Chapter II

REVIEW OF RELATED LITERATURE

The review of the research reports which are relevant to the study and available in the library of Lakshmibai National University of Physical Education, Gwalior has been represented in this chapter by the research scholar.

Gupta N. And et.al 1 studied the short-term impact of a comprehensive but brief lifestyle intervention, based on yoga, on anxiety levels in normal and diseased subjects. The study was the result of operational research carried out in the Integral Health Clinic (IHC) at the Department of Physiology of All India Institute of Medical Sciences. The subjects had history of hypertension, coronary artery disease, diabetes mellitus, obesity, psychiatric disorders (depression, anxiety, and 'stress'), gastrointestinal problems (non ulcer dyspepsia, duodenal ulcers, irritable bowel disease, Crohn's disease, chronic constipation) and thyroid disorders (hyperthyroidism and hypothyroidism). The intervention consisted of asanas, pranayama, relaxation techniques, group support, individualized advice, and lectures and films on

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philosophy of yoga, the place of yoga in daily life, meditation, stress management, nutrition, and knowledge about the illness. The outcome measures were anxiety scores, taken on the first and last day of the course. Anxiety scores, both state and trait anxiety were significantly reduced. Among the diseased subjects significant improvement was seen in the anxiety levels of patients of hypertension, coronary artery disease, obesity, cervical spondylitis and those with psychiatric disorders. The observations suggest that a short educational programme for lifestyle modification and stress management leads to remarkable reduction in the anxiety scores within a period of 10 days.

Sivasankaran S, and et.al \(^2\) hypothesized that Yoga and meditation will improve parameters of endothelial function. They examined the effects of yoga and meditation on hemodynamic and laboratory parameters as well as on endothelial function in a 6-week pilot study. Systolic and diastolic blood pressures, heart rate, body mass index (BMI), fasting glucose, lipids, hs C-reactive protein (CRP), and endothelial function (as assessed by brachial artery reactivity) were all studied at baseline and after 6 weeks of yoga practice. A course in yoga

and meditation was given to the subjects for 1.5 h three times weekly for
6 weeks and subjects were instructed to continue their efforts at home.
This prospective cohort study included 33 subjects (mean age 55 +/- 11
years) both with (30%) and without (70%) established coronary artery
disease (CAD). There were significant reductions in blood pressure,
heart rate, and BMI in the total cohort with yoga. None of the laboratory
parameters changed significantly with yoga. For the total cohort there
was no significant improvement in endothelial-dependent vasodilatation
with yoga training and meditation compared with baseline (16.7%
relative improvement from 7.2-8.4%; p = 0.3). In the group with CAD,
endothelial-dependent vasodilatation improved 69% with yoga training
(6.38-10.78%; p = 0.09). Yoga and meditation appear to improve
endothelial function in subjects with CAD.

Schwickert M, and et.al 3 Between 60 and 90% of patients consult
their family doctor for stress-associated complaints. Not infrequently, a
considerable number of these patients already have elevated blood
pressure. The positive effect on high blood pressure of relaxation
techniques has been confirmed in various studies. Accordingly, stress
management should now have a permanent place in effective

3 Schwickert M, and et.al "Stress management in the treatment of essential arterial hypertension"
MMW Fortschr Med. 2006 Nov 23:148(47):40-2; quiz 43
antihypertensive treatment. Appropriate relaxation techniques include, for example, autogenic training, progressive muscle relaxation, visualization and breathing exercises, chi gong and yoga. These practices are incorporated in various lifestyle programs. They act in different ways, and can be offered to the patient in accordance with his/her individual wishes.

Ospina MB, and et.al 4 mentioned that To review and synthesize the state of research on a variety of meditation practices, including: the specific meditation practices examined; the research designs employed and the conditions and outcomes examined; the efficacy and effectiveness of different meditation practices for the three most studied conditions; the role of effect modifiers on outcomes; and the effects of meditation on physiological and neuropsychological outcomes. Comprehensive searches were conducted in 17 electronic databases of medical and psychological literature up to September 2005. Other sources of potentially relevant studies included hand searches, reference tracking, contact with experts, and gray literature searches. A Delphi method was used to develop a set of parameters to describe meditation practices. Included studies were comparative, on any meditation

practice, had more than 10 adult participants, provided quantitative data on health-related outcomes, and published in English. Two independent reviewers assessed study relevance, extracted the data and assessed the methodological quality of the studies. Five broad categories of meditation practices were identified (Mantra meditation, Mindfulness meditation, Yoga, Tai Chi, and Qi Gong). Characterization of the universal or supplemental components of meditation practices was precluded by the theoretical and terminological heterogeneity among practices. Evidence on the state of research in meditation practices was provided in 813 predominantly poor-quality studies. The three most studied conditions were hypertension, other cardiovascular diseases, and substance abuse. Sixty-five intervention studies examined the therapeutic effect of meditation practices for these conditions. Meta-analyses based on low-quality studies and small numbers of hypertensive participants showed that TM(R), Qi Gong and Zen Buddhist meditation significantly reduced blood pressure. Yoga helped reduce stress. Yoga was no better than Mindfulness-based Stress Reduction at reducing anxiety in patients with cardiovascular diseases. No results from substance abuse studies could be combined. The role of effect modifiers in meditation practices has been neglected in the scientific literature. The
physiological and neuropsychological effects of meditation practices have been evaluated in 312 poor-quality studies. Meta-analyses of results from 55 studies indicated that some meditation practices produced significant changes in healthy participants. Many uncertainties surround the practice of meditation. Scientific research on meditation practices does not appear to have a common theoretical perspective and is characterized by poor methodological quality. Firm conclusions on the effects of meditation practices in healthcare cannot be drawn based on the available evidence. Future research on meditation practices must be more rigorous in the design and execution of studies and in the analysis and reporting of results.

Telles S, Naveen KV, Dash M5 conducted a test a month after the December 2004 tsunami the effect of a 1 week yoga program was evaluated on self rated fear, anxiety, sadness and disturbed sleep in 47 survivors in the Andaman Islands. Polygraph recordings of the heart rate, breath rate and skin resistance were also made. Among the 47 people, 31 were settlers from the mainland (i.e. India, ML group) and 16 were endogenous people (EP group). There was a significant decrease in

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self rated fear, anxiety, sadness and disturbed sleep in both groups, and in the heart and breath rate in the ML group, and in the breath rate alone in the EP group, following yoga (P < 0.05, t-test). This suggests that yoga practice may be useful in the management of stress following a natural disaster in people with widely differing social, cultural and spiritual beliefs.

Sharma R, Gupta N, Bijlani RL. conducted a prospective controlled study to explore the short-term impact of a comprehensive but brief lifestyle intervention, based on yoga, on subjective well being levels in normal and diseased subjects. Normal healthy individuals and subjects having hypertension, coronary artery disease, diabetes mellitus or a variety of other illnesses were included in the study. The outcome measures were 'subjective well being inventory' (SUBI) scores, taken on the first and last day of the course. The inventory consists of questions related to one's feelings and attitude about various areas of life, such as happiness, achievement and interpersonal relationship. There was significant improvement in the subjective well being scores of the 77 subjects within a period of 10 days as compared to controls. These observations suggest that a short lifestyle modification and stress

management educational program leads to remarkable improvement in the subjective well being scores of the subjects and can therefore make an appreciable contribution to primary prevention as well as management of lifestyle diseases.

Granath J, Ingvarsson S, von Thiele U, Lundberg U\(^7\) studied a stress management program based on cognitive behavioural therapy principles was compared with a Kundaliniyoga program. A study sample of 26 women and 7 men from a large Swedish company were divided randomly into 2 groups for each of the different forms of intervention; a total of 4 groups. The groups were instructed by trained group leaders and 10 sessions were held with each of groups, over a period of 4 months. Psychological (self-rated stress and stress behaviour, anger, exhaustion, quality of life) and physiological (blood pressure, heart rate, urinary catecholamines, salivary cortisol) measurements obtained before and after treatment showed significant improvements on most of the variables in both groups as well as medium-to-high effect sizes. However, no significant difference was found between the 2 programs. The results indicate that both cognitive behaviour therapy and yoga are promising stress management techniques.

Krisanaprakornkit T, Krisanaprakornkit W, Piyavhatkul N, Laopaiboon M\(^8\) investigated the effectiveness of meditation therapy in treating anxiety disorders. Electronic databases searched include CCDANCTR-Studies and CCDANCTR-References, complementary and alternative medicine specific databases, Science Citation Index, Health Services/Technology Assessment Text database, and grey literature databases. Conference proceedings, book chapters and references were checked. Study authors and experts from religious/spiritual organisations were contacted. Types of studies: Randomised controlled trials. Types of participants: patients with a diagnosis of anxiety disorders, with or without another comorbid psychiatric condition. Types of interventions: concentrative meditation or mindfulness meditation. Comparison conditions: one or combination of 1) pharmacological therapy 2) other psychological treatment 3) other methods of meditation 4) no intervention or waiting list. Types of outcome: 1) improvement in clinical anxiety scale 2) improvement in anxiety level specified by triallists, or global improvement 3) acceptability of treatment, adverse effects 4) dropout. Data were independently extracted by two reviewers using a pre-designed data collection form. Any disagreements were

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\(^8\) Krisanaprakornkit T, and et.al "Meditation therapy for anxiety disorders" Cochrane Database of Systematic review – online 2006 Jan 25;(1)
discussed with a third reviewer, and the authors of the studies were contacted for further information. MAIN Two randomized controlled studies were eligible for inclusion in the review. Both studies were of moderate quality and used active control comparisons (another type of meditation, relaxation, and biofeedback). Anti-anxiety drugs were used as standard treatment. The duration of trials ranged from 3 months (12 weeks) to 18 weeks. In one study transcendental meditation showed a reduction in anxiety symptoms and electromyography score comparable with electromyography-biofeedback and relaxation therapy. Another study compared Kundalini Yoga (KY), with Relaxation/Mindfulness Meditation. The Yale-Brown Obsessive Compulsive Scale showed no statistically significant difference between groups. The overall dropout rate in both studies was high (33-44%). Neither study reported on adverse effects of meditation. The small number of studies included in this review does not permit any conclusions to be drawn on the effectiveness of meditation therapy for anxiety disorders. Transcendental meditation is comparable with other kinds of relaxation therapies in reducing anxiety, and Kundalini Yoga did not show significant effectiveness in treating obsessive-compulsive disorders compared with
Relaxation/Meditation. Drop out rates appear to be high, and adverse effects of meditation have not been reported. More trials are needed.

Ospina MB, and et.al ⁹ studied to provide a descriptive overview of the clinical trials assessing meditation practices for health care. Systematic review of the literature. Comprehensive searches were conducted in 17 electronic bibliographic databases through September 2005. Other sources of potentially relevant studies included hand searches, reference tracking, contacting experts, and gray literature searches. Included studies were clinical trials with 10 or more adult participants using any meditation practice, providing quantitative data on health-related outcomes, and published in English. Two independent reviewers assessed study relevance, extracted the data, and assessed the methodological quality of the studies. Four hundred clinical trials on meditation (72% described as randomized) were included in the review (publication years 1956-2005). Five broad categories of meditation practices were identified: mantra meditation, mindfulness meditation, yoga, t'ai chi, and qigong. The three most studied clinical conditions were hypertension, miscellaneous cardiovascular diseases, and substance abuse. Psychosocial measures were the most frequently reported

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outcomes. Outcome measures of psychiatric and psychological symptoms dominate the outcomes of interest. Overall, the methodological quality of clinical trials is poor, but has significantly improved over time by 0.014 points every year (95% CI, 0.005, and 0.023). Most clinical trials on meditation practices are generally characterized by poor methodological quality with significant threats to validity in every major quality domain assessed. Despite a statistically significant improvement in the methodological quality over time, it is imperative that future trials on meditation be rigorous in design, execution, analysis, and the reporting of results.

Bijlani RL, and et.al 10 studied the short-term impact of a brief lifestyle intervention based on yoga on some of the biochemical indicators of risk for cardiovascular disease and diabetes mellitus. The variables of interest were measured at the beginning (day 1) and end (day 10) of the intervention using a pre-post design. The study is the result of operational research carried out in our Integral Health Clinic (IHC). The IHC is an outpatient facility which conducts 8-day lifestyle modification programs based on yoga for prevention and management of

chronic disease. A new course begins every alternate week of the year. The study is based on data collected on 98 subjects (67 male, 31 female), ages 20-74 years, who attended one of our programs. The subjects were a heterogeneous group of patients with hypertension, coronary artery disease, diabetes mellitus, and a variety of other illnesses. The intervention consisted of asanas (postures), pranayama (breathing exercises), relaxation techniques, group support, individualized advice, lectures and films on the philosophy of yoga and the place of yoga in daily life, meditation, stress management, nutrition, and knowledge about the illness. The outcome measures were fasting plasma glucose and serum lipoprotein profile. These variables were determined in fasting blood samples, taken on the first and last day of the course. Fasting plasma glucose, serum total cholesterol, low-density lipoprotein (LDL) cholesterol, very-LDL cholesterol, the ratio of total cholesterol to high density lipoprotein (HDL) cholesterol, and total triglycerides were significantly lower, and HDL cholesterol significantly higher, on the last day of the course compared to the first day of the course. The changes were more marked in subjects with hyperglycemia or hypercholesterolemia. The observations suggest that a short lifestyle
modification and stress management education program leads to favorable metabolic effects within a period of 9 days.

West J, Otte C, and et.al 11: conducted a study to examine some of the psychological and neuroendocrine response to these activities. Sixty-nine healthy college students participated in one of three 90-min classes: African dance (n = 21), Hatha yoga (n= 18), or a biology lecture as a control session (n = 30). Before and after each condition participants completed the Perceived Stress Scale (PSS), completed the Positive Affect and Negative Affect Schedule, and provided a saliva sample for cortisol. There were significant reductions in PSS and negative affect (ps < .0001) and Time x Treatment interactions (ps < .0001) such that African dance and Hatha yoga showed significant declines, whereas there was no significant change in biology lecture. There was no significant main effect for positive affect (p = .53), however there was a significant interaction effect (p < .001) such that positive affect increased in African dance, decreased in biology lecture, and did not change significantly in Hatha yoga. There was a significant main effect for salivary cortisol (p < .05) and a significant interaction effect (p < .0001)

such that cortisol increased in African dance, decreased in Hatha yoga, and did not change in biology. Changes in cortisol were not significantly related to changes in psychological variables across treatments. There was 1 significant interaction effect (p = .04) such that change in positive affect and change in cortisol were negatively correlated in Hatha yoga but positively correlated in Africa dance and biology. Both African dance and Hatha yoga reduced perceived stress and negative affect. Cortisol increased in African dance and decreased in Hatha yoga. Therefore, even when these interventions produce similar positive psychological effects, the effects may be very different on physiological stress processes. One factor that may have particular salience is that amount of physiological arousal produced by the intervention.

Kochupillai V, and et.al

Stress, a psychophysiological process, acts through the immune-neuroendocrine axis and affects cellular processes of body and immune functions, leading to disease states including cancer. Stress is also linked to the habit of tobacco consumption and substance abuse, which in turn also leads to diseases. Sudarshan Kriya (SK) and Pranayam (P), rhythmic breathing processes,

are known to reduce stress and improve immune functions. Cancer patients who had completed their standard therapy were studied. SK and P increased natural killer (NK) cells significantly (P <0.001) at 12 and 24 weeks of the practice compared to baseline. Increase in NK cells at 24 weeks was significant (P <0.05) compared to controls. There was no effect on T-cell subsets after SK and P either in the study group or among controls. SK and P helped to control the tobacco habit in 21% of individuals who were followed up to 6 months of practice. We conclude that the inexpensive and easy to learn and practice breathing processes (SK and P) in this study demonstrated an increase in NK cells and a reduction in tobacco consumption. When confirmed in large and randomized studies, this result could mean that the regular practice of SK and P might reduce the incidence and progression of cancer.

Bhattacharya S, Pandey US, Verma NS.13 Studied to assess the effect of yogic breathing exercises (pranayama) on the oxidatives stress. The study group consisted of 30 young male volunteers, trained for the purpose of this study and an equal number of controls were used. The free radicals and Super oxide dismutase levels were measured before the study and at the end of the study. The free radicals were decreased

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significantly in the study group but the SOD was increased insignificantly as compared to the control group. Yogic breathing exercises not only help in relieving the stresses of life but also improve the antioxidant status of the individual. An improvement in the antioxidant status is helpful in preventing many pathological processes that are known with impaired antioxidant system of body.

Pilkington K, Kirkwood G, Rampes H, Richardson J.\textsuperscript{14} Yoga-based interventions may prove to be an attractive option for the treatment of depression. The aim of this study is to systematically review the research evidence on the effectiveness of yoga for this indication. Searches of the major biomedical databases including MEDLINE, EMBASE, CINAHL, PsycINFO and the Cochrane Library were conducted. Specialist complementary and alternative medicine (CAM) and the IndMED databases were also searched and efforts made to identify unpublished and ongoing research. Searches were conducted between January and June 2004. Relevant research was categorized by study type and appraised. Clinical commentaries were obtained for studies reporting clinical outcomes. Five randomized controlled trials were located, each of which utilized different forms of yoga

interventions and in which the severity of the condition ranged from mild to severe. All trials reported positive findings but methodological details such as method of randomisation, compliance and attrition rates were missing. No adverse effects were reported with the exception of fatigue and breathlessness in participants in one study. No language restrictions were imposed on the searches conducted but no searches of databases in languages other than English were included. Overall, the initial indications are of potentially beneficial effects of yoga interventions on depressive disorders. Variation in interventions, severity and reporting of trial methodology suggests that the findings must be interpreted with caution. Several of the interventions may not be feasible in those with reduced or impaired mobility. Nevertheless, further investigation of yoga as a therapeutic intervention is warranted.

Lane JD, Seskevich JE, Pieper CF. Studied a brief, non-sectarian program of meditation training for effects on perceived stress and negative emotion, and to determine effects of practice frequency and test the moderating effects of neuroticism (emotional lability) on treatment outcome. The study used a single-group, open-label, pre-test post-test design conducted in the setting of a university medical center. Healthy

15 Lane JD, Seskevich JE, Pieper CF. "Brief meditation training can improve perceived stress and negative mood". Altern Therapies in Health and Med. 2007 Jan-Feb;13(1):38-44
adults (N=200) interested in learning meditation for stress-reduction were enrolled. One hundred thirty-three (76% females) completed at least 1 follow-up visit and were included in data analyses. Participants learned a simple mantra-based meditation technique in 4, 1-hour small-group meetings, with instructions to practice for 15-20 minutes twice daily. Instruction was based on a psychophysiological model of meditation practice and its expected effects on stress. Baseline and monthly follow-up measures of Profile of Mood States; Perceived Stress Scale; State-Trait Anxiety Inventory (STAI); and Brief Symptom Inventory (BSI). Practice frequency was indexed by monthly retrospective ratings. Neuroticism was evaluated as a potential moderator of treatment effects. All 4 outcome measures improved significantly after instruction, with reductions from baseline that ranged from 14% (STAI) to 36% (BSI). More frequent practice was associated with better outcome. Higher baseline neuroticism scores were associated with greater improvement. Preliminary evidence suggests that even brief instruction in a simple meditation technique can improve negative mood and perceived stress in healthy adults, which could yield long-term health benefits. Frequency of practice does affect outcome. Those most
likely to experience negative emotions may benefit the most from the intervention.

Gupta N, Khera S, Vempati RP, Sharma R, Bijlani RL. Considerable evidence exists for the place of mind body medicine in the treatment of anxiety disorders. Excessive anxiety is maladaptive. It is often considered to be the major component of unhealthy lifestyle that contributes significantly to the pathogenesis of not only psychiatric but also many other systemic disorders. Among the approaches to reduce the level of anxiety has been the search for healthy lifestyles. The aim of the study was to study the short-term impact of a comprehensive but brief lifestyle intervention, based on yoga, on anxiety levels in normal and diseased subjects. The study was the result of operational research carried out in the Integral Health Clinic (IHC) at the Department of Physiology of All India Institute of Medical Sciences. The subjects had history of hypertension, coronary artery disease, diabetes mellitus, obesity, psychiatric disorders (depression, anxiety, 'stress'), gastrointestinal problems (non ulcer dyspepsia, duodenal ulcers, irritable bowel disease, Crohn's disease, chronic constipation) and thyroid disorders (hyperthyroidism and hypothyroidism). The intervention

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consisted of asanas, pranayama, relaxation techniques, group support, individualized advice, and lectures and films on philosophy of yoga, the place of yoga in daily life, meditation, stress management, nutrition, and knowledge about the illness. The outcome measures were anxiety scores, taken on the first and last day of the course. Anxiety scores, both state and trait anxiety were significantly reduced. Among the diseased subjects significant improvement was seen in the anxiety levels of patients of hypertension, coronary artery disease, obesity, cervical spondylitis and those with psychiatric disorders. The observations suggest that a short educational programme for lifestyle modification and stress management leads to remarkable reduction in the anxiety scores within a period of 10 days.

Khalsa SB, Cope S\textsuperscript{17}. Studied Previous research has suggested that yoga and meditation practices are effective in stress management, alleviating anxiety and musculoskeletal problems and improving mood and cognitive and physical performance. Musicians experience a number of challenges in their profession including high levels of stress, performance anxiety and performance-related musculoskeletal

conditions. Yoga and meditation techniques are therefore potentially useful practices for professional musicians. Musicians enrolled in a prestigious 2-month summer fellowship program were invited to participate in a regular yoga and meditation program at a yoga center during the course of the program. The 10 participants in the yoga program completed baseline and end-program questionnaires evaluating performance-related musculoskeletal conditions, performance anxiety, mood and flow experience. Fellows not participating in the yoga program were recruited to serve as controls and completed the same assessments (N=8). The yoga participants showed some improvements relative to control subjects on most measures, with the relative improvement in performance anxiety being the greatest. The results from this preliminary study suggest that yoga and meditation may be beneficial as a routine practice to reduce performance anxiety in musicians.

Majumdar M, Grossman P, Dietz-Waschkowski B, Kersig S, Walach H. Conducted the first systematic outcome evaluation to examine the effects of an 8-week meditation-based program in mindfulness in a German sample. Twenty-one (21) participants with

chronic physical, psychologic, or psychosomatic illnesses were examined in a longitudinal pretest and post-treatment design with a 3-month follow-up. Both quantitative and qualitative data were gathered. Emotional and general physical well-being, sense of coherence, overall psychologic distress, and satisfaction with life were measured with standardized instruments. Overall, the interventions led to high levels of adherence to the meditation practice and satisfaction with the benefits of the course, as well as effective and lasting reductions of symptoms (especially in psychologic distress, well-being, and quality of life). Changes were of moderate-to-large effect sizes. Positive complementary effects with psychotherapy were also found. These findings warrant controlled studies to evaluate the efficacy and cost effectiveness of mindfulness-based stress reduction as an intervention for chronic physical and psychosomatic disorders in Germany.

Coppola F.\textsuperscript{19} Natural Stress Relief meditation, a mental technique which is practiced for 15 minutes twice a day, aims to reduce stress and anxiety by eliciting a specific state of physiological rest along with mental alertness. The meditation is taught in a self-administered program, requiring one hour of training during the first three days,

followed by the regular twice daily practice. Each 15-min. session consists in sitting quietly with closed eyes while applying a specific mental procedure. To test the effectiveness of meditation in reducing trait anxiety, Spielberger's State-Trait Anxiety Inventory was administered to 25 participants four times over a 3-wk. period: one week before starting to practice the meditation, a few hours before starting, 1 wk. after, and 2 wk. after. The difference in Trait Anxiety score between pretreatment and before starting the practice was not significant, while it was significant both after the first week of practice (Cohen $d=.46$) and after the first 2 wk. of practice ($d=.67$).

Grossman P, Niemann L, Schmidt S, Walach H. Mindfulness-based stress reduction (MBSR) is a structured group program that employs mindfulness meditation to alleviate suffering associated with physical, psychosomatic and psychiatric disorders. The program, nonreligious and nonesoteric, is based upon a systematic procedure to develop enhanced awareness of moment-to-moment experience of perceptible mental processes. The approach assumes that greater awareness will provide more veridical perception, reduce negative affect and improve vitality and coping. In the last two decades, a number of

research reports appeared that seem to support many of these claims. They performed a comprehensive review and meta-analysis of published and unpublished studies of health-related studies related to MBSR. Sixty-four empirical studies were found, but only 20 reports met criteria of acceptable quality or relevance to be included in the meta-analysis. Reports were excluded due to (1) insufficient information about interventions, (2) poor quantitative health evaluation, (3) inadequate statistical analysis, (4) mindfulness not being the central component of intervention, or (5) the setting of intervention or sample composition deviating too widely from the health-related MBSR program. Acceptable studies covered a wide spectrum of clinical populations (e.g., pain, cancer, heart disease, depression, and anxiety), as well as stressed nonclinical groups. Both controlled and observational investigations were included. Standardized measures of physical and mental well-being constituted the dependent variables of the analysis. Overall, both controlled and uncontrolled studies showed similar effect sizes of approximately 0.5 (P<.0001) with homogeneity of distribution. Although derived from a relatively small number of studies, these results suggest that MBSR may help a broad range of individuals to cope with their clinical and nonclinical problems.
Roth B, Stanley TW\textsuperscript{21} examined inner-city patients' healthcare utilization before and after an MBSR intervention. To determine whether completion of an MBSR program resulted in changes in healthcare utilization in an inner-city population. Medical chart review compared the number and diagnoses of health center visits during the year before patients entered the MBSR program with the year following completion of the program. The Community Health Center in Meriden, Conn. The chart review process examined healthcare utilization patterns for 73 patients: 54 who completed the MBSR program in Spanish and 19 who completed the program in English. The focus of this study is a subgroup of 47 patients for whom a complete year of data were available before and after the intervention. An 8-week course in MBSR. The number and diagnoses of patients' health center visits before and after completion of the MBSR program. A significant decrease in the number of chronic care visits was found among the 47 patients for whom complete data were available. The 36 patients who completed the Spanish courses demonstrated a significant decrease in total medical visits and chronic care visits. The results of this study suggest that MBSR may help contain healthcare costs by decreasing the number of visits made by inner-city patients.

\textsuperscript{21} Roth B, Stanley TW. "Mindfulness-based stress reduction and healthcare utilization in the inner city: preliminary findings" Altern Therapies in Health and Med. 2002 Jan-Feb;8(1):60-2, 64-6
patients to their primary care providers after completing the MBSR program.

Manzoni GM, Pagnini F, Castelnuovo G, Molinari E. Relaxation training is a common treatment for anxiety problems. Lacking is a recent quantitative meta-analysis that enhances understanding of the variability and clinical significance of anxiety reduction outcomes after relaxation treatment. All studies (1997-2007), both RCT, observational and without control group, evaluating the efficacy of relaxation training (Jacobson's progressive relaxation, autogenic training, applied relaxation and meditation) for anxiety problems and disorders were identified by comprehensive electronic searches with Pubmed, Psychinfo and Cochrane Registers, by checking references of relevant studies and of other reviews. Our primary outcome was anxiety measured with psychometric questionnaires. Meta-analysis was undertaken synthesizing the data from all trials, distinguishing within and between effect sizes. 27 studies qualified for the inclusion in the meta-analysis. As hypothesized, relaxation training showed a medium-large effect size in the treatment of anxiety. Cohen's d was .57 (95% CI: .52 to .68) in the within analysis and .51 (95% CI: .46 to .634)

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in the between group analysis. Efficacy was higher for meditation, among volunteers and for longer treatments. Implications and limitations are discussed. The results show consistent and significant efficacy of relaxation training in reducing anxiety. This meta-analysis extends the existing literature through facilitation of a better understanding of the variability and clinical significance of anxiety improvement subsequent to relaxation training.

Dickinson HO, and et.al studied the effects of relaxation therapies on cardiovascular outcomes and blood pressure in people with elevated blood pressure. They searched the Cochrane Library, MEDLINE, EMBASE, Science Citation Index, ISI Proceedings, ClinicalTrials.gov, Current Controlled Trials and reference lists of systematic reviews, meta-analyses and randomised controlled trials (RCTs) included in the review. Inclusion criteria: RCTs of a parallel design comparing relaxation therapies with no active treatment, or sham therapy; follow-up ≥8 weeks; participants over 18 years, with raised systolic blood pressure (SBP) ≥140 mmHg or diastolic blood pressure (DBP) ≥85 mmHg); SBP and DBP reported at end of follow-up. Exclusion criteria: participants were pregnant; participants received antihypertensive medication which changed during the trial. Two reviewers independently
extracted data and assessed trial quality. Disagreements were resolved by discussion or a third reviewer. Random effects meta-analyses and sensitivity analyses were conducted. MAIN 29 RCTs, with eight weeks to five years follow-up, met our inclusion criteria; four were excluded from the primary meta-analysis because of inadequate outcome data. The remaining 25 trials assessed 1,198 participants, but adequate randomisation was confirmed in only seven trials and concealment of allocation in only one. Only one trial reported deaths, heart attacks and strokes (one of each). Meta-analysis indicated that relaxation resulted in small, statistically significant reductions in SBP (mean difference: -5.5 mmHg, 95% CI: -8.2 to -2.8, I² = 72%) and DBP (mean difference: -3.5 mmHg, 95% CI: -5.3 to -1.6, I² = 75%) compared to control. The substantial heterogeneity between trials was not explained by duration of follow-up, type of control, type of relaxation therapy or baseline blood pressure. The nine trials that reported blinding of outcome assessors found a non-significant net reduction in blood pressure (SBP mean difference: -3.2 mmHg, 95% CI: -7.7 to 1.4, I(2) = 69%) associated with relaxation. The 15 trials comparing relaxation with sham therapy likewise found a non-significant reduction in blood pressure (SBP mean difference: -3.5 mmHg, 95% CI: -7.1 to 0.2, I(2) = 63%). In view of the
poor quality of included trials and unexplained variation between trials, 
the evidence in favour of causal association between relaxation and 
blood pressure reduction is weak. Some of the apparent benefit of 
relaxation was probably due to aspects of treatment unrelated to 
relaxation.

Carmody J, Reed G, Kristeller J, Merriam P. 23 conducted a study 
was to ascertain whether participation in the mindfulness-based stress 
reduction (MBSR) program was associated with increases in 
mindfulness and spirituality, and to examine the associations between 
mindfulness, spirituality, and medical and psychological symptoms. 
Forty-four participants in the University of Massachusetts Medical 
School's MBSR program were assessed preprogram and postprogram on 
trait (Mindful Attention and Awareness Scale) and state (Toronto 
Mindfulness Scale) mindfulness, spirituality (Functional Assessment of 
Chronic Illness Therapy--Spiritual Well-Being Scale), psychological 
distress, and reported medical symptoms. Participants also kept a log of 
daily home mindfulness practice. Mean changes in scores were 
computed, and relationships between changes in variables were 
examined using mixed-model linear regression. There were significant

improvements in spirituality, state and trait mindfulness, psychological distress, and reported medical symptoms. Increases in both state and trait mindfulness were associated with increases in spirituality. Increases in trait mindfulness and spirituality were associated with decreases in psychological distress and reported medical symptoms. Changes in both trait and state mindfulness were independently associated with changes in spirituality, but only changes in trait mindfulness and spirituality were associated with reductions in psychological distress and reported medical symptoms. No association was found between outcomes and home mindfulness practice. Participation in the MBSR program appears to be associated with improvements in trait and state mindfulness, psychological distress, and medical symptoms. Improvements in trait mindfulness and spirituality appear, in turn, to be associated with improvements in psychological and medical symptoms.

Ott MJ. As nurses, they have the unique privilege of witnessing and nurturing the healing process of the whole person—mind, body, and spirit. Teaching mindfulness meditation is a nursing intervention that can foster healing. The consistent practice of mindfulness meditation has been shown to decrease the subjective experience of pain and stress in a

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variety of research settings. Formal and informal daily practice fosters
development of a profound inner calmness and nonreactivity of the
mind, allowing individuals to face, and even embrace, all aspects of
daily life, regardless of circumstances. By emphasizing being, not doing,
mindfulness meditation provides a way through suffering for patients,
families, and staff. This practice allows individuals to become
compassionate witnesses to their own experiences, to avoid making
premature decisions, and to be open to new possibilities, transformation,
and healing.

Khalsa SB. Although yoga is historically a spiritual discipline, it
has also been used clinically as a therapeutic intervention. A bibliometric
analysis on the biomedical journal literature involving research on the
clinical application of yoga has revealed an increase in publication
frequency over the past 3 decades with a substantial and growing use of
randomized controlled trials. Types of medical conditions have included
psychopathological (e.g. depression, anxiety), cardiovascular (e.g.
hypertension, heart disease), respiratory (e.g. asthma), diabetes and a
variety of others. A majority of this research has been conducted by
Indian investigators and published in Indian journals, particularly yoga

25 Khalsa SB. “Yoga as a therapeutic intervention: a bibliometric analysis of published research
specialty journals, although recent trends indicate increasing contributions from investigators in the U.S. and England. Yoga therapy is a relatively novel and emerging clinical discipline within the broad category of mind-body medicine, whose growth is consistent with the burgeoning popularity of yoga in the West and the increasing worldwide use of alternative medicine.

Chen KM, and et.al aimed to test older adults' physical fitness after a 24-week silver yoga exercise programme and to examine whether the programme could be further shortened to fit senior activity centres' programme designs. A quasi-experimental, pre-post tests design was used: baseline, at 12-week and at 24-week periods. Convenience samples of 204 subjects were recruited from eight senior activity centres and 176 subjects completed the study. Subjects were randomly assigned into three groups based on the centres: (1) Experiment I: complete silver yoga with stretching and meditation, (2) Experiment II: shortened silver yoga without the guided-imagery meditation and (3) Wait-list control. The interventions were conducted three times per week for 24 weeks. Physical fitness indicators included body compositions, cardiovascular-respiratory functions, physical functions and the range of motion. At the end of the 24-week period, the physical fitness of subjects in
Experiments I and II had significantly improved whether or not guided-imagery meditation was used and all had better physical fitness than subjects in the control group (all p < 0.05). The physical fitness of older adults in both the 70-minute complete silver yoga group and the 55-minute shortened silver yoga group had significantly improved after the interventions. It was recommended that the silver yoga programme be shortened by eliminating the guided-imagery meditation. The shortened silver yoga exercise programme is recommended to be incorporated as an activity programme in community-settings to promote the physical fitness of older adults.

Woolfolk RL.26 The scientific research that has investigated the physiological changes associated with meditation as it is practiced by adherents of Indian Yoga, Transcendental Meditation, and Zen Buddhism has not yielded a thoroughly consistent, easily replicable pattern of responses. The majority of studies show meditation to be a wakeful state accompanied by a lowering of cortical and autonomic arousal. The investigations of Zen and Transcendental Meditation have thus far produced the most consistent findings. Additional research into the mechanisms underlying the phenomena of meditation will require a

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shifting from old to new methodological perspectives that allow for adequate experimental control and the testing of theoretically relevant hypotheses.

Sharma R, Gupta N, Bijlani RL.\textsuperscript{27} conducted a prospective controlled study to explore the short-term impact of a comprehensive but brief lifestyle intervention, based on yoga, on subjective well being levels in normal and diseased subjects. Normal healthy individuals and subjects having hypertension, coronary artery disease, diabetes mellitus or a variety of other illnesses were included in the study. The outcome measures were 'subjective well being inventory' (SUBI) scores, taken on the first and last day of the course. The inventory consists of questions related to one's feelings and attitude about various areas of life, such as happiness, achievement and interpersonal relationship. There was significant improvement in the subjective well being scores of the 77 subjects within a period of 10 days as compared to controls. These observations suggest that a short lifestyle modification and stress management educational program leads to remarkable improvement in the subjective well being scores of the subjects and can therefore make

an appreciable contribution to primary prevention as well as management of lifestyle diseases.

Blackwell B, and et.al 28 seven selected hypertensive patients were stabilized on drugs at a research clinic. Subjects learned transcendental meditation (T.M.), were seen weekly, and took their own blood pressure several times daily. After 12 weeks of T.M. six subjects showed psychological changes and reduced anxiety scores. Six subjects also showed significant reductions in home and four in clinic blood-pressures. Six months later four subjects continued to derive psychological benefit and two showed significant blood-pressure reductions attributable to T.M. at home and clinic.

Kirkwood G, and et.al 29 Between March and June 2004, a systematic review was carried out of the research evidence on the effectiveness of yoga for the treatment of anxiety and anxiety disorders. Eight studies were reviewed. They reported positive results, although there were many methodological inadequacies. Owing to the diversity of conditions treated and poor quality of most of the studies, it is not possible to say that yoga is effective in treating anxiety or anxiety

disorders in general. However, there are encouraging results, particularly with obsessive compulsive disorder. Further well conducted research is necessary which may be most productive if focused on specific anxiety disorders.

Chen KM, and et.al.\textsuperscript{30} Conducted a study in 2005 and it had two phases. Phase I consisted of sending a survey to 10 experts to help develop the Silver Yoga Programme. A hard copy and a video containing detailed descriptions and demonstrations of the programme were then sent to the experts for review and critique regarding the clarity and feasibility of the yoga postures. Phase II was an enquiry into older adults' views on the programme using a quantitative evaluation and semi-structured qualitative inquiry. Fourteen women participants from a senior activity centre were interviewed individually after 1 month of Silver Yoga group practice, three times per week, 70 minutes per session. They were asked to evaluate the appropriateness of postures based on the criteria of difficulty, acceptability, feasibility and helpfulness. Five open-ended questions asked participants to reflect on their yoga experiences. Participants' mean ratings of the acceptability, feasibility and helpfulness of the four aspects of the programme (warm-

up, Hatha yoga, relaxation and guided-imagery meditation) ranged from 8.8 +/- 1.9 to 9.3 +/- 1.5; mean ratings of the difficulty of the programme revealed that relaxation and guided-imagery meditation were fairly easy to follow (0.1 +/- 0.3 and 0.1 +/- 0.3 respectively), but the postures in the Hatha yoga were relatively challenging (2.1 +/- 2.6). The Silver Yoga Programme should undergo further pilot-testing with larger samples of older adults before it is taken up internationally as a health-promotion activity for older adults.

Astin JA.\textsuperscript{31} Examined the effects of an 8-week stress reduction program based on training in mindfulness meditation. Previous research efforts suggesting this program may be beneficial in terms of reducing stress-related symptomatology and helping patients cope with chronic pain have been limited by a lack of adequate comparison control group. Twenty-eight individuals who volunteered to participate in the present study were randomized into either an experimental group or a nonintervention control group. Following participation, experimental subjects, when compared with controls, evidenced significantly greater changes in terms of: (1) reductions in overall psychological

symptomatology; (2) increase in overall domain-specific sense of control and utilization of an accepting or yielding mode of control in their lives, and (3) higher scores on a measure of spiritual experiences. The techniques of mindfulness meditation, with their emphasis on developing detached observation and awareness of the contents of consciousness, may represent a powerful cognitive behavioral coping strategy for transforming the ways in which we respond to life events. They may also have potential for relapse prevention in affective disorders.

Manocha R. 32: studied to define meditation, outline the broad types of meditation and give an overview of the extent and validity of available evidence for its efficacy. The basic question of what constitutes meditation and what separates it from relaxation therapy has been an impediment to formulating quality studies in order to research meditation techniques. Examining the literature using evidence based criteria reveals that, while meditation does appear to have therapeutic potential, there is a great need for further research before definitive conclusions can be made. Researchers have yet to systematically compare different techniques of meditation to compare their profiles.

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Arambula P, and et.al. Studied to explore the physiological correlates of a highly practiced Kundalini Yoga meditator. Thoracic and abdominal breathing patterns, heart rate (HR), occipital parietal electroencephalograph (EEG), skin conductance level (SCL), and blood volume pulse (BVP) were monitored during prebaseline, meditation, and postbaseline periods. Visual analyses of the data showed a decrease in respiration rate during the meditation from a mean of 11 breaths/min for the pre- and 13 breaths/min for the postbaseline to a mean of 5 breaths/min during the meditation, with a predominance of abdominal/diaphragmatic breathing. There was also more alpha EEG activity during the meditation (M = 1.71 microV) compared to the pre- (M = .47 microV) and postbaseline (M = .78 microV) periods, and an increase in theta EEG activity immediately following the meditation (M = .62 microV) compared to the pre-baseline and meditative periods (each with M = .26 microV). These findings suggest that a shift in breathing patterns may contribute to the development of alpha EEG, and those patterns need to be investigated further.

King MS, Carr T, D'Cruz C.\textsuperscript{34}: studied to describe transcendental meditation and review research on its use in the treatment and prevention of coronary heart disease. Transcendental meditation shows promise as a preventive and treatment method for coronary heart disease. Transcendental meditation is associated with decreased hypertension and atherosclerosis, improvements in patients with heart disease, decreased hospitalization rates and improvements in other risk factors including decreased smoking and cholesterol. These findings cannot be generalized to all meditation and stress reduction techniques as each technique differs in its effects. Further research is needed to delineate the mechanisms involved and to verify preliminary findings concerning atherosclerosis and heart disease and the findings of short term hypertension studies.

Pettinati PM.\textsuperscript{35} Presented an introduction to insight or mindfulness meditation, yoga, and guided imagery from theoretical and practical perspectives. She provides clear, easy-to-follow steps to begin using sitting meditation, walking meditation, and yoga for the health care provider and for the patient. She presents the material first for self-

\textsuperscript{34} King MS, Carr T, D'Cruz C. "Transcendental meditation, hypertension and heart disease", Aust Fam Physician. 2002 Feb;31(2):164-8.
\textsuperscript{35} Pettinati PM. "Meditation, yoga, and guided imagery". The Nursing Clinic in North America. 2001 Mar;36(1):47-56
knowledge and self-care and secondarily for connecting to others in healing relationships.

Telles S, Naveen KV.\textsuperscript{36} Stated that the use of yoga for rehabilitation has diverse applications. Yoga practice benefited mentally handicapped subjects by improving their mental ability, also the motor co-ordination and social skills. Physically handicapped subjects had a restoration of some degree of functional ability after practicing yoga. Visually impaired children showed a significant decrease in their abnormal anxiety levels when they practiced yoga for three weeks, while a program of physical activity had no such effect. Socially disadvantaged adults (prisoners in a jail) and children in a remand home showed significant improvement in sleep, appetite and general well being, as well as a decrease in physiological arousal. The practice of meditation was reported to decrease the degree of substance (marijuana) abuse, by strengthening the mental resolve and decreasing the anxiety. Another important area is the application of yoga (and indeed, lifestyle change), in the rehabilitation of patients with coronary artery disease. Finally, the possible role of yoga in improving the mental state and general well being of HIV positive persons and patients with AIDS is being explored.

Wallace RK. States that Oxygen consumption, heart rate, skin resistance, and electroencephalograph measurements were rerecorded before during, and after subjects practiced a technique called transcendental meditation. There were significant changes between the control period and the meditation period in all measurements. During meditation, oxygen consumption and heart rate decreased, skin resistance increased, and the electroencephalogram showed specific changes in certain frequencies. These results seem to distinguish the state produced by transcendental meditation from commonly encountered states of consciousness and suggest that it may have practical applications.

Cumming made an attempt to explore the correlation of stress and job satisfaction among urban special education teachers. Maslach Burnout Inventory, Minnesota Job Satisfaction Questionnaire and Demographic profile were used to survey over 292 special needs teachers. Results indicate that no significant differences were found among different classification of teachers. Depersonalization was found


to be a significant factor in the extrinsic satisfaction, a teacher experienced in his/ her job.

Smeltzer\textsuperscript{39} used the stress diagnostic survey to determine the work stress among government and private industry. Results indicated that variables associated with communication at the group and individual, not organization level had the greatest effect on work stress. In addition a 'type A' behavioral style was significantly related to role overload and responsibility for people.

Nelson\textsuperscript{40} studied personnel professionals and found that females reported significantly more stress from politics and higher levels of psychological and physiological distress, when compared with males. However, the females did not report more stress than males on variables concerning work/home, home conflicts or career progress.

Moffett's\textsuperscript{41} study of summer faculty at the University of Iowa revealed that female, non tenure and probationary faculty experienced significantly higher levels of job stressors than male and tenure faculty.

\textsuperscript{40} Nelson, D.L., "Men and Women of the Personnel Profession some difference and similarities in their stress", Stress Medicine 5:3 (1989) : 145 -152
\textsuperscript{41} Moffett, M.A., "Implications of Job Stressors are Perceived by Summer Faculty at the University of Iowa (Doctoral Dissertation, University of Iowa, 1983), Dissertation Abstracts International 44 (1983) : 3611-A.
Academicians earning less than professors perceived greater stress. Faculty who classified themselves as 'type A' personalities had more job stress than those who classified themselves as 'type B'. Full time professors and academicians who had greater departmental seniority had minimum levels of perceived of strains.

Fogelson\textsuperscript{42} determined to find out the occupational stress and burnout among teachers and administrators in elementary school. He used the Maslach burnout inventory, role questionnaire by Rizzo et al. (1970), a demographic questionnaire and Fogelson. Educator's survey constructed for this study. The results indicated that emotional exhaustion was present in moderate levels but that depersonalization and feelings of lack of personal accomplishment were low among teachers and administrator. Levels of role conflicts and role ambiguity were also low when compared to established norms. Other influencing factors were age, grade level taught communication styles and school governance models.

Margaret\textsuperscript{43} studied the relationship between burnout and sources of stress as perceived by selected bilingual education teachers. She used Maslach inventory and stressful teaching situation questionnaire (part 1). In the self reported rating she identified the prevalence of high, moderate and low levels of emotional exhaustion, depersonalization and personal accomplishments. The responses of all 190 teachers were further analyzed using multiple regressions and Pearson’s ‘r’ correlation. These exhibited that age was significantly and positively related to burnout. Interpersonal relationship, instructional management and administrative policies were identified as resources of stress which clearly and significantly explained the variance of all three dimensions of burnout.

Czerniakoueski\textsuperscript{44} studied the relationship of stress and burnout to coping strategies preferred by public elementary Principals in Pennsylvania. In this study he used the administrative stress index (ASI), the Maslach Burnout Inventory (MBI), Rosech Coping Preference Scale (RCPS), and personal data sheet. The responses were analysed and computed for percentage distribution, analysis of variables, Pearson product moment correlations and multiple linear regression analysis.


Results indicated moderate levels of stress and burnout in the principles from the administrative constraints such as increased workloads and excessive meetings.

Zamirullah Khan and Naseem Ahmed\textsuperscript{45} (2005) found that inter university male swimmers were significantly different from female swimmer on social, emotional and total adjustment, in which the scholar found that male swimmer have better social, emotional and total adjustment over the female swimmer.

Maura Paul-Labrador and et.al \textsuperscript{46}Background The metabolic syndrome is thought to be a contributor to coronary heart disease (CHD), and components of the syndrome have been identified as possible therapeutic targets. Previous data implicate neurohumoral activation related to psychosocial stress as a contributor to the metabolic syndrome. The aim of this study was to evaluate the efficacy of transcendental meditation (TM) on components of the metabolic syndrome and CHD.

Methods We conducted a randomized, placebo-controlled clinical trial of 16 weeks of TM or active control treatment (health education), matched


\textsuperscript{46} Maura Paul-Labrador and et.al. Effects of a Randomized Controlled Trial of Transcendental Meditation on Components of the Metabolic Syndrome in Subjects With Coronary Heart Disease Arch Intern Med. 2006:166:1218-1224.
for frequency and time, at an academic medical center in a total of 103 subjects with stable CHD. Main outcome measures included blood pressure, lipoprotein profile, and insulin resistance determined by homeostasis model assessment (calculated as follows: [(fasting plasma glucose level [in milligrams per deciliter] x fasting plasma insulin level [in micro units per milliliter]) x 0.0552]/22.5); endothelial function measured by brachial artery reactivity testing; and cardiac autonomic system activity measured by heart rate variability. Results the TM group had beneficial changes (measured as mean ± SD) in adjusted systolic blood pressure (−3.4 ± 2.0 vs 2.8 ± 2.1 mm Hg; \( P = .04 \)), insulin resistance (−0.75 ± 2.04 vs 0.52 ± 2.84; \( P = .01 \)), and heart rate variability (0.10 ± 0.17 vs −0.50 ± 0.17 high-frequency power; \( P = .07 \)) compared with the health education group, respectively. There was no effect of brachial artery reactivity testing. Conclusions Use of TM for 16 weeks in CHD patients improved blood pressure and insulin resistance components of the metabolic syndrome as well as cardiac autonomic nervous system tone compared with a control group receiving health education. These results suggest that TM may modulate the physiological response to stress and improve CHD risk factors, which may be a novel therapeutic target for the treatment of CHD.
Kutz I, Borysenko JZ, Benson H. 47 A framework for the integration of meditation and psychotherapy is presented through a consideration of the psychobiological nature of meditation (the relaxation response) and discussion of a traditional meditation practice (mindfulness meditation) as an effective cognitive technique for the development of self-awareness. The mechanisms by which the emotional and cognitive changes of meditation can be of therapeutic value are explored and the synergistic advantages of the combination of psychotherapy and meditation are discussed.

Kozasa EH and et.al 48 Siddha Samadhi Yoga is a program in which meditation is associated with pranayama (breathing exercises). 22 volunteers with anxiety complaints (M age = 42.8 yr., SD = 10.3) were assigned to two groups: 14 attended the yoga group, and 8 attended a waiting-list or control group. They were evaluated before the intervention and 1 month after it on the State-Trait Anxiety Inventory, the Beck Depression Inventory, Tension Feelings Self-evaluation Scales, and the Well-being Self-evaluation Scales. A significant reduction in

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scores on anxiety, depression, and tension was found in yoga group, as well as an increase in well-being in comparison with the control group.

Saucen G. Western psychotherapy and Yoga overlap insofar as both systems are based upon religious and mythological facts, and--on the level of psychotherapeutical praxis--on the techniques of hypnosis, auto- and heterosuggestions and/or meditation. It is 50 years ago that the west considered the psychotherapeutical effects of theayoga-systems, first of all of Hatha- Yoga. Even today a theoretical foundation by means of proper comparison of the two structures is missing. In present-day India Yoga fulfills psychohygienical functions without being psychotherapy in our sense. There are various techniques of magic in use, which replace the experimental psychological-psychotherapeutical methods in the West. The acceptance of meditation could only be successful if the metaphysical and sociocultural context would be integrated at the same time. The traditional function of Yoga guarantees its continuity even in the modern industrialized society of India. Neither the theoretical nor the practical fundaments allow a direct transfer at present.

Brown RP, Gerbarg PL. Yogic breathing is a unique method for balancing the autonomic nervous system and influencing psychologic and stress-related disorders. Part I of this series presented a neurophysiologic theory of the effects of Sudarshan Kriya Yoga (SKY). Part II will review clinical studies, our own clinical observations, and guidelines for the safe and effective use of yoga breath techniques in a wide range of clinical conditions. Although more clinical studies are needed to document the benefits of programs that combine pranayama (yogic breathing) asanas (yoga postures), and meditation, there is sufficient evidence to consider Sudarshan Kriya Yoga to be a beneficial, low-risk, low-cost adjunct to the treatment of stress, anxiety, post-traumatic stress disorder (PTSD), depression, stress-related medical illnesses, substance abuse, and rehabilitation of criminal offenders. SKY has been used as a public health intervention to alleviate PTSD in survivors of mass disasters. Yoga techniques enhance well-being, mood, attention, mental focus, and stress tolerance. Proper training by a skilled teacher and a 30-minute practice every day will maximize the benefits. Health care providers play a crucial role in encouraging patients to maintain their yoga practices.

Holmes DS and et.al \(^{51}\) on four successive days, 10 highly trained and experienced meditators were asked to relax for 5 minutes, meditate for 20 minutes, and then relax for 5 minutes. In contrast, 10 other subjects who had no training or experience with meditation were asked to relax for 5 minutes, rest for 20 minutes, and then relax for 5 minutes. Physiological arousal (heart rate, skin resistance, respiration rate, systolic blood pressure, diastolic blood pressure) and subjective arousal (cognitive, somatic, relaxation) were measured throughout the experiment. Results indicated that (a) prior to meditating or resting, meditators tended to have higher heart rates and diastolic blood pressure than did nonmeditators, (b) meditation was associated with generally reduced arousal, but (c) while meditating, meditators did not evidence lower levels of arousal than nonmeditators did while resting. This investigation employed controls, which were not used in previous investigations, and the results place qualifications on previously reported results. The results have implications for the study of personality functioning, stress management, and psychotherapy.

Yesavage JA, Karasu TB.52 The purpose of this article is to present a review of the psychotherapy of the elderly, emphasizing traditional methods as well as some newer techniques. It will first review the literature on the process of psychotherapy in the elderly, then the rationale for such therapy will be discussed, and finally important technical points about such therapy will be listed, including information about the cognitive psychotherapies in the treatment of demented elderly.