh in inflammation and pain. Further, phytochemical studies are needed to know the exact mechanism of action of this formulation.


Abstract:
**Background:** Vitiligo is not only a cosmetic problem, but also a social and psychological problem worldwide with the prevalence rate being highest in India. Treatment is unsatisfactory in Western System of Medicine. Unani System of Medicine (USM) possesses various drugs to treat vitiligo in both topical and oral dosage forms. Safoof-e-Bars (SB) is an important powdered dosage form used widely to treat vitiligo, internally as Zulal.Externally as Sufl (Sediment remained after decanting the soaked drug) is used. Babchi, a component of SB, is reported to contain psoralen, an important therapeutically active compounds for treating vitiligo. But as Psoralen - the active marker compound is very slightly soluble in water, so only negligible amount of it comes in zulal and most of the amount remains in sufl. That might be the reason for local application of sufl as recommended by Hakeems. But clinically it is observed that application of sufl is not followed by most of the patients, due to side effects associated with its application on skin.

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**Conclusion:** Newly developed emulgel may be recommended with zulal instead of traditionally used sufl with zulal. In future emulgel will provide a solution for topical delivery of hydrophobic drugs and more convenient dosage form to apply locally.

Abstract:

Continued improvement in medical and device therapy for heart failure (HF) has led to better survival with this disease. Longer survival and increasing numbers of unhealthy lifestyle factors and behaviors leading to occurrence of HF at younger ages are both contributors to an increase in the overall prevalence of HF. Clinicians treating this complex disease tend to focus on pharmacological and device therapies, but often fail to capitalize on the significant opportunities to prevent or treat HF through lifestyle modification. Herein, the authors review the evidence behind weight management, exercise, nutrition, dietary composition, supplements, and mindfulness and their potential to influence the epidemiology, pathophysiology, etiology, and management of stage A HF.


Abstract:

Introduction: Trauma-focused psychotherapies do not meet the needs of all veterans. Yoga shows some potential in reducing stress and perhaps even PTSD in veterans, although little is understood about the mechanisms of action. This study identifies preliminary correlates of change in PTSD and perceived stress for veterans participating in yoga.

Materials and methods: Nine veterans (seven males and two females) were recruited from an existing clinical yoga program and observed over 16 wk. Severity of PTSD symptoms (PCL-5) and perceived stress (PSS-10) were collected at baseline and weeks 4, 6, 8, and 16. Psychological flexibility (AAQ-II) and set-shifting (ratio of trail making test A to B) were collected at baseline and at week 6. Subjects attended yoga sessions freely, ranging from 1 to 23 classes over the 16 weeks. The Stanford University Institutional Review Board approved this research protocol.
**Results:** Self-reported PTSD symptoms significantly reduced while perceived stress did not. Lower baseline set-shifting predicted greater improvements in PTSD between baseline and 4 weeks; early improvements in set-shifting predicted overall reduction in PTSD. Greater psychological flexibility was associated with lower PTSD and perceived stress; more yoga practice, before and during the study, was associated with greater psychological flexibility. Other predictors were not supported.

**Conclusions:** In a small uncontrolled sample, psychological flexibility and set-shifting predicted changes in PTSD symptoms in veterans participating in a clinical yoga program, which supports findings from prior research. Future research should include an active comparison group and record frequency of yoga practiced outside formal sessions.

**Black LI, Barnes PM, Clarke TC et al.** Use of Yoga, Meditation, and Chiropractors Among U.S. Children Aged 4-17 Years. NCHS Data Brief. 2018 Nov;(324):1-8.

**Abstract:**

Yoga, meditation, and use of chiropractors are types of complementary health approaches developed outside of mainstream Western medicine (1-2). Although complementary health approaches as a whole are not widely used among children, previous work has established a rise in the use of selected approaches over time (3). This report presents the most recent national estimates of use of the three most prevalent approaches during the past 12 months, among children aged 4-17 years in the United States. Comparable estimates from 2012 are also included to examine changes over time.


**Abstract:**

**Background:** In Vietnam, the mental health care infrastructure is on the verge of transformation with an increase in the demand for access to adequate and effective mental health care services. Public attitudes towards mental illness, as well as corresponding treatment options influence help-seeking behaviors of patients and caregivers, affecting the course of their treatment. This study assesses attitudes towards treatment options for depression and
schizophrenia, as the two most common psychiatric disorders in Vietnam, accounting for at least 75% of all psychiatric inpatients.

**Methods:** A general population-based survey was conducted in Hanoi, Vietnam between April and August 2013. Participants received a description of a person with symptoms of either depression (n = 326) or schizophrenia (n = 403) and were asked to give recommendations for adequate sources of mental health support and treatment options. Multiple analyses on a single item level compared the likelihood of recommendation between schizophrenia and depression.

**Results:** Overall, respondents recommended health care services, ranging from seeking mental health care professionals, psychotherapists, and psychiatrists for both disorders. Psychotherapy was the most favored treatment method, whereas further treatment options, such as concentration and relaxation exercises, meditation or yoga and psychotropic medication were also endorsed as helpful. For the schizophrenia vignette condition, psychotherapy, visiting a psychiatrist or psychotherapist received stronger endorsement rates as compared to the depression vignette. Furthermore, ECT, Feng Shui-based practices, praying and visiting natural healers were recommended less by respondents for the depression vignette in comparison with the schizophrenia vignette.

**Conclusions:** The Vietnamese public endorsed evidence-based treatment recommendations from a variety of treatments options. Differences in the treatment recommendations between depression and schizophrenia reflected the perceived severity of each disorder. Further developments of the Vietnamese mental health care system concerning mental health care providers, as well as the legal regulations surrounding the provision of psychotherapy are needed.


**Abstract:**

Sleep-wake disturbances are common in liver cirrhosis and associated with impaired quality of life. The most common abnormalities are insomnia (difficulties falling asleep and maintaining sleep, or unrefreshing sleep), excessive daytime sleepiness, and sleep-wake inversion (disturbances of circadian rhythmicity). The underlying pathophysiological mechanisms for
Sleep disturbances in cirrhosis are complex and may include disturbed metabolism of melatonin and glucose, alterations in thermoregulation, and altered ghrelin secretion profiles. Sleep-wake abnormalities are related to the presence of hepatic encephalopathy (HE) and improvement in sleep parameters can be observed when HE is properly managed. A few non-specific treatments for sleep-wake abnormalities have been tried with encouraging results for hydroxyzine and modafinil. However, due to the potential for medication toxicity in these disabled patients, further studies are needed to address the potential role of non-drug therapies in this population (eg, cognitive behavioral therapy, mindfulness, yoga) that have demonstrated usefulness in insomnia disorders.


**Abstract:**

Yoga is increasing in popularity in the United States and across the globe. However, most yoga programs are provided outside the worksite; although many companies offer worksite wellness programs, at present there is limited documentation regarding the potential benefits of participating in a worksite yoga program. Therefore, the purpose of this project was to examine the potential effect of a worksite yoga program on self-acceptance, quality of life, and perceived stress. A prospective cohort pilot study that examined a structured worksite yoga program was designed and tailored to individuals new to yoga. The 8-week Yoga Foundations program was conducted at an academic medical center’s worksite wellness center with 86 subjects. Outcome measures were the 36-item Self-Acceptance Scale; a six-item quality-of-life measure that assesses overall, social, mental, physical, emotional, and spiritual well-being; and the ten-item Perceived Stress Scale. Participants demonstrated significant improvement in their overall self-acceptance (p < 0.001), quality of life (p < 0.001), and perceived stress (p < 0.001) levels. They also highly rated the yoga instructors and the weekly format of the program. Participation in a Yoga Foundations program was associated with improvements in self-acceptance, quality of life and stress levels in worksite wellness center members. Future studies should use randomized designs and examine other wellness domains to learn more about the potential benefits of worksite yoga programs.

Abstract:

Objective: Evidence concerning the effectiveness of yoga in partial hospital programs is limited. Yet, partial hospitals provide treatment at a critical juncture by bridging inpatient and outpatient care. The present study tested the effectiveness of a single-session group yoga intervention for short-term mood and psychiatric symptom change in participants attending a 1- to 2-week partial hospital program.

Method: Participants included 104 partial hospital patients who participated in the single-session yoga intervention and completed a measure of positive/negative affect before and after the group. Participants, as well as partial hospital patients who did not attend the yoga intervention (n = 438), completed measures of depression and anxiety symptoms at admission and discharge from the program. At discharge, they also rated their perceived improvement and the overall quality of the care they received.

Results: Participants who attended the yoga intervention experienced significant improvements in positive and negative affect during the group. They did not show greater improvements in symptoms of anxiety or depression over the course of treatment compared to individuals who did not attend the group. Yoga intervention participants nonetheless gave higher ratings to the quality of the care they received.

Conclusions and Implications For Practice: Findings demonstrated that attending a single yoga session during partial hospitalization was associated with short-term mood benefits, and with enhanced overall perceptions of treatment. Further research is needed to determine the conditions under which participation in yoga during partial hospitalization could contribute to symptom change in this context. (PsycINFO Database Record (c) 2018 APA, all rights reserved).


Abstract:
Complementary health is the use of holistic or unconventional medicine with mainstream Western medicine for health and wellness (1,2). Past research has identified yoga, meditation, and seeing a chiropractor as some of the most commonly used approaches (3). This report examines changes over time in the percentage of adults who used yoga, meditation, and chiropractors in the past 12 months, as well as variation by sex, age, and race and Hispanic origin.


Abstract:

Objective: Autonomic nervous system activity is associated with neurobehavioral aspects of pain. Yogis use breathing, relaxation, and mindfulness to tolerate pain, which could influence autonomic responses. To evaluate how the link between autonomic responses and pain is altered by other factors, we compared perceptual and autonomic responses to pain between yogis and controls.

Methods: Nineteen yogis and 15 controls rated warm and painfully hot stimuli (1-cm thermode on calf), with visual anticipatory cues indicating certainly painful, certainly nonpainful, or uncertainly either painful or nonpainful. Heart rate, skin conductance, respiration, and blood pressure were measured.

Results: At baseline, yogis breathed slower and deeper than did controls, with no differences in other autonomic measures. During the task, perceptual ratings did not differ between groups in either the certain or uncertain conditions. Nevertheless, yogis had higher phasic skin conductance responses in anticipation of and response to all stimuli, but particularly during painful heat in uncertain contexts (uncertain: 0.46 [0.34] μS; certain: 0.37 [0.28] μS; t(18) = 3.962, p = .001). Furthermore, controls showed a decrease in heart rate to warm (-2.51 [2.17] beats/min) versus painful stimuli (0.83 [1.63] beats/min; t(13) = 5.212, p < .001) and lower respiratory sinus arrhythmia during pain compared with warm trials, whereas yogis had similar reactions to painful and nonpainful stimuli.

Conclusions: Autonomic responses to pain differed in yogis and healthy volunteers, despite similar pain ratings. Thus, autonomic reactivity to pain may be altered by environmental and psychological factors throughout an individual's life.

Abstract:

An estimated 15.7 million Germans are currently practicing yoga or are at least interested in starting to practice, and they often perceive yoga as a therapeutic approach. From a healthcare system perspective, the situation is less clear. Here, yoga is only recognized as a recreational or preventive activity. When yoga teachers fulfill specific qualifications, their preventive yoga classes are covered by the statutory health insurances. Only those with additional qualifications in medicine or psychotherapy, however, can independently use and promote "yoga therapy." The general perception of yoga in Germany as a preventive practice is reflected in the professional organization of yoga providers. Most providers are considered to be yoga teachers rather than yoga therapists and are organized mainly in yoga teacher associations. Despite the uncertain legal framework, yoga is now considered in a number of medical guidelines; in a number of hospitals, yoga is part of multimodal inpatient treatment programs and is delivered by physical therapists or members of other health professions. An increasing number of yoga therapy clinical trials are conducted in Germany, and efforts are underway to establish yoga therapy as an accepted adjunct treatment approach for selected medical conditions within the German healthcare system.


Abstract:

Quantitative studies of yoga have reported reduced posttraumatic stress disorder (PTSD) symptoms in veterans, but little is known about how and why veterans are attracted to and stick with a yoga practice. Guided by the Health Belief Model, this study examined veterans' perceptions of the benefits, barriers, and motivations to continue practicing trauma-sensitive yoga. Interviews were conducted with nine individuals, five of whom completed a 6-week trauma-sensitive yoga intervention designed for veterans and four who did not complete the intervention. Transcripts were analyzed for themes. The benefits identified by veterans were finding mental stillness, body awareness, and social connection. The barriers were perceptions that yoga is socially unacceptable, especially for men, and physically unchallenging. Understanding these benefits and barriers can help to make yoga more...
attractive to service members and veterans. For example, medical personnel can refer service members and veterans to yoga not only for PTSD symptoms, but also to address back pain and to reduce isolation. Access to male yoga instructors, especially those who are themselves service members or veterans, could be expanded, and classes could be integrated into physical activity routines required of active-duty personnel. Promotional materials can feature male service members and veterans with captions related to yoga as a way to increase resiliency, self-sufficiency, and physical and mental mission readiness. Findings from this study can help the Department of Defense and the Veterans Health Administration implement yoga as an adjunct or alternative treatment for veterans with PTSD symptoms.


Abstract:

Introduction: While cross-sectional studies have shown neural changes in long-term meditators, they might be confounded by self-selection and potential baseline differences between meditators and non meditators. Prospective longitudinal studies of the effects of meditation in naïve subjects are more conclusive with respect to causal inferences, but related evidence is so far limited.

Methods: Here, we assessed the effects of a 4-week Sahaja Yoga meditation training on gray matter density and spontaneous resting-state brain activity in a group of 12 meditation-naïve healthy adults.

Results: Compared with 30 control subjects, the participants to meditation training showed increased gray matter density and changes in the coherence of intrinsic brain activity in two adjacent regions of the right inferior frontal gyrus encompassing the anterior component of the executive control network. Both these measures correlated with self-reported well-being scores in the meditation group.

Conclusions: The significant impact of a brief meditation training on brain regions associated with attention, self-control, and self-awareness may reflect
the engagement of cognitive control skills in searching for a state of mental silence, a distinctive feature of Sahaja Yoga meditation. The manifold implications of these findings involve both managerial and rehabilitative settings concerned with well-being and emotional state in normal and pathological conditions.


**Abstract:**

The current study evaluated a yoga teacher training program to understand the effect of bringing yoga psychology (as an integrated eight-limbed system) to adults in custody (AIC), who were trained to become yoga teachers who will in turn teach other AICs. The study used quantitative and qualitative measures to assess the yoga teacher training program’s impact on individuals, their relationships, and the overall prison environment. The study included assessments and interviews with 12 AICs and nine yoga teacher volunteers, as well as key informant interviews with two correctional officers and five administrators who work within or directly with the Department of Corrections on the implementation of the program. Quantitative results revealed significant enhancements and sustainability in all key outcome variables (self-compassion, mindfulness, perceived stress, understanding of yoga philosophy, and teaching skills) from pretest to program completion and from completion to 3-month follow-up. Additionally, AIC yoga teachers became more similar on all outcome measures to the volunteer teachers from pretest to program completion and from completion to follow-up. Qualitative methods (used for 31 key informant and focus group interviews) revealed themes that illuminated positive effects on the prison community regarding participants’ personal experiences, attitudes and values, behaviors, relationships, yoga philosophy in prison, culture, and future directions. Implications and recommendations are provided to support sustaining the current program and to help with the creation of new programs to infuse yoga philosophy into corrections departments.


**Abstract:**
The aim of this study was to examine the efficacy of Kundalini Yoga in reducing symptoms of generalized anxiety disorder (GAD) compared to a common treatment-as-usual condition using cognitive techniques. A secondary objective was to explore potential treatment mechanisms. Females aged 24 to 75 years with GAD (n = 49) received either an 8-week Kundalini Yoga intervention (n = 34) or an 8-week treatment-as-usual condition (n = 15). The yoga condition resulted in lower levels of anxiety relative to the treatment-as-usual condition. Furthermore, changes in somatic symptoms mediated treatment outcome for Kundalini Yoga. Kundalini Yoga may show promise as a treatment for GAD, and this treatment might convey its effect on symptom severity by reducing somatic symptoms.


Abstract:

Purpose: Cardiovascular disease continues to be the leading cause of morbidity and mortality around the world. Yoga, a combination of physical postures (asana), breathing exercises (pranayama), and meditation (dhyana), has gained increasing recognition as a form of mind-body exercise. In this narrative review, we intended to review the emerging evidence assessing the physiologic and clinical effects of yoga on the cardiovascular system and the potential role of yoga as a component of comprehensive cardiac rehabilitation.

Methods: We searched PubMed, Google Scholar, Embase, and Cochrane databases for literature related to cardiovascular effects of yoga from inception up until 2017.

Results: Yoga has been shown to have favorable effects on systemic inflammation, stress, the cardiac autonomic nervous system, and traditional and emerging cardiovascular risk factors.

Conclusions: Yoga has shown promise as a useful lifestyle intervention that can be incorporated into cardiovascular disease management algorithms. Although many investigators have reported the clinical benefits of yoga in reducing cardiovascular events, morbidity, and mortality, evidence supporting these conclusions is somewhat limited, thereby emphasizing the need for large, well-designed randomized trials that minimize bias and methodological drawbacks.

Abstract:

Pediatric integrative therapy programs are essential to the treatment and well-being of patients. Identifying an effective integrative therapy model within conventional pediatric medical settings, however, often proves difficult. Our goal in this article is to explore varied solutions to increase access and inclusion of integrative therapies in an effort to promote best practice and holistic care. The main methods applied in this article are vignettes that illustrate how the integrative therapies in a metropolitan academic hospital successfully treat the patient by complementing conventional medicine. This leads to comprehensive care. The central finding of the article proposes viable solutions to increase interdisciplinary collaboration both internally within the institution and externally. Integrative therapists detail how they were able to increase visibility and yield best practice through increased educational initiatives and interdisciplinary collaboration.


Abstract:

Vet Chloe Hannigan works as a locum in the UK and abroad, and also teaches yoga to vet professionals, helping them care for their physical and mental health.


Abstract:

Parkinson’s disease (PD) often leads to poor balance, increased falls, and fear of falling, all of which can reduce participation in life activities. Yoga, which usually includes physical exercise, can improve functioning and life participation; however, limited research has been conducted on the effects of yoga on life participation of individuals with PD. This study had two purposes: (1) to identify and understand the perceived activities and participation outcomes associated a therapeutic yoga intervention for individuals with PD; and (2) to compare the perceived activities and participation outcomes with the
outcomes measured in the clinical trial. A single-blind, randomized, waitlist-controlled, phase II exploratory pilot study using an after-trial embedded mixed methods design (clinical trial Pro00041068) evaluated the effect of an 8-week Hatha Yoga intervention on individuals with PD. Directed content analysis was used to analyze focus group interviews with participants who completed the yoga intervention. Quantitative and qualitative data were merged and compared using a data comparison matrix. Qualitative analysis indicated many activities and participation outcomes. Comparison of qualitative and quantitative data indicated the yoga intervention led to improved balance, mobility, and functional gait, and fewer falls. These outcomes reached beyond the intervention and into participants' daily lives. Results support the use of Hatha Yoga as a community-based rehabilitation intervention for individuals with PD. Yoga, as part of an interdisciplinary approach to treatment, can improve many types of activities and participation outcomes (e.g., mobility, social relationships, self-care, handling stress, recreation).


Abstract:

Medical students often experience significant stress during their undergraduate training. Evidence has shown short-term yoga to be effective in decreasing stress in students. This study aimed to assess knowledge about, attitude toward, and practice of (KAP) yoga among medical students. A secondary objective was to analyze their dietary habits and physical activity. Participants consisted of 224 medical students aged 18-23 years in pre- and paraclinical groups. A closed-ended KAP questionnaire was used to collect data. Anthropometric measurements were taken. Results showed that paraclinical students (70.5%) favorably perceived the health benefits of yoga. Nearly three-fourths of study subjects had previously practiced yoga; greater numbers intended to practice yoga in the future. About 95.5% of the preclinical students who had done yoga had discontinued the practice. Perceived barriers to the practice of yoga were lack of time, insufficient facilities, lack of company, and lack of interest. Consideration of the undergraduates' lifestyle revealed that 50.4% of preclinical students did not exercise, and they routinely consumed more junk food with fewer servings of fresh fruits/salads. Preclinical students exhibited higher BMI and waist circumference compared to paraclinical students. Findings suggest that
knowledge of and attitude regarding yoga were good among medical undergraduates.


Abstract:

Background: Assessing the effects of exercise training on cardiovascular variability is challenging, due to the complexity of multiple mechanisms. In a prospective, parallel-group, randomized controlled study, we examined the effect of 2-years of high-intensity exercise training on integrated cardiovascular function which incorporates the dynamic Starling mechanism, dynamic arterial elastance, and arterial-cardiac baroreflex function.

Methods: Sixty-one healthy participants (48% male, 53 [52-54] years) were randomized to either 2-years of exercise training (exercise group: n = 34) or control/yoga group (controls: n = 27). Before and after two years, subjects underwent a 6-min recording of beat-by-beat pulmonary artery diastolic pressure (PAD), stroke volume index (SV-index), systolic blood pressure (sBP), and R-R interval measurements with controlled respiration at 0.2-Hz. The dynamic Starling mechanism, dynamic arterial elastance, and arterial-cardiac baroreflex function were calculated by transfer function gain between PAD and SV-index; SV-index and sBP; and sBP and RR-interval, respectively.

Results: Fifty three participants (controls: n = 25; exercise group: n = 28) completed intervention. After 2-years, the dynamic Starling mechanism gain (Group × Time interaction: P = 0.008) and the arterial-cardiac baroreflex gain (P = 0.005) were significantly increased in the exercise group but remained unchanged in the controls. There was no change in dynamic arterial elastance in either of the 2 groups. The integrated cardiovascular function gain in the exercise group increased 1.34-fold, while there was no change in the controls (P = 0.02).

Conclusions: In these previously sedentary, otherwise healthy middle-aged adults, a 2-year program of high-intensity exercise training improved integrated cardiovascular regulation by enhancing the dynamic Starling mechanism and arterial-cardiac baroreflex sensitivity, without changing dynamic arterial elastance. This article is protected by copyright. All rights reserved.

Abstract:

**Objective:** To explore the potential factors that mediate the relationship between mindfulness and symptoms of posttraumatic stress (PTS) in women who experienced stillbirth.

**Design:** A cross-sectional analysis of baseline data before women's participation in an online mindfulness intervention (i.e., online yoga).

**Setting:** This was a national study, and women participated in their own homes.

**Participants:** Women who experienced stillbirth (N = 74) within the past 2 years and resided in the United States.

**Methods:** Women were recruited nationally, primarily through social media. Participants (N = 74) completed baseline assessments (self-report mental and physical health surveys) via a Web-based survey tool. We conducted an exploratory factor analysis of the COPE Inventory subscales to reduce the number of variables before entry into a mediation model. We then tested the mediation effects of sleep quality, self-esteem, resilience, and maladaptive coping on the relationship between mindfulness and PTS symptoms.

**Results:** Through the exploratory factor analysis we identified a two-factor solution. The first factor included nine subscales that represented adaptive coping strategies, and the second factor included five subscales that represented maladaptive coping strategies. Results from multiple mediation analysis suggested that mindfulness had a significant inverse relationship to PTS symptoms mediated by sleep quality.

**Conclusion:** Mindfulness practices may have potential benefits for grieving women after stillbirth. Evidence-based approaches to improve sleep quality also may be important to reduce PTS symptoms in women after stillbirth.

Abstract:

Yoga has been shown to improve cancer survivors' quality of life, yet regular yoga practice is a challenge for those who are sedentary. We conducted a pilot randomized controlled study to assess feasibility and adherence of two types of yoga intervention among sedentary cancer survivors. Sedentary breast and ovarian cancer survivors were randomized to practice either restorative yoga (minimal physical exertion, Group R) or vigorous yoga (considerable physical exertion, Group V) in three 60-minute supervised sessions a week for 12 weeks, followed by 12 weeks of home practice. Accrual, adherence, and attendance rates were assessed. Of the 226 eligible patients, 175 (77%) declined to participate in the study, citing time commitment and travel as the most common barriers. Forty-two subjects consented to participate in the study. Of the 35 participants who began the intervention (20 in Group R and 15 in Group V), adherence rate (percentage remaining in the study at week 12) was 100% and 87%, respectively. Rate of adequate attendance (more than 66% of the scheduled supervised sessions) was 85% and 73%, respectively. Rate of completion of the home practice period was 85% and 77%, respectively. In this study, sedentary cancer survivors were able to adhere to a long-term, regular yoga regimen. The rate of adequate attendance was higher for restorative yoga. Future studies for sedentary patients should focus on reducing time commitment and travel requirements to improve recruitment, and on using restorative yoga as a more feasible intervention for this population.


Abstract:

**Context:** Osteopathic manipulative treatment (OMT) and yoga are both recommended by systematic reviews in the evidence-based research literature for low back pain management. It is unknown, to the authors' knowledge, what the effect of personal experience with OMT or yoga, reading research articles on OMT or yoga, or both will have on medical students' recommendations for these treatment options to future patients with chronic low back pain.
Objective: To evaluate the likelihood of osteopathic medical students recommending OMT or yoga to treat patients with chronic low back pain based on their personal experience or reading research articles that recommend OMT or yoga for patients with chronic low back pain.

Methods: In this prospective cohort study, researchers administered an anonymous 18-question online survey for osteopathic medical students. The survey included a patient vignette, 2 evidence-based articles, and multiple choice, yes/no, and Likert-type questions. Participants were recruited via email from all 4 years of medical school. Between-group differences in proportions were assessed with descriptive statistics and x2 tests; differences within groups were assessed with the McNemar test; and Fischer exact tests were used when expected cell counts were less than 5.

Results: A total of 180 participants (100 male, 80 female) completed the study. Personal experience increased the likelihood of osteopathic medical students recommending OMT (P<.018) or yoga (P<.001) to a future patient or to a patient in a case vignette (P<.05) with chronic low back pain. Students who read research articles were more likely to recommend OMT to the case patient and future patients before and after reading the intervention article regardless of their experience (P<.001).

Conclusion: Personal experience and reading evidence-based research may increase the likelihood that osteopathic medical students will recommend OMT to future patients with chronic low back pain.


Abstract:

Due to the presence of nonlinearity and volume conduction in electroencephalography (EEG), sometimes it’s challenging to find out the actual brain network from neurodynamical alteration. In this paper, two well-known time-frequency brain connectivity measures, namely partial directed coherence (PDC) and directed transfer function (DTF), have been applied to evaluate the performance analysis of EEG signals obtained during meditation. These measures are implemented to the multichannel meditation EEG data to get the directed neural information flow. Mostly the assessment of PDC and DTF is entirely subjective and there are probabilities to have erroneous connectivity estimation. To avoid the subjective evaluation, the performance
results are compared in terms of absolute energy, signal-to-noise ratio (SNR) and relative SNR (R-SNR) scale. In most of the cases, the PDC result is found to be more efficient than DTF. The limitation of DTF and PDC in terms of the time-varying multivariate autoregressive (MVAR) model is highlighted. The time-varying MVAR model can track the neurodynamical changes better than any other method. In the present study, we would like to show that the PDC-based connectivity gives a better understanding of the non-symmetric relation in EEG obtained during Kriya Yoga meditation in comparison to DTF. However, it needs to be investigated further to warrant this claim.


Abstract:

Background: Depression and anxiety are common during the antenatal and postnatal period, and are known to have a significant impact on the woman and her unborn infant. Pregnant women state a preference for non-pharmacological treatment options, and use complementary medicines and therapies to manage these symptoms. We examined the effectiveness and safety of these modalities on depression and anxiety during pregnancy.

Methods: CENTRAL, EMBASE and PubMed databases were searched for randomised controlled trials comparing complementary therapies and medicines to a control, for pregnant women with depression or anxiety. The primary outcome measure was antenatal depression or anxiety.

Results: Twenty randomised controlled trials containing 1092 women were included in the review. We found some evidence of reduced antenatal depression from three modalities. Acupuncture reduced the number of women diagnosed with antenatal depression (RR 1.68, 95% CI 1.06-2.66, 1 trial). Massage reduced the severity of antenatal depression in one trial of 149 women (SMD -0.73, 95%CI -1.07--0.39). One small trial of bright light therapy found reduced antenatal depression (RR 4.80, 95% CI -8.39--1.21, 27 women). There was no evidence of a reduction in depression and anxiety from relaxation, yoga, mindfulness and fish oils. Overall the risk of bias was high or unclear for the majority of studies.
Limitations: There are few high quality randomised controlled trials of complementary medicines and therapies examining the effect on anxiety and depression.

Conclusion: Acupuncture, bright light therapy, and massage may reduce antenatal depression. There is a need for high quality and larger studies that include postnatal follow up and maternal and neonatal outcomes.


Abstract:

There is growing recognition within psychology and other disciplines that body experience may be as important as cognitive and emotional experience. However, psychology has few psychotherapeutic interventions to support the integration of mind and body within therapy. Phoenix Rising Yoga Therapy (PRYT) is a form of mind-body therapy that uses yoga posture, touch, and psychotherapeutic dialogue to facilitate growth and healing. The current study explored the phenomenological experience of four women who each received five PRYT sessions. Research questions posed were: (1) What are the clients' experiences of the phenomena of PRYT? and (2) How does receiving PRYT sessions impact the clients' lives? The following themes emerged from the data as the essence of PRYT sessions: mindfulness, self-awareness, mind-body connection, in vivo experience of new behaviors, client-directed, empowerment, and life changes. These themes show significance in the mind-body connection and that it is important to consider alternative modalities such as PRYT for clients. Each participant noted greater insight into mind-body connection. They noticed the effect of cognition and emotion on the body, observed how the body can be used to improve coping through movement and breathing, and experienced different thoughts and emotions associated with different areas of their bodies. Although these results are not necessarily generalizable, they offer interesting theoretical implications for embodied interventions.


Abstract:

In order to describe the prevalence and characteristics of complementary medicine (CM) practice and product use by Australians, we conducted a cross-
sectional online survey with Australian adults aged 18 and over. Rates of consultation with CM practitioners, and use of CM products and practices were assessed. The sample (n = 2,019) was broadly representative of the Australian population. Prevalence of any CM use was 63.1%, with 36% consulting a CM practitioner and 52.8% using any CM product or practice. Bodywork therapists were the most commonly consulted CM practitioners (massage therapists 20.7%, chiropractors 12.6%, yoga teachers 8.9%) and homeopaths were the least commonly consulted (3.4%). Almost half of respondents (47.8%) used vitamin/mineral supplements, while relaxation techniques/meditation were the most common practice (15.8%). CM users were more likely to be female, have a chronic disease diagnosis, no private health insurance, a higher education level, and not be looking for work. Prevalence of CM use in Australia has remained consistently high, demonstrating that CM is an established part of contemporary health management practices within the general population. It is critical that health policy makers and health care providers acknowledge CM in their attempts to ensure optimal public health and patient outcomes.


Abstract:

Diabetes is the seventh leading cause of death in the United States. For most patients, medication alone is not sufficient to achieve glycemic control; attention must also be paid to multiple healthy behaviors including diet, regular physical activity, and stress management. Yoga, a mindfulness practice with emphasis on relaxation, meditation, and deep breathing, may have special relevance to people with type 2 diabetes mellitus (T2DM). Yoga practice may positively affect stress and other self-care tasks that will contribute to improved glycemic control. The Healthy, Active, and in Control (HA1C) study is designed to examine the feasibility and acceptability of yoga among adult patients with T2DM. In this pilot randomized controlled trial, adults with T2DM were randomly assigned to either a 12-week Iyengar Yoga intervention given twice weekly, or a twice-weekly 12-week program of traditional exercise (e.g., walking, stationary cycling). Assessments are conducted at the end of treatment (12 weeks) and at 3 and 6 months postintervention. The HA1C study will assess feasibility and acceptability (e.g., attendance/retention rates, satisfaction with program), glycemic outcomes (e.g., HbA1c, fasting blood glucose, postprandial blood glucose), and changes
in physiological (e.g., salivary cortisol) and behavioral factors (e.g., physical activity, diet) relevant to the management of T2DM. Focus groups are conducted at the end of the intervention to explore participants' experience with the program and their perception of the potential utility of yoga for diabetes management.


Abstract:

Background: People in reentry from prison or jail (returning citizens) living with HIV and substance use problems often experience numerous stressors and are at high risk for resumed substance use. Interventions are needed to manage stress as a pathway to reduced substance use.

Objective: This study explored the effect of a hatha yoga intervention as compared to treatment as usual on stress and substance use among returning citizens living with HIV and substance use problems.

Methods: Participants were randomized to either a 12-session, 90-minute weekly yoga intervention or treatment as usual. All participants were clients of a service provider for returning citizens that offered case management, health care, and educational classes. Outcomes included stress as measured by the Perceived Stress Scale at the completion of the yoga intervention (three-months) and substance use as measured by the Timeline Followback at one-month, two-months, and three-months.

Results: Seventy-five people were enrolled, two of whom were withdrawn from the study because they did not have HIV. Of the 73 remaining participants, 85% participated in the three-month assessment. At three-months, yoga participants reported less stress than participants in treatment as usual \[F (1,59) = 9.24, p < .05\]. Yoga participants reported less substance use than participants in treatment as usual at one-month, two-months, and three-months \[X2 (1) = 11.13, p < .001\].

Conclusion: Yoga interventions for returning citizens living with HIV and substance use problems may reduce stress and substance use. This finding is
tentative because the control group did not receive an intervention of equal time and intensity.