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Role of yoga and meditation in enhancing the mental health

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Abstract

Yoga is a spiritual practice with its roots in ancient Indian philosophy. The modern practice of Yoga comprises mostly of *asanas* (postural exercises), *Pranayama* (breathing exercises) and *dhyana* (meditation) (Boehm *et al.*, 2012; Cramer *et al.*, 2013) Yoga is a scientific process through which an individual can develop all aspects of his physical, mental, emotional and spiritual wellbeing and tackle the disturbances generated by the modern day lifestyle. The aim of Yoga is to join the mind and body as well as the individual and collective selves.

As per philosophy of Hatha Yoga everything in universe is composed of two energies i.e. *prana shakti*, the vital force and *manas shakti*, the mental energy. Therefore, Hatha Yoga works as harmonizing mechanism between these two shaktis *Ida* and *Pingala*. Hatha Yoga practices along with *asana* and *Pranayama* are more than enough for most of the individuals. Hatha Yoga is both a scientific method for spiritual awakening as well as science of health promotion. Therefore, Hatha Yoga therapy strives for balancing these energies and by doing so it has been successful in managing diseases like stress, anxiety, depression diabetes, asthma, blood pressure, epilepsy, hysteria, arthritis, insomnia, rheumatism and several other chronic diseases.

The word "mental health" is often misunderstood and interpreted to mean "mental illness." This can be perplexing, particularly because our mental health systems have traditionally focused on treating mental illness rather than mental health in general (Barry, 2007).

Keywords: Health, yoga, pranayama, meditation

Introduction

The Word Yoga derives from the Sanskrit root "Yug" signifies connecting or uniting. The term Yoga therefore means, 'union' between the finite and the infinite. The hatha yoga is considered as science of purification. Therefore, the first objective of the Hatha Yoga is the purification of body. The main aim of the Hatha Yoga is to develop a complete balance of the interacting functioning, processes and activities of physical body, mind and vital energy. Yoga and mental health are a relatively new area. Also, due to the variety in types and techniques of yogic practices, there is difficulty in comparing one study with another. While some studies have tested the benefits of Sudarshan Kriya, others have studied Hatha Yoga or mindfulness-based meditation and so on. Health is a multidimensional state involving physical, psychological, social and spiritual domains. The most discussed domain of health is the physical domain. Physical health is concerned with the healthy mechanisms of the body, the organs, muscles, glands, bones, and nerves. It refers to having a disease-free body. The second important domain which is often ignored is the psychological health. Psychological health encompasses a wide range of emotions, feelings, general mental wellness, personality, thinking, intelligence, and problem solving. Emotional health refers to the ability of a person to recognize and understand emotions such as joy, grief, sadness, surprise, anger and fear. One must be able to understand and express these emotions effectively and appropriately. A social environment provides resources from both physical and emotional needs. While physical needs such as the basic need for food, water, clothing and shelter are essential for survival, one cannot be healthy without the presence of a good social environment. The final critical area of health is spiritual health. While spirituality is often confused with religiosity and religious beliefs, they are in fact very different. Spiritual health is connected to personal creeds, one's beliefs about oneself and ideal behavior, ways to achieve mental peace and ensure peace with

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oneself. All the domains discussed above are interlinked and dynamic. For instance, poor physical health such as a chronic illness hampers one's self esteem (mental health) and thus, relationships with others (social health), which in turn, affects emotional health. On the contrary, a physically healthy person with better interpersonal skills will have better social relationships and emotional health.

Review of Literature

The review of literature gives an insight as to the methodological tools used in previous researches and the shortcomings of previous researches. This allows new researchers to avoid the shortcomings of the previous research. A review of literature related to the present study is presented to gather a background for the research as well as to evaluate the significance of the study

It has been predicted by the World Health Organization (WHO) that by the year 2020, depression will be the second largest contributor to the global disease burden. Depression, which is largely treated by psychiatric medicines along with supportive psychotherapy, is expected to become so prevalent that control through pharmacological means will become ineffective. Therefore, mental health becomes an important aspect of research on yogic practices. Poor mental health is characterized by alterations in thought, feelings and behavior which cause difficulty in everyday functioning. Good mental health is reflected by a sense of freedom from anxiety and emotional wellbeing (Carson *et al.*, 2004)^[9].

Bhattacharya, Pandey and Verma (2002)^[4] conducted a study to examine the effect of Pranayama on oxidative stress. Pranayama was introduced as the yogic breathing exercise to reduce stress it emerged that the practice of Pranayama is useful in reducing stress as it improves the status of antioxidants in the body. Improved antioxidant status is useful in preventing many pathological processes which improves overall wellbeing.

The most common mental illness experienced by women is related to anxiety and mood disorders. Compared to men, women experience greater rates of anxiety disorders, depression, and bipolar disorder. Depression is reported twice as much in women than in men (Astbury, 2001)^[1]. 10-15% of women report experience depression shortly after childbirth known as post-partum depression (O'Hara & Swain, 1996)^[20].

Bluth *et al.* (2015)^[6] conducted a study to assess the effectiveness of a school-based mindfulness program. The objective of the study was to test the effectiveness of school-based mindfulness program in alleviating the stress among school students. The results revealed that in the experimental group, there was a significant reduction in depression in comparison to the control group. Further, the program was so beneficial that the students wanted the program to continue.

There are significant differences in how mental illnesses affect males and females. Also, how the patients respond to treatment and how treatment varies according to gender is significant in research on mental health. The most common mental illness experienced by women is related to anxiety and mood disorders. Compared to men, women experience greater rates of anxiety disorders, depression, and bipolar disorder. Depression is reported twice as much in women than in men (Astbury, 2001)^[1]. 10-15% of women report experience depression shortly after childbirth known as post-partum depression (O'Hara & Swain, 1996)^[20].

Brown and Gerbarg (2005)^[8] conducted a study to assess the impact of yogic breathing on stress-related disorders. In the

first half, they presented a neuro-physiological theory on the effects of Sudarshan Kriya. In the second part, they presented a review of clinical studies, observations and guidelines for the effective use of Yoga and breathing exercises on a number of clinical conditions. There is considerable research to suggest that Sudarshan Kriya is beneficial, low-risk treatment of stress related illnesses such as anxiety, post-traumatic stress disorder (PTSD), depression, substance use, insomnia and also the rehabilitation of criminal offenders. In the survivors of mass disasters, Sudarshan Kriya has been found to be useful in reducing PTSD symptoms. Overall, Yoga improves mood, attention, concentration and stress tolerance, therefore, facilitating wellbeing.

Mental disorder is a massive and growing issue all over the world (WHO, 2004). According to the WHO, 450 million people worldwide suffer from a mental or behavioral illness, but only a small percentage of them receive medication. Sadness and depression associated with sorrow and death, stress symptoms, and reactive anxiety are all examples of mental health issues

On a global level, approximately 20% of youth experience some form of mental illness every year, contributing significantly to disability and decreased opportunity over the life cycle (Gore *et al.*, 2011)^[12].

Bhattacharya, Pandey and Verma (2002)^[4] conducted a study to examine the effect of Pranayama on oxidative stress. Pranayama was introduced as the yogic breathing exercise to reduce stress. The study was conducted on 30 male participants in the experimental group who trained for the purpose of the study. 30 participants were also employed as control group. Therefore, it emerged that the practice of Pranayama is useful in reducing stress as it improves the status of antioxidants in the body. Improved antioxidant status is useful in preventing many pathological processes which improves overall wellbeing.

Majumdar *et al.* (2002)^[19] examined the effects of eight-week meditation-based program in mindfulness. 21 participants were selected who suffered from different chronic physical, psychological, or psychophysiological illnesses. Data collected was both qualitative and quantitative. The dependent variables measured well being, sense of coherence, psychological distress and satisfaction with life. The findings were of moderate to large effect sizes. Meditation based mindfulness activities had positive impact on the outcome measures.

Austin (1997)^[2] conducted an eight week stress reduction program based on training in mindfulness meditation. Earlier researches have indicated that mindfulness meditation is useful in reducing stress-related symptoms. It helps people cope with chronic illnesses such as chronic pain, heart disease, hypertension, diabetes, cancer and the like. The study was conducted on 28 individuals. The participants were randomly divided into experimental or control group. The experimental group received an 8-week stress reduction program and training on mindfulness meditation. After eight weeks, it was found that in the experimental group, there was significant reduction in overall psychological symptomatology as compared to the control group.

Ray *et al.* (2001)^[21] conducted a study to examine the effect of yogic practices on physical and mental health. The study was conducted on 54 young fellowship course trainees. The participants were on the age group of 20-25 years. The participants were split into two groups: experimental and control. Yoga practises were given to the experimental group for the first five months of the course, while the control group

did not do any yogic activities during this time. Both groups did yogic practises from the sixth to the ninth month of training. On various psychological parameters, there was improvement as seen in reduction in anxiety levels, depression and a better mental function.

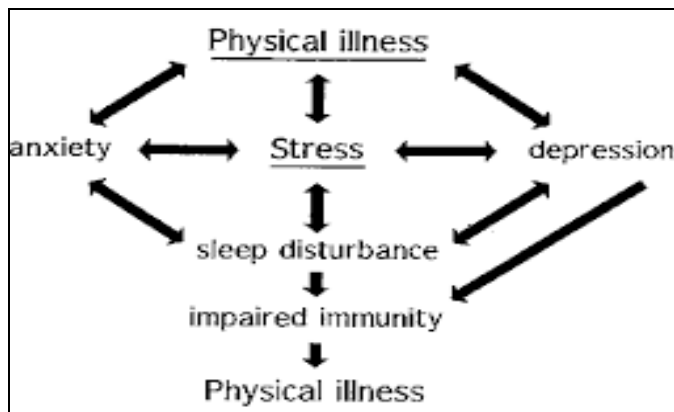


Fig 1: Stress-illness vicious circle

Bijlani *et al.* (2005) ^[5] undertook a study to assess the short-term impact of a Yoga-based brief-lifestyle intervention to assess the risk for cardiovascular disease and diabetes mellitus. The intervention was presented for ten days. The sample consisted of 98 participants (67 males, 31 females), in the age range of 20-74 years. The participants were divided into four groups based on their complaints namely diabetes mellitus, coronary artery disease, hypertension and other illnesses, the lifestyle program based on Yoga was given to them for eight days for prevention and management of chronic illnesses. The intervention consisted of postures (asanas), breathing exercises (Pranayama), relaxation techniques, meditation, nutrition, stress-management techniques, individualized advice, support groups, knowledge about the illness, videos and lectures on the philosophy of Yoga and the usefulness of Yoga in everyday life. The outcome measures consisted of plasma glucose and serum lipoprotein profile. The pre-test and post-test were conducted at a gap of 10 days. The pre-test and post-test were conducted at a gap of 10 days. Therefore, the study concluded that even short time changes in lifestyle through Yoga and stress management programs can have positive impact on the metabolic rates of individuals with chronic illness.

Bluth *et al.* (2015) ^[6] conducted a study to assess the effectiveness of a school-based mindfulness program. The objective of the study was to test the effectiveness of school-based mindfulness program in alleviating the stress among school students. The results revealed that in the experimental group, there was a significant reduction in depression in comparison to the control group. Further, the program was so beneficial that the students wanted the program to continue.

Coppola (2007) ^[10] did research to see how Natural Stress Relief meditation affected stress and anxiety levels. It's a 15-minute mental technique that can be done twice a day. It induces a condition of physical rest and increased focus, which helps to relieve tension and anxiety. Over the course of three weeks, 25 subjects were given the Spielberger's State-Trait Anxiety Inventory (STAI) four times. The first week was before starting the meditation, the second was few hours after starting the meditation and the third was after two weeks. In the pre-test, there was no significant difference in trait anxiety but after starting the treatment, there was a significant difference after first week and second week of

practice. There was a significant reduction in stress and anxiety scores reflecting a possibility that this technique may be used as an effective intervention for stress reduction.

Granath *et al.* (2006) ^[13] studied the effects of a stress management program on various psychological and physiological measurements. The stress management program was developed on the basis of cognitive behavioral therapy. The principles of the therapy were compared to a Kundalini Yoga program. The study was conducted on 33 participants (26 females and 7 males). The participants received intervention from trained leaders on 10 sessions over a period of four months. The psychological measures included anger, exhaustion, quality of life, stress behavior and self-rated stress. The physiological measures included blood pressure, urinary catecholamine, salivary cortisol and heart rate. The post-test data revealed that there were significant improvements on most of the psychological and physiological measures. However, there were no difference between the two groups, i.e. the stress management program and kundalini Yoga. Therefore, it was concluded that both the stress management program and kundalini Yoga could be used as effective stress management techniques.

Joshi (2007) ^[14] conducted a study to assess the effect of kapalbhathi kriya and anulom vilom Pranayama on the levels of anxiety, depression and the capacity of lungs of college students. It was found that there was a significant difference in students who practiced Yoga and those who did not on all the three dependent variables.

Kang and Choi (2009) ^[15] assessed the effectiveness of Yoga and meditation intervention on stress, anxiety and depression of nursing students in Korea. It was found that while the stress management program was effective in combating stress and anxiety, there was no significant improvement in the level of depression in the students.

Khalsa *et al.* (2012) ^[16] looked into the potential mental health advantages of Yoga for secondary school students. The pupils were randomly allocated to either regular physical education programmes or 11 weeks of Yoga. They looked at self-report measures of mood, anxiety, perceived stress, resilience, and other mental health factors at the start and completion of the programme. The authors discovered that participants in the Yoga group showed significant differences in anger control and fatigue/inertia over time when compared to controls.

Khandaet (2004) conducted a study to assess the efficacy of Nadi Shodhan Pranayama and kapalbhathi kriya on depression among male students. He found that there was a significant difference between experimental and control groups after Yogic intervention.

Kochupillai *et al.* (2005) ^[18] studied the beneficial effects of Sudarshan Kriya, Pranayama and rhythmic breathing processes on stress and immune functions of cancer patients. In this study, cancer patients who had completed their standard cancer therapy were studied. In the post-test, Sudarshan kriya and Pranayama significantly improved natural killer cells (NK) after 12 and 24 weeks of practice. Compared to the control group, in the experimental group, there was significant increase in NK cells at 24 weeks. No significant effect was observed on T-cell after the practice of either Sudarshan kriya or Pranayama. Therefore, on the basis of the findings it was concluded that the practice of Sudarshan kriya and Pranayama are inexpensive and relatively easy ways to learn and incorporate into daily lives.

Woolery *et al.* (2004) ^[22] conducted a study to determine the short term effect of Yoga on mood in young adults with mild depression. The study was conducted on 28 youth in the age

range of 18-29 years. The participants were assigned to experimental and control groups randomly. The Yoga type in this study was Iyengar Yoga. The intervention group took part in a five week Yoga program. The program ran for five weeks

with two hours class per week. The findings revealed that the Yoga group had a significantly lower depression compared to the control group. Similarly, there was a reduction in trait anxiety. Overall mood improvement was observed.

Table 1: Shows the intervention outcome result and not significant

Author Year	Intervention	Outcome	Result	Significant/Not Significant
Bijlani (2005) ^[5]	Yoga	Glucose and lipoprotein profile.	Reduced	Significant
Khalsa (2012) ^[16]	Yoga	Anger &fatigue	Reduced	Significant
Kochupillai (2005) ^[18]	Sudarshan Kriya &Pranayama	Anxiety	Reduced	Significant
Woolery (2004) ^[22]	Iyenger Yoga	Depression	Reduced	Significant
Joshi (2007) ^[14]	Pranayama	Anxiety,Depression	Reduced	Significant
Austin (1997) ^[2]	Meditation	Stress	Reduced	Significant

Conclusion

Therefore, mental health may be conceptualized as a multidimensional construct that includes both cognitive and emotional elements. It encompasses the complete and synchronous functioning of the person. The functional aspect gives satisfaction and a sense of fulfillment. Mental health is a way of expression of emotions, and it stands for the ability to adapt to various pressures and demands of the environment. Thus, mental health is about finding the balance between social, physical, emotional, mental and spiritual aspects of life. It impacts how we live in our surroundings and manage our day-to-day activities and stressors. Therefore, British Columbia Ministry of Health (2007) defined mental health as the “foundation for well-being and effective functioning for an individual and community. It is a resource vital to individual, families and societies.” The effect of specific yogic techniques has been studied extensively on mental health. Yoga enhances mood, wellbeing, stress tolerance, attention, concentration, the ability to focus, and improves decision making. Although the benefits of Yoga have been known for a long time, scientific research on the relationship between Yoga and mental health is a relatively new area some studies have tested the benefits of Sudarshan Kriya, others have studied Hatha Yoga or mindfulness-based meditation and so on.

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