

An evidence-based review of yoga on physical, psychological health and quality of life

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Abstract :- This manuscript brings forth information regarding the therapeutic effects of asanas, pranayama and meditation as it has been studied in various populations concerning a multitude of different disorders. The objective of this study is to assess the selected current evidences of the therapeutic effect of yoga and to provide a comprehensive review of the benefits of regular yoga. Collectively these reviews suggest a wide spectrum beneficial effect of yoga but a wider and in-depth study is required for virtually all of them to firmly establish such benefits. Though yoga has full potency to establish itself as a supportive adjunct to mitigate several psychosomatic and psychophysiological disorders and improvement in quality of life.

Keywords :- asanas, asanas, psychosomatic, parasympathetic.

World health organisation (WHO) has considered alternative medicine as the second line of health care (WHO, 2013) practice that are adapted by a majority of global population. Yoga is one of the most ancient practice mentioned in ancient Indian manuscripts and practiced by saints. Yoga involves many physical postures called asanas, breathing exercises pranayama, meditation, specified feeding habits and a specific life style. These practices give several psycho-somatic and physiological benefits like body flexibility, strength and better coordination between body and soul, all these enhances the quality of life.

But systematic reviews on the therapeutic effects of yoga is still inconclusive and not supported by well documented scientific research. In this review paper we have summarised the current findings on the therapeutic effects of yoga on psychological and physiological parameters of humans.

Yoga in pulmonary function :- In literature review twelve studies were examined evaluating effects of yoga on pulmonary function in healthy individuals and patients with chronic bronchitis and asthma (Raub,2002). In both patients and healthy

individuals practicing yoga, there are reported improvements in various parameters of lung functions like respiratory rate, peak expiratory flow rate (PEFR), forced vital capacity (FVC) with breathing control technique (pranayama), specific postures (asanas) and relaxation techniques. Saxena and Saxena also evaluated the effects of breathing exercises in patients with asthma for three months. Forced expiratory volume and peak expiratory flow rate were measured in volunteers during the three months duration. A significant improvement in the symptoms and lung function was observed in the intervention group compared to control group. Similarly, Sodhi et al conducted clinical trial with patients suffering bronchial asthma and described improvements in peak expiratory flow rate and diminished frequency of asthma attack. Compared to control groups.

Yoga on human physiology

Cardiovascular endurance :- Literature review that included five controlled studies reported significant improvements in cardiovascular parameters of the patients who practiced pranayama and asanas both. The parameters measured included oxygen consumption, work output and blood lactate during exercise. also, improvement in physical fitness and cardiopulmonary endurance was found in young adults and patients. Maurya et al and Goyal et al, 2014, both carried out studies to evaluate the effect of yogic breathing exercises on hypertension and autonomic functions and found small but significant reduction of SBP and /or DBP. However, several notable biases for example lifestyle and other factors, in the studies reviewed and limitations in several of studies which makes it difficult to detect an effect specific to yoga.

Glucose regulation :- Aljasir et al, 1987 examined the management of type 2 diabetes and suggested favourable effects of pranayama and asanas on parameters of diabetes. In other reports also induction of yoga in lifestyle reported a large and significant reduction in fasting glucose level. The author's discussed differences in the study groups and interventions as possible explanation for variability in results.

Yoga and generalized anxiety disorders :- Generalized anxiety disorder (GAD) is a chronic psychiatric disorder with high rates of co-morbidity all over the world. The central feature of GAD is stress, depression, anxiety and fatigue. We have found several relevant publications and six reviews on effect of pranayama and meditation and GAD.

MK Khalsa et al (2015) concluded improvement in anxiety, depression, panic, sleep and quality of life (QOL) in a total of 32 participants and suggested yoga as a promising treatment for those suffering from GAD. Kirkwood et al (2005)

identified eight controlled trials all with positive results. Other uncontrolled trials de Vicente (1987), concluded improvement in anxiety for population with primarily anxiety disorders.

Discussion :- These systematic reviews suggest a number of areas where yoga may have beneficial health effects but more research is required for virtually all of them to definitively establish benefits. We find a significant effect on the pulmonary function, physiology and psychosomatic disorders. Yoga establishes spiritual state of unity and is practiced to produce physical and emotional wellbeing. Scientific research suggests that yogic exercises improves anxiety (Khalsa and Cope, 2006; Richardson and Pilkington, 2005), hypertension (Field, 2011). Yoga may produce its wide spectrum implications by invoking an endogenous, coordinated response in which arousal of the autonomic nervous system and activation of the hypothalamic pituitary occurs (Jacobs,2009). The improved quality of life can also be explained by an calming and focusing the mind to develop greater awareness, high self-competence, lower anxiety, reduced distress etc.

Yogic asanas specifically improve body flexibility and fitness with a synergistic effect on the psychosomatic disorders, while the meditation and pranayama may result in cardiovascular parameters. Recent RCT have suggested pranayama exercises shift the autonomic nervous system balance from sympathetic to parasympathetic by enhancing parasympathetic output, probably by vagus stimulation, producing positive changes in cardiovagal function and associated neuroendocrine control. This shift towards parasympathetic may be responsible for the observed cardiovascular effects like lower systolic and diastolic blood pressure, heart rate in hypertension patients.

Conclusion :- Yoga (pranayama and asanas) with meditation are simple, cost effective long-term therapeutic benefits for people with diagnosed disorders or just on the border line of developing a disease. the available evidence indicates yoga may help to improve patient's self-efficacy, self-competence, physical and psychological fitness and may be effective as a supportive adjunct to mitigate medical condition. Although the data supports the potential of this therapy but not yet enough to use as a proven standalone curative treatment. Confirmatory studies with higher methodological quality, heterogeneity of sample and adequate control intervention is needed.

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