

**EFFECT OF COMBINED YOGA AND MINDFULNESS
ON HAPPINESS, TYPE A / B PERSONALITY AND
ANGER AMONG WOMEN**

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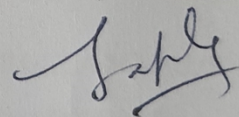
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CERTIFICATE OF ORIGINALITY

This is to certify that the Project Report titled "EFFECT OF COMBINED YOGA AND MINDFULNESS ON HAPPINESS, TYPE A & B PERSONALITY AND ANGER AMONG WOMEN" submitted to Indira Gandhi National Open University in partial fulfillment of the requirement for the award of Master of Arts Degree in Psychology (MAPC) is an original work carried out by SREEDHARANNAMBOOTHIRI.N Enrl.No.(180532762). The matter embodied in this Project is a genuine work by the student and has not been submitted whether to this University or to any other University/Institution for the fulfillment of the requirement of any course of study.

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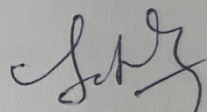
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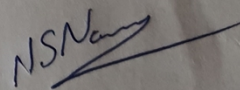
I am grateful to the Govt. Ayurveda dispensary ,Devikulangara, Ochira, as well as The Member of Devikulangara Panchayath and our women participants for participating and helping in my study with sincere enthusiasm.

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Place:

Date:



Signature of the Learner

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CHAPTER 1

INTRODUCTION

INTRODUCTION

Modern man considers 'happiness' as the gauge of a meaningful and successful life. From Plato through Sigmund Freud, to the present generation Psychologists, extensively enquired on the topic. The present pioneers of psychological researchers are still in search of meaning of life and how happiness is achieved. Psychologists suggest a number of ways in how happiness is fostered. Positive psychology is the scientific study of the "good life", or the positive aspects of the human experience that make life worth living (Seligman et al. 2000). It focuses on both individual and societal well-being.

Personality characteristics, such as particular ways of thinking, feeling and behaviours do play roles in well being and happiness of the human being. Emotional balance, levels of calmness/distress, anger etc are also contributing to one's well being.

Many factors are expected to contribute happiness in man. Genetics as well as developmental and other environmental factors influence happiness. Various psychological constructs like achievement, effective parenting, peer influences and many other behavioural practices influence happiness. Even the practice of gratitude is responsible for happiness. The majority of empirical studies (Sansone & Sansone, 2010) indicate that there is an association between gratitude and a sense of overall well being.

India accommodates multiple cultures and human lives are highly influenced by religious practices and rituals. Yoga is a way of life in India and many other parts of the world, which has been developed by saints, and said to contribute a successful and happy life. The present study is aimed to examine the effect of combined yoga and mindfulness practices on the wellbeing. The study particularly analyses its effects of yoga and mindfulness on psychological variables of happiness, anger and Type A/ Type B personality type among

women. Yoga is a system of physical exercise and mental/emotional focus that incorporates components of the mind (cognitive and meditative concentration) and the body (postures and breathing exercises). While the goal of yoga historically has been to create a spiritual state of unity, it is also practiced to produce physical and emotional wellbeing. Many Researches suggests that yoga can improve mood (Streeter et al., 2010). The proper insight about yoga let the person free from bondages of reactions in his lifespan.

Mindfulness includes practices that enhance the focused attention and self awareness. The most widely used definition of mindfulness consists of both awareness and acceptance (awareness without judgment). Acceptance means to embrace what happens within the mind and body, moment to moment, just as it is, allowing an individual to interpret a situation accurately (Neff, 2012). Mindfulness includes the awareness of suffering, and acceptance is willingness to move toward and experience suffering (Neff, 2012).

Neuropsychological evidences of benefits of Yoga and Mindfulness

Many studies show evidences for the effectiveness of Meditation in disorders of affect, anxiety and attention. The combined evidence from neurobiological and clinical studies seems promising about the advantages of yoga and mindfulness practices. Rubia (2009) suggested a more thorough understanding of the neurobiological mechanisms of action and clinical effectiveness of the different Meditative practices is needed before Meditative practices can be leveraged in the prevention and intervention of mental illness

Structural Brain Changes:

Neuropsychological imaging studies have demonstrated that mindfulness can induce neuroplastic changes in various areas of the brain (including the anterior cingulate cortex, insula, default mode network structures, left hippocampus, temporo-parietal junction, and

fronto-limbic network (Holzel et al., 2011). The structural brain changes linked to mindfulness (and related forms of meditation) are typically associated with (i) increased learning and memory capacity (Holzel et al., 2011), (ii) improved self-regulatory efficacy and (iii) greater interoceptive awareness (i.e., increased sensitivity to sensations that originate in the body as well as associated subjective awareness of the physical self as a sentient being (Lazar et al., 2005).

Reduced Autonomic Arousal:

Mindfulness and yoga related meditative techniques have been shown to increase output in the vagus nerve – a primary cranial nerve responsible for regulating heart and breathing rate (Telles et al., 2013). In turn, reduced autonomic arousal is associated with increased relaxation response, including across both somatic and psychological relaxation indices (Khanna & Greeson, 2013).

Perceptual Shift:

Practising mindfulness and yoga is believed to create a perceptual shift in the way individuals respond and relate to thoughts, feelings, and sensory stimuli (e.g., sounds, sights, smells, pain, etc.) (Jerath et al., 2012).

Greater Situational Awareness:

Mindfulness can help individuals better understand and connect with the physical and social environment in which they find themselves. More specifically, it can induce what has been termed the *phenomena feedback effect* that involves the mindfulness practitioner entering into a form of effortless communication with the present moment (Shonin & Van Gordon, 2015).

Increase in Self-Awareness:

Mindfulness can augment self-awareness that, in-turn, is understood to improve ability to identify and label negative mood states and thinking patterns (Gillespie et al., 2012). . Deficits in emotional regulation are particularly pertinent in sexual offenders.. It is argued that the effective control of emotional states may be helped through the adoption of a group of meditational practices, known as mindfulness techniques, which have emerged from Buddhist philosophy. The techniques involve slow, deep breathing and have been shown to affect vagal modulation of the heart and the functioning of specific neural circuits which are critically involved in emotional regulation. Buddhist teachings suggest that addiction to selfhood can be overcome by a treatment process involving phases of (i) becoming aware of the imputed self, (ii) deconstructing the imputed self, and (iii) reconstructing a dynamic and non-dual self (Shonin, E. et al., 2012).

Yoga

The word yoga comes from the Sanskrit word Yuj, which means union of the individual and universal consciousness. The Rugveda is one of the old most and most sacred books in human history, having been written 8-10 thousand years ago. Yoga is a part of this Vedic literature and was propounded by Maharishi Patanjali nearly 5000 years ago. He elucidated eight limbs of yoga, namely - Yama (Social Ethics), Niyama (Personal Ethics), Asana (Postures), Pranayam (Life Force awareness), Pratyahara (Turning the senses inwards), Dharana (One-pointed Focus), Dhyana (Meditation) and Samadhi (Self transcendent or Merging with the self). Yoga is a way of better living. It ensures great competence in work and a better control over mind and emotions. Through yoga one can achieve both physical and mental harmony (Hasmukh ,2018)

. Rhodes (2014) reports trauma survivors are highly benefitted from yoga and mindfulness practices. Through the integrative mind-body practice of yoga, various trauma

survivors experienced transformative insights, and improved their capacities for self-regulation and self-care. In doing so, they reduced problematic symptomology stemming from exposure to traumatic stress, improved their capacities to cope with trauma symptoms and new stressors, and increased their experiences of well-being and growth.

According to yogic literature, the energy called Kundalini is the psychic energy is flowing through spine and left (IDA) and right (PIMGALA) energy path in a human body. The system shows 7 energy centers known as chakras. The chakras represent the psychological state of mind and the “psyche” (Psychological life energy) concept of Sigmund Freud is known as Kundalini in Indian tradition. The center of the pleasure point, “LIBIDO” was known as “Kamakala”. The Id is an entirely unconscious aspect of the psyche and, according to Freud, is the “source of all psychic energy”; thus making it the primary component of personality. Freud claimed that the Id acts according to the pleasure principle and that the Id contains the libido, which is the primary source of instinctual force that is unresponsive to the demands of reality (Siegfried, W. 2014).

The ancient system of Kundalini yoga includes a vast array of meditation techniques and many were discovered to be specific for treating the psychiatric disorders as we know them today. One such technique was found to be specific for treating obsessive-compulsive disorder (OCD), the fourth most common psychiatric disorder, and the tenth most disabling disorder worldwide. Shannahoff, & Khalsa (2004) published reports of clinical trials describing treatments for OCD (Obsessive Compulsive Disorder) using a specific Kundalini yoga protocol. This OCD protocol also includes techniques that are useful for a wide range of anxiety disorders (Shannahoff, et al. 2004).

Yama and Niyama form the very basis of yoga and are considered to be essential part of yogic routine, on a mild scale. It is believed that through the Yama and niyama people can attain motivational ideas and guidance to improve their consciousness. The nature of all yogic practices is aimed at psycho-physiological modulations. The techniques are also used for the prevention and cure of psychosomatic condition of stress origin. Thus yogic practices seems to affect (i) Body organs like muscles, joints, ligaments, (ii) On the autonomous nervous system, (iii) On the higher nervous system.(Tomar, 2015.) Groups of various yogic practices have been found useful in various conditions of psycho-physical disturbances. By introducing yoga into school curriculum immense improvement in the behavior of the children has been noticed. The children become emotionally more stable especially closing adolescent period. The application of yogic techniques and principles in the field of games and sports injuries and promotion of sports skills is also popular now.

In a randomized, controlled, mixed-methods community-based study compared an 8-week yoga intervention with an attention-control activity in 27 women with Major Depressive Disorder (MDD). After controlling for baseline stress, there was a decrease in depression over time in both the yoga group and the attention-control group, with the yoga group having a unique trend in decreased ruminations. Participants in the yoga group reported experiencing increased connectedness and gaining a coping strategy through yoga(Kinser, et al., 2013).

Mindfulness

Mindfulness are meditation techniques that derives from Buddhist practices, as old as a 2600-year. Although contemplative techniques similar to mindfulness feature in many of the world's religious and spiritual traditions, the type of mindfulness employed in mental health settings is largely based on the Buddhist model. Mindfulness-based interventions

(MBIs) are at a pivotal point in their future development. Spurred on by an ever-increasing number of studies and breadth of clinical application, the value of such approaches may appear self-evident. The public health impact of MBIs can be enhanced significantly by situating the work in a broader framework of clinical psychological science (Dimidjian, S and Segal, 2015).

All the method of mindfulness can say in one word as “be here and now”. One study showed that mindfulness meditation improved psychological well being and reduced psychological symptoms of stress related problems, illness and anxiety (Carmody, J .et al. 2008). These include observing (attending to or noticing internal and external stimuli, such as sensations, emotions, cognitions, sights, sounds, and smells), describing (noting or mentally labelling these stimuli with words), acting with awareness (attending to one’s current actions, as opposed to behaving automatically or absent-mindedly), non-judging of inner experience (refraining from evaluation of one’s sensations, cognitions, and emotions) and non-reactivity to inner experience (allowing thoughts and feelings to come and go, without attention getting caught up in them)(Carmody and Baer, 2007)

Mindfulness Based Cognitive Therapy helped prevent depression recurrence as effectively as maintenance antidepressant medication did. The study also found that MBCT had a larger effect on people with histories of more severe childhood abuse, which has been associated with a greater risk of relapse, than on participants overall (Lu, S. 2015).

Historically, there are eight elements of yoga that, together, comprise ethical principles & practices for living a meaningful, purposeful, moral and self-disciplined life. Traditional yoga practices, including postures and meditation, direct attention towards one’s health, while acknowledging the spiritual aspects of one’s nature. Mindfulness meditation practices, such as gentle Hatha yoga and mindful breathing, are increasingly integrated into

secular health care settings. Current theoretical models suggest that the skills, insights, and self-awareness learned through yoga and mindfulness practice can target multiple psychological, neural, physiological, and behavioural processes implicated in addiction and relapse. A small but growing number of well-designed clinical trials and experimental laboratory studies on smoking, alcohol dependence, and illicit substance use support the clinical effectiveness and hypothesized mechanisms of action underlying mindfulness-based interventions for treating addiction (Khanna & Greeson, 2013).

Criticism of yoga and mindfulness

During the past two decades, mindfulness meditation has gone from being a fringe topic of scientific investigation to being an occasional replacement for psychotherapy, tool of corporate well-being, widely implemented educational practice, and “key to building more resilient soldiers”. Interpreting results from investigations of mindfulness is very difficult. Yet the mindfulness movement and empirical evidence supporting it have not gone without criticism. Misinformation and poor methodology associated with some past studies of mindfulness may lead public consumers to be harmed, misled, and disappointed (Nicholas et al., 2018).

Recent neuroimaging studies have begun to uncover the brain areas and networks that mediate these positive effects. However, the underlying neural mechanisms remain unclear, and it is apparent that more methodologically rigorous studies are required if we are to gain a full understanding of the neuronal and molecular bases of the changes in the brain that accompany mindfulness meditation.

The functioning of yoga and mindfulness

Cognitive theories posit that thought processes are associated with an individual's emotional experiences, whether positive and functional or negative and dysfunctional (Beck, 1967). Dysfunctional thoughts are related to emotional disturbance, mood instability, and depression, and are characterized by negative assumptions and self criticism (Ramel, Goldin, Carmona, & McQuaid, 2004).

According to the cognitive theory of psychopathology, the development of most pathology is due to irrational thoughts and cognitive distortions (Beck, 2005). Cognitive distortions were originally defined by Beck (1967) as the result of processing information in ways that result in identifiable errors in thinking. These distorted perceptions may begin early in life and continue to expand with each experience. There are several cognitive distortions, or categories of commonly used distorted thought processes. Beck and colleagues (1979) proposed that cognitive distortions are developed as a result of an individual generalizing his or her experiences into categories of thinking, or schemas. Schemas are considered stable cognitive structures that represent an individual's past learning experiences (Beck, Rush, Shaw, & Emery, 1979).

Meditation has been found to calm the sympathetic nervous system (reduced heart, respiratory, and pulse rates), reduce blood pressure and urinary vanilly mandelic acid (VMA), and increase parasympathetic activity (Rubia, K.2009). Meditation can result in feelings of well-being and positive effect, which are indicative of the release of mood stabilizing neuro hormones and neurotransmitters in the limbic brain areas. These hormones include dopamine, serotonin, and melatonin (Rubia, K. 2009). Meditation has also been shown to reduce the production of cortisol, which is one of the primary stress hormones (Barbor, 2001). These physiological changes are thought to be the result of increased control of the autonomic

system, even when compared to relaxation groups, which appear to have different associated neural networks Rubia, K. (2009). Research thus far has provided evidence for the psychological and physiological benefits of incorporating meditation into the current study's yoga intervention. Mediation is a technique that can be used at any age and with no cost (Barnes, 2004).

Western psychological theory and practice, specifically developments in somatic psychology, can be integrated with the scientific insights of Yoga in order to produce a more thorough model that seeks to reduce the symptoms of psychological trauma and promote overall well-being. Delving into the vast field of Yoga, one discovers that the physical exercises we commonly understand as Yoga are but one aspect of a highly refined philosophy that offers a psychological view of the human being. When we consider Yoga from this wider perspective, we discover many of the goals of modern psychology to be complementary with those of Yoga. A helpful step in integrating the yogic and Western psychological approaches is to consider the role of somatic psychology. In the West, there is increasing recognition that body awareness is an essential component to psychological wellbeing (Mehling et al., 2011). Somatic psychology has been shown to be effective in treating symptoms associated with anxiety, depression, psychosomatic issues, post-traumatic stress disorder (PTSD), sexual abuse, and other forms of trauma (Caplan, M. et al., 2013).

Mindfulness is required to experience self-compassion, it is important to recognize that the two constructs are not exactly the same. First, the type of mindfulness entailed in self-compassion is narrower in scope than mindfulness more generally. The mindfulness component of self-compassion refers to balanced awareness of the negative thoughts and feelings involved in personal suffering. Mindfulness in general refers to the ability to pay attention to any experience—positive, negative, or neutral—with acceptance and equanimity.

Mindfulness tends to focus on one's internal experience (sensations, emotions, thoughts) rather than oneself as the experience. For example, in the case of lower back pain, mindful awareness might be directed at the changing pain sensations, perhaps noting a stabbing, burning quality, whereas self-compassion would be aimed at the person who is suffering from back pain. Self compassion emphasizes soothing and comforting the "self" when distressing experiences arise, remembering that such experiences is part of being human. Research indicates that individuals who are self-compassionate demonstrate better psychological health than those who lack self-compassion. For instance, greater self-compassion has consistently been found to predict lower levels of anxiety and depression, which may be related to the finding that self-compassion tends to decrease cortisol and increase heart-rate variability. Greater self-compassion is also linked with less rumination, perfectionism, and fear of failure .At the same time, self-compassionate people are less likely to suppress unwanted thoughts and are more willing to acknowledge their negative emotions as valid and important (Neff, 2012).

Many researchers have shown how harmful emotional states can cause 'stress' and stress not only affect our body, but our mind as well (Schneiderman, N. et al. 2005). The present study particularly intended to observe effect of yoga with mindfulness meditation on anger level, personality types and happiness of **women**.

Relation of Yoga and mindfulness with happiness

Positive psychology has flourished in the last 5 years. The author reviewed recent developments in the field, including books, meetings, courses, and conferences. They also discuss the newly created classification of character strengths and virtues, a positive complement to the various editions of the Diagnostic and Statistical Manual of Mental

Disorders (e. g., American Psychiatric Association, 1994), and present some cross-cultural findings that suggest a surprising ubiquity of strengths and virtues. Researchers found the yoga and mindfulness interventions lastingly increased happiness and decreased depressive symptoms. Positive interventions can supplement traditional interventions that relieve suffering and may someday be the practical legacy of positive psychology (Seligman, M. et al 2005)

Type A/B Personality & Anger

According to Allport, “Personality is the dynamic organization within the individual of those psychophysical systems that determine his characteristic behaviour and thought” (Allport, 1961). There are various other perspectives in which the term personality defined, like from psychodynamic, humanistic etc.

Type A/Type B Personality type has been used according to an individual's responses to external stimuli, in a continuum from anger to calmness. This concept was developed after a study conducted by Friedman and Rosenman (1974), investigating the relationship between certain behavioral characteristics and heart attacks. The researchers who were also heart specialists, specified certain common behavioral characteristics in their patients, and named these as Type-A Behaviors. Type-A behaviors are generally seen in individuals who race with time and who are led by success. They work fast, talk fast; try to do several things at once. They are impatient and angry. Since they cannot bear to wait, they tend to interrupt the conversation; they try to lead all of their interpersonal interactions. (Batigun, et al 2006) The present study focuses on behavioural responses among women, in terms of levels of Happiness, Type A/B characteristics and levels of Anger.

CHAPTER 2

LITERATURE REVIEW

LITERATURE REVIEW

The mindfulness is neither a belief or ideology, nor a philosophy. Rather, it is a coherent phenomenological description of the nature of mind, emotion, and suffering and its potential release, based on highly refined practices aimed at systematically training and cultivating various aspects of mind and heart via the faculty of mindful attention (the words for mind and heart are the same in Asian languages; thus “mindfulness” includes an affectionate, compassionate quality within the attending, a sense of openhearted, friendly presence and interest). The mindfulness engagement takes a variety of forms, from a range of formal practices that are undertaken for varying periods of time on a regular basis, to informal practices that are aimed at cultivating a continuity of awareness in all activities of daily living (Kabat-Zinn, J. 2003).

Therapeutically, yoga can ensure some positive results in many illness cases of psychological and physical conditions. Woodyard (2007) conducted a study on “Exploring the therapeutic effects of Yoga and its ability to increase quality of life.”. Therapeutic Yoga is defined as the application of Yoga postures and practice to the treatment of health conditions and involves instruction in yogic practices and teachings to prevent, reduce or alleviate structural, physiological, emotional and spiritual pain, suffering or limitations (Woodyard, .2007).

According to Napoli, (2005), the key features of mindfulness include a focus on the breath, paying attention to the events occurring within one’s mind and body, and bearing witness to one’s own experience. Shapiro, et al. (2006) proposes that development occurs when individuals are able to broaden their perspective and see beyond their own frame of

reference. In essence, the literature reviewed suggests that mindfulness training teaches individuals a different way of being. (Shapiro, S. et al. 2006)

Malboeuf, et al (2013) observed the attitude changes, happened by the Mindfulness meditation training. The broad attitude by the practice of yoga and mindfulness makes the person stronger and he can strengthen his capacity to cop any situation. The effects of a school-based mindfulness-based stress reduction (MBSR) program for young urban males were evaluated for psychological functioning and MBSR participants showed less anxiety, improved coping, and a possible attenuation of cortisol response to academic stress (Sibinga, et al. 2013). Mindfulness-based meditation intervention on quality of life, sleep, and mood in adolescents with cancer showed improvement compared to a control group (Malboeuf, et al 2013).

As per the Pavlov's concepts, in this competition-world, the people unknowingly making their life as a competition by the classical conditioning phenomena and getting suffered by stress, anxiety, anger and lack of happiness (Pavlov. I.1927). Even the traditional sports psychology interventions emphasize controlling or reducing distress, mindfulness-based interventions teach tolerance and acceptance of negative thoughts, feelings, and emotions. Goodman et al. 2014 reported that following the mindfulness interventions, participants reported greater mindfulness, greater goal-directed energy, and less perceived stress than before the intervention.

The Maslow's pyramid shows the motivation of human life is focused on self-actualisation. Yoga is focussing to strengthening the goal of self actualisation of a person. Maslow (1943) extended the idea of self actualization to include his observations of humans' innate curiosity of life. Maslow's hierarchy of needs where the lower order needs (physiological and safety needs) most of the people passes through this lower order stage in which they struggle with their basic survival needs. At the end level of the Maslow's

hierarchy found the fact of self-esteem and self-actualization needs (Jerome, 2013). Yoga disregards such motivational philosophies to attain self actualization. Yoga says that anybody can achieve self-actualisation directly without of safety, love and self-esteem needs.

Mindfulness is one of the measures for developing social skills for these people. In a study to explore test anxiety in adolescent students, a comparative study revealed that adolescents with high test anxiety scored significantly higher in negative forms of self-criticism, social anxiety and lower in self-reassurance, acceptance and mindfulness, compared to those with low test anxiety (Cunha,et al. 2012).

Physical health is deeply related to psychological health. This connection leads to many psychosocial and physiological issues. Inducing distress and measuring state rumination showed that a brief period of mindfulness was found to be helpful in getting youth out of their ruminative state (Hilt,et al. 2012). In a study to assess potential effect of a mindfulness-based stress reduction (MBSR) program for human immune deficiency virus (HIV)-infected and at-risk urban youth, MBSR was shown to have a positive effect on hostility, interpersonal relationships, school achievement, and physical health (Sibinga et al., 2011). The lack of awareness is one of the main factors in the failure of life. The essence of yoga is the development of awareness and self-control. A yoga practice ultimately teaches, through control of the body, that we have control of the mind. “As we improve our abilities of controlling the senses from wandering during practice, the subtle quality of concentration deepens (Bethany, 2007).

Yoga practises are different from normal exercises. Yoga is giving importance not only for the body but also the psychological wellbeing of a person. Yoga is focussing the joining or balancing of the mind & body integrated psychophysical system. The most of the

exercises are focussing the muscles or fitness of the body only. Yoga is more effective than normal walking exercise and many other practises for physical and mental health improvement. The 12-week yoga intervention was associated with greater improvements in mood and anxiety than a metabolically matched walking exercise. This is the first study to demonstrate that increased thalamic GABA levels are associated improved mood and decreased anxiety (Streeter, C.C. et al.2010).

The application of pranayamama and mindfulness on breathing is very relevant in modern conditions of fast life. Various ancient and modern systems of breathing skills have evolved over the years. These can be complemented with techniques such as visualization, positive self-talk, centring and concentration. Finally, given the abundant evidence for their value and power in various forms and contexts, breathing skills may be regarded as the original method of survival, energy control, illness prevention, health promotion and improving quality of living (Edwards, S.D. 2005).

Meditation is an interactive process among mind, body and behaviour, in which emotional, mental, social, spiritual and behavioural factors can directly be affected. Guided mindfulness meditation is a powerful technique for facilitating healing and growth toward autonomy by helping adolescents connect to their inner voice. This technique may be especially useful in the adolescent search for self-awareness, meaning, and life purpose. The main goal of mindfulness meditation is the development of an observant self that learns about one's actions, thoughts, and feelings from a nonjudgmental perspective. It consist four stages: (1) physical relaxation, (2) independent mindfulness meditation, (3) guided meditation calling on inner voice, and (4) connecting with inner voice. Mindfulness meditation has proven effective in reducing psychological stress, negativity, anger and aggression; it is a tool for

awakening and developing one's conscious and thereby modifying one's thoughts (Gupta,R.K, et al.2015).

The yamas and niyamas are the ethical laws of yoga, which are specially designed for mental restructuring . The five yamas, self-regulating behaviors involving our interactions with other people and the world at large, include,1.Ahimsa: nonviolence,2.Satya: truthfulness,3.Asteya: non-stealing,4.Brahmacharya: non- excess (often interpreted as celibacy),5.Aparigraha: non-possessiveness, non-greed. The five niyamas, personal practices that relate to our inner world, include, 1. Saucha: purity, 2. Santosha: contentment, 3. Tapas: self-discipline, training your senses,4. Svadhyaya: self-study, inner exploration,5.Ishvara Pranidhana: surrender to higher self . *Yama* refers to ethics regarding the outside world, and therefore is particularly important in social contexts. It comprises non-violence (Sanskrit: *ahimsa*), truthfulness non-stealing, moderation of senses, and greedless. *Niyama* refers to ethics regarding the inner world. It comprises purification or cleanliness and contentment, austerity (Sanskrit: *tapas*), self-reflection and surrender or devotion to something greater than oneself. As such, the ethics suggested in yoga are devoid of religious connection—they are not based on moral value judgments of right and wrong—but are rather seen as actions that help to quiet an overactive mind, regulate emotions, and enhance prosaically and skilful behaviours (Cope, 2006).

Through the systematic practice of the Yama niyama through the association (sadsanga) with trainer can bring positive changes in the negative archetype in the subconscious mind of a person. Carl Jung often connects his ideas about the archetype to animal behaviour, as in the following: “Of course this term [archetype] is not meant to denote an inherited idea, but rather an inherited mode of psychic functioning, corresponding to the inborn way in which the chick emerges from the egg, the bird builds its nest, a certain kind of

wasp stings the motor ganglion of the caterpillar, and eels find their way to the Bermudas. In other words, it is a 'pattern of behaviour.' This aspect of the archetype, the purely biological one, is the proper concern of scientific psychology (Saunders, P. & Skar, P. 2001).

One study (Uthaman, & Uthaman 2017) shows, better performance with practice of yoga and meditation in tangibly enhancing cognitive performance pertaining to higher level cognitive skills of: sustained and divided attention and concentration, short term memory, visual information processing and working memory, and complex cognitive speed and flexibility over that of non practicing students

The postures (Asanas) of yoga can keep the person in present moment and keep away from the world of uncontrollable thoughts and feelings. This system of asana and breathing style can be support the person to be “here and now”. This can support to develop a mindfulness stage. The physical practice of yoga seeks to connect each asana to the next in a sequence, which synchronizes the breath with movement. In doing so, one is thought to draw inward and provide an opportunity to quiet and still the modifications of the mind. The postures practiced during yoga are thought to strengthen, stretch and align the physical body, while the mental discipline of yoga requires attention to detail that helps develop and sharpen observation skills. Yoga practitioners are encouraged to employ mindfulness techniques to seek a state of active and open attention to the present. Being mindful enables the individual to practice observing thoughts in the present moment from a distance and without judgment (Grossman, N. 2019).

Lulu & Haii, 2016 reported that 25 min of hatha yoga and mindfulness meditation significantly improved task performance. Though hatha yoga presented a greater overall effect, improvements via hatha yoga and mindfulness meditation did not significantly differ from each other. Furthermore, total mood immediately improved following both hatha yoga

and mindfulness meditation. Hatha yoga exhibited a marginal advantage for improving mood compared to mindfulness meditation. The mindfulness can give more psychological changes than yoga practice, but the excess practise of the mindfulness may not be good for total psychophysical wellbeing. For the balance of the psychophysical system we can combine with yoga and mindfulness (Lulu, K.& Haii, P.A. 2016).

Combined the yoga with mindfulness can connect with the findings of Sigmund Freud's psychoanalysis. Catharsis, meaning purgation in which emotions are brought to the surface and discharged and the humanistic idea that people have an inborn tendency toward self-actualization – to strive to become all that they are capable of being, are covered in the practice of meditation and yoga under qualified guidance. Those things that we have thought deeply, have transformed themselves into a subconscious current, and therefore they come up in the mind in meditation (Satsangi, A.K. 2002). Freud observed deeply about the life force of a person which called psyche. The root of the pleasure point of a person is called as 'libido'. In Indian Tantric yoga tradition, this basic force known as 'kamakala' in 'Srividya Tantric-yoga path' in Indian culture which has mentioned in the old tantric texts like 'Kamakalavilasam'.

The modern psychotherapists are eagerly studying mindfulness methods and doing research on that for finding new solutions of the psychological impairments of mankind. very fact that an increasing number of studies on mindfulness and its clinical applications are being funded and published and that an increasing number of doctoral theses on mindfulness are appearing in Dissertation Abstracts suggests this area is currently sparking considerable interest, perhaps driven primarily by the intuition that new dimensions of therapeutic benefit and novel insights into mind/body interactions might accrue through its exploration. Because interest in mindfulness and its applications to specific affective conditions is likely to

increase even further, particularly within the cognitive therapy community with the development of mindfulness-based cognitive therapy (Kabat-Zinn, 2003).

According to a survey last year by Yoga Journal, now more than 15 million U.S. adults practice yoga, and not surprisingly, there is research supporting its physical benefits. Studies show the practice—which combines stretching and other exercises with deep breathing and meditation—can improve overall physical fitness, strength, flexibility and lung capacity, while reducing heart rate, blood pressure and back pain. Psychologists can use psychotherapy sessions to practice yoga's mind-body awareness and breathing techniques. Simple strategies—such as encouraging clients to get as comfortable as possible during their sessions or to pay attention to how their body feels when they inhale and exhale—teach clients to be in the here and now (Novotney, A.2009).

As per yogic view growth of deep awareness gives more freedom from bondages of reaction (Karma). The first core component of mindfulness is intention. Intention is simply knowing why we are doing what we are doing. When we have identified our intentions and are able to connect with them, our intentions help motivate us, reminding us of what is truly important. Discerning our intentions involves inquiring into our deepest hopes, desires, and aspirations. Explicitly reflecting on our intentions helps us bring unconscious values to awareness and decide whether they are really the values we want to pursue. Intention, in the context of mindfulness, is not the same as (and does not include) striving or grasping for certain outcomes or goals. Mindfulness is often referred to as a consciousness discipline. It is a way of training the mind, heart, and body to be fully present with life. Although often associated with meditation, mindfulness is much more than a meditation technique. Mindfulness is fundamentally a way of being; it is a way of inhabiting our bodies, our minds, and our moment-by-moment experience with openness and receptivity. It is a deep

awareness—a knowing and experiencing of life as it arises and passes away in each moment. This leads to the development of awareness and ultimate freedom (Shapiro, S.L. et al.2016).

Current conceptualizations of mindfulness in clinical psychology point to two primary, essential elements of mindfulness: awareness of one's moment-to-moment experience nonjudgmental and with acceptance (Ling Kenget al. 2011). Self-regulation of attention refers to non-elaborative observation and awareness of sensations, thoughts, or feelings from moment to moment. It requires both the ability to anchor one's attention on what is occurring, and the ability to intentionally switch attention from one aspect of the experience to another. Orientation to experience concerns the kind of attitude that one holds towards one's experience, specifically an attitude of curiosity, openness, and acceptance. It is worth noting that “acceptance” in the context of mindfulness should not be equated with passivity or resignation. Rather, acceptance in this context refers to the ability to experience events fully, without resorting to either extreme of excessive preoccupation with, or suppression of, the experience.

Hussain and Bhushan (2010) opine Meditation is not only a scientific method or technique, but also an art. Some people are predisposed towards it while others are not. Some can delve deep into the meditation and acquire all benefits while others may come out more disturbed. Such individual differences should also be considered while making any conclusion regarding the benefits of meditation. It appears that meditation may have therapeutic value, but limited to those who are psychologically healthy, well integrated and may have mild neurosis or psychosomatic disorders. These issues need serious attention from researchers in future to get firm conclusion regarding the efficacy of meditation as an adjunct to mind-body therapy.

SIGNIFICANCE OF THE STUDY

Women or mothers are the back bone of a healthy society. The stress or load on women is an issue of deep concern, in all walks of life, either working women or not. Home making, parenting issues, marital stress, and also insecurity and threat from atrocities, frequent rape and violence make the modern woman more stressed than ever.

The stress affects various aspects of human lives, and also stress negatively affects life satisfaction and happiness. For women, the demand of relationship and lifestyle becomes too big, because some women work overtime just trying to cope. Stress also cause a number of feelings such as rejection, depression, which in turn can lead to health problems such as headaches, upset stomach, insomnia, ulcers, high blood pressure, heart-disease, stroke etc...

Yoga can be very effective in helping to sort out confused and discordant feelings in women. Today, Yoga is no longer confined to remote ashrams in the Himalayas. Since mental and physical strength is necessary for the women to deal with the demands of the difficult world, yoga is a practice that may bring great personal benefit, in the form of better awareness, understanding, energy, health and general well-being. Yoga is that state where the mind is calm, quiet, serene, and the nervous system is relaxed and our actions become clear and concise. Through Yoga, the body and mental wellbeing can be energized. It makes life natural and peaceful, free from nervous exhaustion and worry, because it enables women to keep one's vital force of life ever renewed and reinforced. Yoga helps to find meaning in suffering and is not only a technique of escaping from disturbed health states.

It is widely reported that Yoga helps in dealing with the challenges of life, positively. Every day, each woman goes through stress a number of times - mild or severe. Negative attitudes, negative reactions and negative responses bombard women every day, but they need to insulate themselves against these negatives and diligently seek the positive,

through the practice of Yoga. So, women need to equip themselves to manage stress. Knowledge in this regard can help women, to reduce stress through Yoga and promote a culture of health and harmony among them.

This study assesses the efficacy of Yoga and Mind fullness on Happiness, Type A& B personality and Anger level among women, which may help in removing Anger and can give a positive personality along with the great Happiness of life. Through this study can systematically assess the effect of alternative treatment methods like yoga and mindfulness, especially what changes can create in the personality of women.

CHAPTER 3

METHODOLOGY

METHODOLOGY

Research comprises defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis. It is an original contribution to the existing stock of knowledge making for its advancement. It is the pursuit of truth with the help of study, observation, comparison and experiment.

Problem:

A proper definition of research problem will enable the researcher to be on the track whereas an ill-defined problem may create hurdles. The current study seeks to study efficacy of combined yoga and mindfulness practice on Happiness, Type A/B personality and Anger level among women.

Objectives

The present study is aimed at pre post psychological differences in the yoga and mindfulness. The specific objectives are

1. To assess the effects of combined yoga and mindfulness practice on level of Happiness among women
2. To assess the effects of combined yoga and mindfulness practice on Type A/ Type B Personality dimensions among women
3. To assess the effects of combined yoga and mindfulness practice on levels of Anger dimensions among women

Research Design:

The research design is a comprehensive master plan of the research study to be undertaken, giving a general statement of the methods to be used. The function of a research design is to ensure that requisite data in accordance with the problem at hand is collected accurately and economically. A series of pre-tests had given to the group. Subsequently, treatment and series of post tests had given to the same samples. Levels of happiness, Type A/Type B Personality dimensions and Anger are measured before and after interventions of 8 weeks intensive program of combined yoga and mindfulness practice, supervised by a certified yoga practitioner.

Sample:

The study uses purposive sampling method. The study is conducted on a sample population of 30 respondents of women, aged between 10 years and 80 years. All of them undergone a regular yoga and mindfulness training organized by a governmental body, under an experienced trainer. They came from different socioeconomic strata, in and around Cochin, Kerala. Informed consent has (oral/written) collected from the participants before inducting them as participants.

Exclusion Criteria:

1. The subjects below 10 years and above 80 years were not included
2. Subjects with major health risks like cancer, diabetes were excluded
3. Subjects with physically or psychologically challenged persons were excluded.

Hypotheses

In order to fulfil the above-mentioned objectives and to deal with the research problem, hypotheses were framed for this research study.

1. H1: Combined yoga and mindfulness practice will have significant impact on Happiness level of women
2. H2: Combined yoga and mindfulness practice will have significant impact on Type A& B personality of women
3. H3: Combined yoga and mindfulness practice will have significant impact on Anger level of women.

Tests/Tools

Personal data schedule

The personal data schedule was prepared by the investigator, which describes the socio demographic details of the subjects such as Name, Age, Sex, Place of residence, etc.

Oxford Happiness Questionnaire

Oxford Happiness Questionnaire is a well developed happiness questionnaire for testing happiness level. The scientific study of happiness requires accurate measurement of the construct that satisfies assumptions of parametric statistics and thus allows both researchers and clinicians to make reliable and valid comparisons with the relevant data sources. The 29-item Oxford Happiness Questionnaire (OHQ) is a widely-used scale for

assessment of personal happiness. While its psychometric properties are acknowledged to be acceptable, it presents scores on an ordinal scale and may thus not discriminate precisely between individual happiness levels. The current study aimed to improve precision and item functioning of the OHQ by applying Rasch analysis to a sample of 281 participants.

The Oxford Happiness Inventory and Fordyce Happiness Inventory were completed by a sample of 727 Iranian university students. Findings confirmed the internal reliability, construct, and concurrent validity of the Oxford Happiness Inventory

Factor analysis revealed that the inventory consisted of six factors. Eigenvalues for the six factors ranged from .94 to 9.17. These six factors explained 33.93% of the variance. They were: Life Satisfaction, Joy, Self-esteem, Calm, Control, and Efficacy. Concurrent validity was established based on the correlation ($r = .73$) between scores of the Oxford Happiness Inventory and those of the Fordyce Happiness Inventory in sample of students ($n = 727$). No significant sex difference was found.

Internal reliability using Cronbach's alpha in sample of students ($n = 727$) was .92. Then, a sample of 50 students out of the 727 was randomly selected to examine test-retest reliability 6 weeks later, obtaining a reliability coefficient of .73. As items were deleted, alpha, the scale mean, a scale variance, and item-total correlation were calculated.

Type A and Typ B Personality Questionnaire

Friedman and Rosenman (1976) labeled this behavior Type A personality. They subsequently conducted research to show that people with type A personality run a higher risk of heart disease and high blood pressure than type Bs. Although originally called 'Type A personality' by Friedman and Rosenman it has now been conceptualized as a set of behavioral responses collectively known as Type A Behavior Pattern.

It is a standardized scale with high reliability and validity, of which the translated version in to the vernacular language was used for the present study.

The Anger questionnaire: Extra punitive (Typ1) & Intra punitive (Typ 2)

The anger scale was developed by Safarulla (2013), in which there are 24 items in which 12 items each to measure intropunitive and extra punitive anger. The total scale has been used in this scale to get an aggregate of levels of anger. This scale was designed to administer among adult population above the age of 18 years. The extra punitive questionnaire is aimed at the assessing subjective anger level the condition in which who are easily provoked by external or internal anger stimuli. They represent in a way of harming or threatening others. Items related to Intrapunitive Anger dimensions measures the anger behaviours directed toward the self, like self harming, grinding teeth, that will to internalize the impact of stress that lead to arousal of sympathetic activation of Autonomic nervous system, leading to excessive stress on the person

The validity of the each items were checked by 11 selected experienced psychologists. The items those were agreed by all the 11 psychologists.

The reliability co efficient cronbach's Alfa 0.88 for extra punitive and 0.84 for intropunitive scale respectively indicate adequate reliability for the samples of the present study. (Safarulla, 2013).

Procedure

Yoga and Mindfulness

Yoga and Mindfulness meditation training provide to the sample group, with daily 1 hr basis for 8 weeks. This training includes Guided meditations, breathing exercise (pranayama and vipassana),teaching 8 limbs of Ashtanga yoga including postures of yoga (Asanas), and

observing 5 senses for stop over thinking process of the mind and rise mindfulness or awareness of the participants. Guided meditation and motivational and awareness based trainings also given. Relevant questionnaires were given to assess before and after changes.

Statistical analysis

The role of statistics in research is to function as a tool in designing research, analysing its data and drawing conclusions there from. Large volume of raw data must be suitably reduced so that the same can be read easily and can be used for further analysis. There are two major areas of statistics such as descriptive statistics and inferential statistics. Descriptive statistics concern the development of certain indices from the raw data, whereas inferential statistics concern with the process of generalisation. Inferential statistics are also known as sampling statistics and are mainly concerned with estimation of population parameters, and testing of statistical hypotheses.

The current study uses measures of central tendency, ie, Mean, Standard Deviation (SD) correlation statistics are used to find out, if there is any significant difference between before and after of yoga and mindfulness training, T- test is used for the analysis of data.

CHAPTER 4

RESULTS

RESULTS

This chapter will present descriptive and statistical data directly related to this study. The first section will summarize the results of the descriptive statistics. Table 1 demonstrates the values of happiness in before and after conditions

Table 1. Levels of happiness in the before and after conditions of Combined Yoga and Mindfulness Practices

	Before		After		Mean Difference	t
	Mean	SD	Mean	SD		
Happiness	03.68	0.63	4.75	0.45	1.07	6.101**

** (P= <0.05)

The mean (M) scores of happiness before undergoing the behavioural package was 03.68, with the standard deviations (SD) of 0.63. After the interventions, the mean score was raised to 4.75 (SD= 0.45) with the mean difference (MD) of 1.07. The t value (6.101) shows statistically significant at both 0.01 and 0.05 levels. Therefore it is interpreted that, there is

improvement in levels of happiness compared to the before condition and the difference is statistically significant. Figure 1 shows the diagrammatic representation.

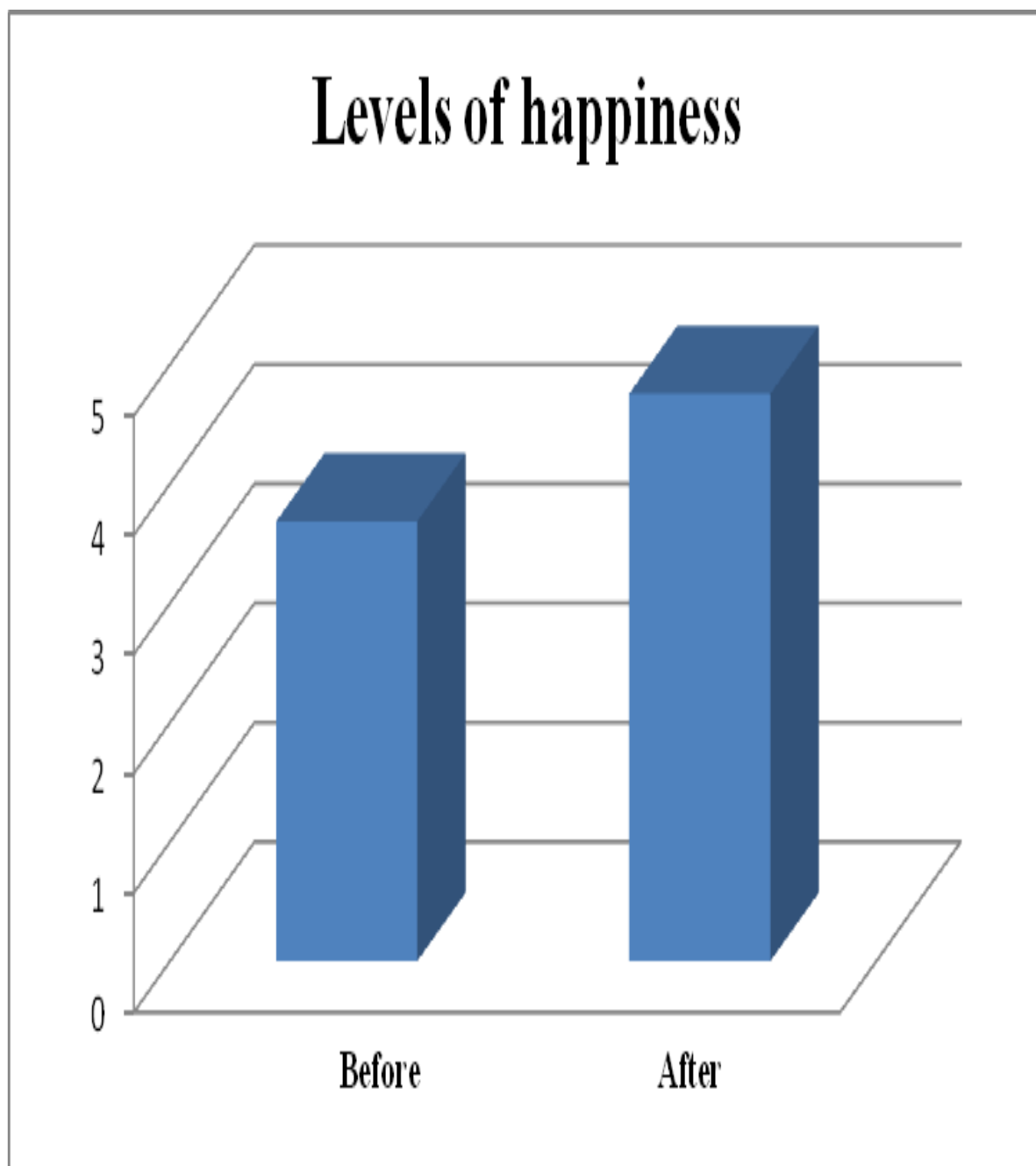


Figure 1. Levels of Happiness before and after Combined Yoga and Mindfulness Practices among women

Table 2. Type A/ B Personality levels before and after Combined Yoga and Mindfulness Practices among women

	Before		After		Mean Difference	t
	Mean	SD	Mean	SD		
Type A/ B	79.53	17.24	74.56	15.09	4.97	0.247

NS ($P = >0.05$)

The mean (M) scores of Type A/B Personality before undergoing the behavioral package was 79.53, with the standard deviations (SD) of 17.24. After the interventions, the mean score was raised to 74.56 (SD= 15.09) with the mean difference (MD) of 4.97. But the t value (0.247) for the test does not show statistical significance at 0.01 or 0.05 levels. Therefore it is interpreted that, even though there is improvement in levels of Personality Type A/B compared to the before condition, the difference is not statistically significant. Figure 2 shows the diagrammatic representation.

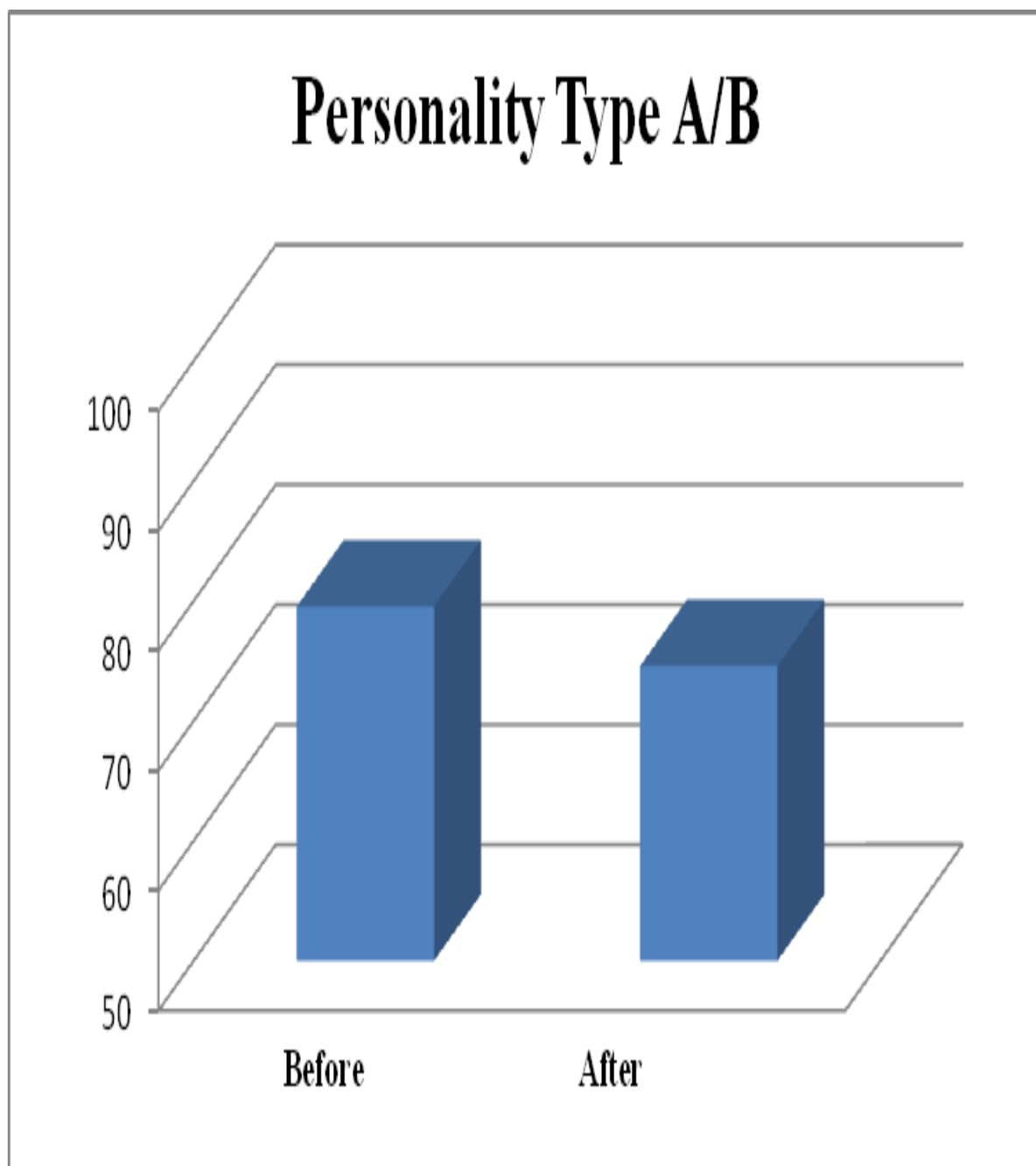


Figure 2. Type A/ B Personality levels before and after Combined Yoga and Mindfulness Practices among women.

Table 3. Levels of Anger before and after Combined Yoga and Mindfulness Practices among women

	Before		After		Mean Difference	t
	Mean	SD	Mean	SD		
Anger	39.23	9.50	23.33	9.86	15.9	3.518**

** (P= <0.05)

The mean (M) scores of happiness before undergoing the behavioural package was 39.23, with the standard deviations (SD) of 9.50. After the interventions, the mean score was raised to 23.33 (SD= 9.86) with the mean difference (MD) of 15.9. The t value (3.518) of the test shows statistically significant at both 0.01 and 0.05 levels. Therefore it is interpreted that, there is significant changes in level of Anger, compared to the before condition. So the difference is statistically significant. Figure 1 shows the diagrammatic representation.

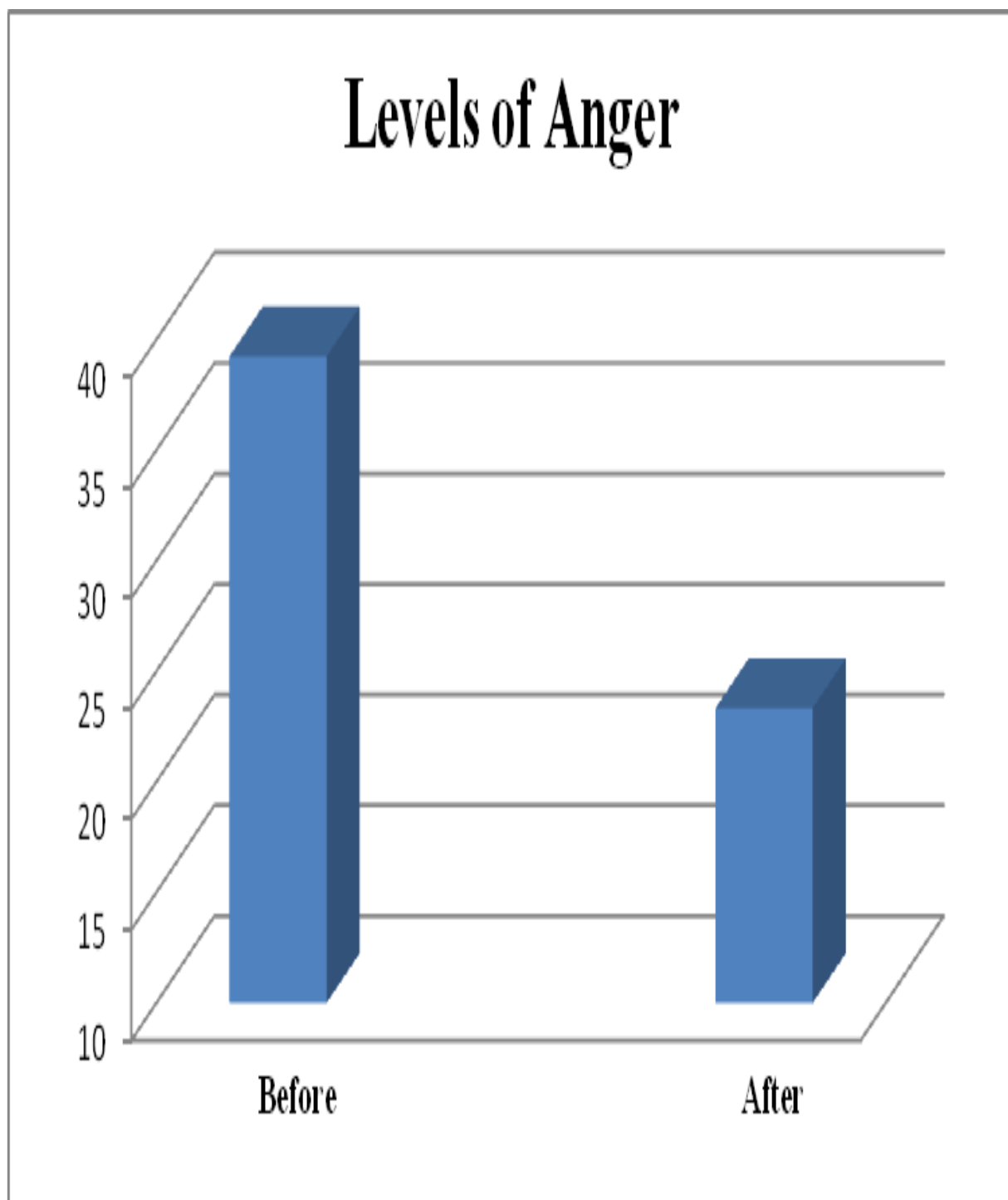


Figure 3. levels of Anger before and after Combined Yoga and Mindfulness Practices among women

CHAPTER 5

DISCUSSION AND LIMATIONS

DISCUSSION

The current study was aimed to examine the effect of combined yoga and mindfulness on happiness, type A&B personality and anger among women.

The finding of the Study shows significant positive changes in happiness and anger level by the use of combined yoga and mindfulness practise. The levels of happiness were significantly improves and the levels of Anger were significantly reduced.

The personality change is not significant which indicates the difficulty of change, but the moderate change shows there have a possibility to happen significant change may get more time to practise. The personality characteristics are said to be lasting traits in a person that is relatively resistant to change. The Type A personality dimension is based on the impulsiveness, impatience and anger of the person, The more on Type A means, the person is more impulsive, and easily provoked. The present intervention could make some improvement in the levels of Type A toward Type B (more calm and relaxed), but the change is statistically not significant. More extended period of practices may have better results.

These techniques may be useful to the psychological issues like depression, anxiety, stress and psychosomatic issues. The age base separate analysis may help to find new multi dimension effects of these combinations in future study. The present interventional package will be helpful in bringing improvements in such conditions and there by enhance overall wellbeing. The study was particularly conducted on women. Women face stress and other security issues in contemporary period. The results of the study can be recommended as a measure of empowerment of women among other programs.

LIMITATIONS

The sample selected cannot be representative. In the purposive sampling we didn't check the religious and cultural influences. No other screening methods were employed to test the attitude or personality types of the participants. Most of the case children are learning deep religious bias within the 8th of the age. In this study we advised to the participants to make positive attitude the necessity of association with positive stimulus as daily. This association have to do purposefully for the part of their development, but we couldn't check the percentage of the influences of external motivation stimulus like videos, books, positive people etc.

We didn't check the sustainability of the significant changes after the intervention whether it is long-lasting or temporary. As per the Pavlov's theory of classical conditioning the retuning of target behaviours may happen easily (Pavlov, I. 1927).

CONCLUSION

The study was aimed to assess the effect of yoga and mindfulness on happiness, Type A/B personality and levels of anger among women. The results found that there is significant improvement in the levels of **Happiness and Anger** after interventional packages. At the same time there was no significant improvement in the Type A/B personality type. The results of the present study can further be recommended to researches and interventions of overall psychological well being. It can also be proposed as an women empowerment program.

REFERENCES

REERENCES

- Allport, G.W. (1961). *Pattern and Growth in Personality*. New York : Holt, Rinehart and Winston.
- Batigun,AD & Sahin.H (2006) : Type-A Personality and Job Satisfaction: Two Scales for Job Stress and Health Psychology Research . *Türk Psikiyatri Dergisi* 17(1). Turkish Journal of Psychiatry. Florida State University Libraries. Retrieved from : <http://turkpsikiyatri.com/C17S1/en/twoScales.pdf>
- Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York, NY: Hoeber. Retrieved from : [https://books.google.co.in/books?hl=en&lr=&id=6rigtdo0u2UC&oi=fnd&pg=PA3&dq=Depression:+Clinical,+experimental,+and+theoretical+aspects.+New+York,+NY:+Hoeber.&ots=T39kNaI08D&sig=RQFJw-8rQeSTyk3Wi_1nYQ0aQY8#v=onepage&q&f=false](https://books.google.co.in/books?hl=en&lr=&id=6rigtdo0u2UC&oi=fnd&pg=PA3&dq=Depression:+Clinical,+experimental,+and+the+oretical+aspects.+New+York,+NY:+Hoeber.&ots=T39kNaI08D&sig=RQFJw-8rQeSTyk3Wi_1nYQ0aQY8#v=onepage&q&f=false)
- Beck, A. T., Rush, A. J., Shaw, B. F. & Emery, G. (1979). *Cognitive therapy of depression*. New York, NY: Guilford Press. Retrieved from: <https://psycnet.apa.org/record/2008-03297-001>
- Beck A. T. (2005). The current state of cognitive therapy: A 40-year retrospective. *Archives of General Psychiatry*, 62, 953-959. Retrieved from : <https://pdfs.semanticscholar.org/5563/3177b4e808ce6640a20fc1c8c7f562dbb79d.pdf>
- Bordoloi,M. (2013): *Effectiveness of Yoga in the Management of Stress among Working Women*. Chapter 2 Page 11. Ritreved from: <https://shodhganga.inflibnet.ac.in/handle/10603/115268>

- Bethany,B.K.(2007). The Impact of Yoga on Psychological Health in Older Adults. Florida State University Libraries. Retrieved from: <https://diginole.lib.fsu.edu/islandora/object/fsu:181833/datastream/PDF/view>
- Caffrey Me (2005): *The Effects of Yoga on Hypertensive Persons in Thailand*. Retrieved from: <https://www.ncbi.nlm.nih.gov/pubmed/16006832>
- Caplan, M., Portillo,A., Seely, L. 2013. Body Awareness: a phenomenological inquiry into the common ground of mind-body therapies.*The Journal of Transpersonal Psychology* , Vol. 45, No. 2 139. Retrieved from : <http://www.atpweb.org/jtparchive/trps-45-13-02-139.pdf>
- Carmody.J & Baer. R (2007). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. Retrieved from : https://www.researchgate.net/publication/5946075_Relationships_between_mindfulness_practice_and_levels_of_mindfulness_medical_and_psychological_symptoms_and_well-being_in_a_mindfulness-based_stress_reduction_program
- Cope S. (2006). *The Wisdom of Yoga*. New York. Bantam. Retrieved from : https://books.google.co.in/books?hl=en&lr=&id=XhB0DwAAQBAJ&oi=fnd&pg=PR13&ots=1KdHRjIWQS&sig=VmpZiGFPm0r2Uh3Bqm2Yu0KF4U8&redir_esc=y#v=onepage&q&f=false
- Crowley Jack,D. EdD 2001:-Understanding women's anger: A description of relational patterns.Page 396. Retrieved from : http://faculty.wvu.edu/~djack/publications/Understanding_Women's_Anger.pdf
- Cunha and Paiva (2012): *The anxiety in adolescence: The role of self criticism and acceptance and mindfulness skills*. Retrieved from: <https://www.researchgate.net/>

publication/229006366_Text_Anxiety_in_Adolescents_The_Role_of_Self-Criticism_and_Acceptance_and_Mindfulness_Skills

Davis, M and Jeffrey A, H. 2011. *Psychotherapy* © American Psychological Association, Vol. 48, No. 2, 198 –208. Retrieve from : <https://www.apa.org/pubs/journals/features/pst-48-2-198.pdf>

Dennen, J. M. G. V. D. (2005). Theories of Aggression: Psychoanalytic theories of aggression. Default journal. Retrieved from : <https://www.rug.nl/research/portal/files/2888993/A-PANAL.pdf>

Dimidjian, S and Segal, V.Z, 2015. Prospects for a Clinical Science of Mindfulness-Based Intervention . *Am Psychol.* 70(7).593–620. Retrieved from : <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5853107/>

Edwards, S.D. (2005). A psychology of breathing methods. *International Journal of Mental Health Promotion*, 7(4), 28-34. Retrived from : https://www.researchgate.net/publication/233573581_A_Psychology_of_Breathing_Methods/link/54abc3cc0cf25c4c472fa60b/download

Gupta,R.K, Shailendra Singh, Swadesh Bhatt, and Shubhangi Gupta(2015). A Review of Mindfulness Meditation and Its Effects on Adolescents' Aggression. *Multidisciplinary Research.* 1(1), 12-17. Retrieved from: https://www.researchgate.net/publication/298324226_A_Review_of_Mindfulness_Meditation_and_Its_Effects_on_Adolescent_s'_Aggression

Goodman ,F, Todd B. Kashdan, Travis T. Mallard, and Mary Schumann (2014): A Brief Mindfulness and Yoga Intervention With an Entire NCAA Division I Athletic Team:

- An Initial Investigation. George Mason University. Retrieved from : https://www.researchgate.net/publication/264858455_A_brief_mindfulness_and_yoga_intervention_with_an_entire_NCAA_Division_I_athletic_team_An_initial_investigation
- Grossman,N. (2019).Expanding the Mind and Body: Educating Social Work Students on Yoga as a Complementary Practice to Traditional Therapeutic Approaches. *Masthead Logo University of Pennsylvania* . School of Social Policy and Practice . Dissertations. 128. Retrieved from:https://repository.upenn.edu/cgi/viewcontent.cgi?article=1127&context=edissertations_sp2
- Hasamukh M Chavda, (2018): Effect of Yoga on Psycho-Physical Stress, Moral Values and Personality.chapter1- P3. Retrieved from : http://shodhganga.inflibnet.ac.in/bitstream/10603/213512/1/01_title.pdf
- Hilt & Pollak, 2012:- Getting Out of Rumination: Comparison of Three Brief Interventions in a Sample of Youth. *J Abnorm Child Psychol*.40(7): 1157–1165. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3432145/>
- Holzel, B. K., Lazar, S.W., Gard, T., Schuman-Olivier Z, Vago, D. R. & Ott, U. (2011). How Does Mindfulness Meditation Work? Proposing Mechanisms of Action From a Conceptual and Neural Perspective. *Perspect Psychol Sci*. 6, 6,537-59. Retrieved from : <https://www.ncbi.nlm.nih.gov/pubmed/26168376>
- Hussain,D. And Bhushan,B.(2010). Psychology of Meditation and Health: Present Status and Future Directions. *International Journal of Psychology and Psychological Therapy*. 10, 3, pp. 439-451 Retrieved from: <https://www.ijpsy.com/volumen10/num3/273/psychology-of-meditation-andhealth-present-EN.pdf>
- Javad .M, Ebrahim Jafari, Mohammad Reza Abedi, and Fatemeh Samiee(2003): Reliability and Validity of the Oxford Happiness Inventory among University Students in Iran

- The Spanish Journal of Psychology* Vol. 11, No. 1, 310-313. Retrieved from: <https://pdfs.semanticscholar.org/8e3d/082ebdf08bf6044a9d9f5dc4dd548aa48b81.pdf>
- Jerath R, Barnes VA, Dillard-Wright D, Jerath S, Hamilton B, 2012 . Dynamic change of awareness during meditation techniques: neural and physiological correlates. *Front Hum Neurosci* . 6: 131. Retrieved from : <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3443747/>
- Jerome, N. 2013: Application of the Maslow's hierarchy of need theory; impacts and implications on organizational culture, human resource and employee's performance. *International Journal of Business and Management Invention*.
Journal of Counselling and Psychotherapy. Page 202. Retrieved from: <https://pdfs.semanticscholar.org/b0bc/c8ca45193eaf700350a8ac2ddfc09a093be8.pdf>
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10(2), 144. doi: 10.1093/clipsy.bpg016
Retrieved from : <https://institutpsychoneuro.com/wp-content/uploads/2015/09/Kabat-Zinn-2003.pdf>
- Khanna S, Greeson JM, 2013. A narrative review of yoga and mindfulness as complementary therapies for addiction. *Complementary Therapies in Medicine*. *Complement Ther Med*. (3): 244–252. Retrieved from : <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3646290/>
- Kinser PA, Bourguignon C, Whaley D, Hauenstein E, Taylor. AG, 2013 . Feasibility, acceptability, and effects of gentle Hatha yoga for women with major depression: Findings from a randomized controlled mixed-methods study. *Arch Psychiatr Nurs*. Volume 27, Issue 3, Pages 137–147. Retrieved from : <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3664951/>

- Lazar, W.S, Catherine E. Kerr, Rachel, H. Wasserman, Jeremy, R. Gray, Douglas, N. Greve, Michael, T. Treadway, Metta McGarvey, Quinn, B. T., Jeffery, A. Dusek, Benson, H., Rauch, S. L., Christopher, I. Moore, & Fischl, B. (2005). Meditation experience is associated with increased cortical thickness. *Neuroreport*. 16,17,1893–1897. Retrieved from : <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1361002/>
- Ling Keng, S. Smoski,M.J and Robins, C.J. (2011). Effects of Mindfulness on Psychological Health: A Review of Empirical Studies. *Clin Psychol Rev*. 31(6): 1041–1056. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3679190/>
- Lord Krishna :(Bhagavad-Gita, 2/48)
- Lu.S, (2015) . Mindfulness holds promise for treating depression. *Monitor Staff* . Vol 46, No. 3, page 50 . Retrieved from : <https://www.apa.org/monitor/2015/03/cover-mindfulness>
- Lulu,K.& Haii,P.A (2016). Examining the Acute Effects of Hatha Yoga and Mindfulness Meditation on Executive Function and Mood. *Springer Science+Business Media New York* . Mindfulness 8.873-880.Retrieved from : https://www.researchgate.net/publication/311963232_Examining_the_Acute_Effects_of_Hatha_Yoga_and_Mindfulness_Meditation_on_Executive_Function_and_Mood
- Mehling WE, Wrubel J, Daubenmier JJ, Price CJ, Kerr CE, Silow T, Gopisetty V, Stewart AL. 2011.Body Awareness: a phenomenological inquiry into the common ground of mind-body therapies.

- Napoli, Krech, & Holley (2005): *Mindfulness Training for Elementary School Students: The Attention Academy*. *Journal of Applied School Psychology* 21(1):99-125 · July 2005
https://www.researchgate.net/publication/254357020_Mindfulness_Training_for_Elementary_School_Students_The_Attention_Academy
- Neff, K. D., & Germer, C. (2012). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology*, 00, 1-17.
 Retrieved from : https://chrisgermer.com/wp-content/uploads/2017/02/Outcome_Study_Germer-Neff-MS-CRCT-2013.pdf
- Nicholas T, Van Dam, Marieke K. van Vugt, David R. Vago, Laura Schmalzl, Clifford D. Saron, Andrew Olendzki, Ted Meissner, Sara W. Lazar, Catherine E. Kerr, Jolie Gorchov, Kieran C.R. Fox, Brent A. Field, Willoughby B. Britton, Julie A. Brefczynski-Lewis, and David E. Meyer, 2018. *Perspect Psychol Sci*. 13(1): 36–61.
 Retrieved from : <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5758421/>
- Novotney, A.(2009).Yoga as a practice tool. *American psychological association*. Vol 40, No. 10 page 38 . Retrieved from: <https://www.apa.org/monitor/2009/11/yoga>
- Shapiro,S.L, Jazaieri, H, and Sousa,S.D.(2016). Meditation and Positive Psychology. The Oxford Handbook of Positive Psychology, 3rd Edition. *Social Psychology Online Publication Date: Jun 2016 DOI: 10.1093/oxfordhb/9780199396511.013.50*. Retrive from: file:///C:/Users/USER/Downloads/ShapiroJazaieriDeSousa.pdf
- Papini, M. R., & Bitterman, M. E. (1990). The role of contingency in classical conditioning. *Psychological Review*, 97(3), 396–403. Retrieved from : <https://doi.org/10.1037/0033-295X.97.3.396>
- Pathanjali. Chapter 81 ,Page365

Pavlov, I. (1927). Conditioned reflexes: an investigation of the physiological activity of the cerebral cortex: *Classics in the History of Psychology*. Retrieved from : <http://psychclassics.yorku.ca/Pavlov/lecture1.htm>

Pradhan, P. (2014). Department of Psychiatry Cooper University Hospital, and Cooper Medical School of Rowan University Camden USA.

https://link.springer.com/chapter/10.1007/978-3-319-09105-1_7

Ramel, W., Goldin, P. R., Carmona, P. E., & McQuaid, J. R. (2004). The effects of mindfulness meditation on cognitive processes and affect in patients with past depression. *Cognitive Therapy and Research*, 28, 433-455. Retrieved from : <https://link.springer.com/article/10.1023/B:COTR.0000045557.15923.96>

Rhodes, A. (2014). Yoga for Traumatic Stress: A Three Paper Dissertation, Viii, 185. Boston College University Libraries. Retrieved from : <https://dlib.bc.edu/islandora/object/bc-ir:104088/datastream/PDF/view>

Rubia, K. (2009). The neurobiology of meditation and its clinical effectiveness in psychiatric disorders. *Biological Psychology*, 82, 1-11. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.4132&rep=rep1&type=pdf>

Safarulla, N.V.M. (2013). Efficacy of stress management as an adjunct therapy in the treatment of periodontal diseases. Unpublished doctoral thesis, Research and Development Center, Bharathiar University.

Sansone, R. A. & Sansone, L. A. (2010). Gratitude and Well Being, The Benefits of Appreciation. *Psychiatry*, 7, 11, 18-22. Retrieved from : <https://www.ncbi.nlm.nih.gov/pubmed/21191529>

- Satsangi, A.K.(2002). Meditation And Yoga - An Effective Blend of Traditional Psychoanalysis And Person-Centered Therapy : A Hope For Future
Sectional of Psychology And Educational Sciences, *Indian Science Congress*, University of Lucknow, DOI:10.13140/RG.2.1.2515.5603
Retrieved from: https://www.researchgate.net/publication/290439100_Meditation_And_Yoga_-_An_Effective_Blend_of_Traditional_Psychoanalysis_And_Person-Centered_Therapy_A_Hope_For_Future
- Saunders, P.& Skar, P.(2001).Archetypes, Complexes and Self- *Journal of Analytical Psychology* 48 (2001) 305-323
Retrievedfrom : https://www.researchgate.net/publication/227724999_Archetypes_complexes_and_self-organization
- Schneiderman.N, Gail Ironson, and Scott D. Siegel (2005): STRESS AND HEALTH: Psychological, Behavioral, and Biological Determinants . Retrieved from : <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2568977/>
- Seligman, Martin, E. P., Csikszentmihalyi, & Mihaly (2000). Positive Psychology, An introduction. *American Psychologist*. **55**, 1, 5, 14. doi:10.1037/0003- 066X.55.1.5. ISSN .1935-990X. Retrieved from : <https://psycnet.apa.org/record/2000-13324-001>
- Seligman,M and Tracy A, (2005): Positive psychology in progress. Empirical validation of interventions. *American Psychologist*, 60, 410–421.Retrieve from : https://www.researchgate.net/publication/7701091_Positive_Psychology_Progress_Empirical_Validation_of_Interventions
- Shannahoff,D & Khalsa (2004) . An Introduction to Kundalini Yoga Meditation Techniques That Are Specific for the Treatment of Psychiatric Disorders,

The journal of alternative and complementary medicine. 10, 1. Retrieved from : https://www.researchgate.net/publication/8675022_An_Introduction_to_Kundalini_Yoga_Meditation_Techniques_That_Are_Specific_for_the_Treatment_of_Psychiatric_Disorders

Shapiro ,S , Linda E. ,John A. Astin , Benedict Freedman (2006) : Mechanisms of Mindfulness. *Journal of clinical psychology*, Vol. 62(3), 373–386 (2006) Retrieved from : <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.470.3709&rep=rep1&type=pdf>

Shonin, E., Van Gordon, W., & Griffiths, M. D. (2014). The emerging role of Buddhism in clinical psychology: Toward effective integration. *Psychology of Religion and Spirituality*, 6(2), 123–137. Retrieved from : <https://www.apa.org/pubs/journals/features/rel-a0035859.pdf>

Sibinga, Carisa Perry-Parrish , Shang-en Chung , Sara B. Johnson, Michael Smith , Jonathan M. Ellen (2013): School-based mindfulness instruction for urban male youth: A small randomized controlled trial. *Elsevier Inc.* Retrieved from : <http://jhcchr.org/wp-content/uploads/2013/09/Sibinga-E.-Perry-Parrish-C.-Chung-S.-Johnson-S.-Smith-M.-Ellen-J.-2013.-School-based-mindfulness-instruction-for-urban-male-youth-A-small-randomized-controlled-trial..pdf>

Siegfried,W. 2014.The Formation and Structure of the Human Psyche

Florida, Atlantic University ,*Undergraduate Philosophy Journal* Issue No. 2 .Retrieved from : <https://www.fau.edu/athenenocua/pdfs/William%20Siegfried.pdf>

Streeter,C.C ,Whitfield,T. H. , Liz Owen, Tasha Rein, Surya K. Karri, Aleksandra Yakhkind, Ruth Perlmutter, Andrew Prescott, Perry F. Renshaw, Domenic A. Ciraulo, Eric Jensen, (2010)· *Effects of Yoga Versus Walking on Mood, Anxiety, and Brain GABA Levels: A Randomized Controlled MRS Study. J Altern Complement Med.*

Retrieved from : <http://www.indiaenvironmentportal.org.in/files/file/Yoga%20Versus%20Walking%20on%20Mood.pdf>.

Stevenson,B & Justin Wolfers ,(2007): The Paradox of Declining Female Happiness. Page no 193 Para 2nd. *Economic Journal: Economic Policy*, 1:2, 190–225. Retrieved from : <https://eml.berkeley.edu/~cle/laborlunch/stevenson.pdf>

Streeter, C, Whitfield T H., Liz Owen, Rein, T, , Yakhkind, A, Perlmutter, R, & Jensen ,J, (2010): Effects of Yoga Versus Walking on Mood, Anxiety, and Brain GABA Levels: A Randomized Controlled MRS Study. *J Altern Complement Med*. Retrieved from : <http://www.indiaenvironmentportal.org.in/files/file/Yoga%20Versus%20Walking%20on%20Mood.pdf>.

Telles S, Raghavendra BR, Naveen KV, Manjunath NK, Kumar S, Subramanya P, 2013. . Hanges in autonomic variables following two meditative states described in yoga texts. *J Altern Complement Med*. 19(1): 35–42. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546358/>

Thomas,S.(2005) : Women’s Anger, Aggression, and Violence.*University of Tennessee*, Knoxville, Tennessee, USA. Retrieved from : https://www.researchgate.net/publication/7724798_Women's_Anger_Aggression_and_Violence

Tomar,R(2015) : Effect of comprehensive yogic practices programmes on selected psychological characteristics of college students- Chapter 1Page 7.Retrieved; <http://14.139.13.47:8080/jspui/handle/10603/219544>

Tory A. Eisenlohr,M., Jessica R. P.(2017).Both trait and state mindfulness predict lower aggressiveness via anger rumination. Retrieved from: <https://link.springer.com/article/10.1007/s12671-016-0508-x>

Türk Psikiyatri Dergisi (2006). Type-A Personality and Job Satisfaction: Two Scales for Job Stress and Health Psychology Research. *Turkish Journal of Psychiatry* 17(1).

Retrieved from : [https://www.researchgate.net/publication/227854885_Type A_Personality_and_Job_Satisfaction_Two_Scales_for_Job_Stress_and_Health_Psychology_Research](https://www.researchgate.net/publication/227854885_Type_A_Personality_and_Job_Satisfaction_Two_Scales_for_Job_Stress_and_Health_Psychology_Research)

Uthaman,S &Uthaman,S.(2017).Impact of Yoga and Meditation on Cognitive Functions of Students. *Journal of Social Work Education and Practice* (04/2017) 2(2) 53-57

Retrieved from : <https://www.jswep.in/uploads/3/1/7/2/31729069/020207.pdf>

Woodyard,C. (2007): Exploring the therapeutic effects of Yoga and its ability to increase quality of life. *Int J Yoga*. 4(2): 49–54. Retrieved from ; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3193654/>

Yaden.B, et al (2017) : The Varieties of Self-Transcendent Experience

Thomas Jefferson University. Retrieved from :https://www.researchgate.net/publication/316611489_The_Varieties_of_Self-Transcendent_Experience

Images of Interventions of combined Yoga and Mindfulness



Names	Place	Total Numbers	Age	OxfordQ	Before	After	Type A/B	Before	After	Anger Before	Anger After
Rejimol	Govindamuttom,kayal	1	29	90/123	3.103	4.241		94	79	38	32
M.Leela	Devikulangara	2	66	112/129	3.862	4.448		50	79	38	28
Jayasree .p	Govindamuttam	3	36	65/147	2.241	5.06		75	94	49	10
Suma	Puthuppally	4	58	117/144	4.034	4.965		68	82	40	29
Raji.S	Puthuppally South	5	37	139/150	4.793	5.172		85	76	49	28
Haritha.S	Govindamuttom,kayal	6	21	84/135	2.896	4.655		97	94	35	24
Presannaki	Devikulangara	7	65	127/144	4.379	4.965		75	61	26	26
G.Shylaja	Puthuppally	8	65	117/131	4.034	4.517		50	47	41	41
Mallikamai	Puthuppally	9	64	117/114	4.034	3.931		65	68	36	37
VilaSini K.K	Puthuppally	10	75	87/123	3	4.241		75	79	31	13
Archana Pradap		11	35	109/135	3.759	4.655		87	45	38	25
Noora	Devikulangara	12	45	116/155	4	5.345		73	75	52	13
Bhagya	Kayamkulam	13	33	129/145	4.448	5		93	91	16	21
AmbiliSuni	Kayamkulam	14	40	100/141	3.448	4.862		83	97	32	33
Rema Rajai	Devikulangara	15	44	118/116	4.069	4		66	70	32	25
Jyothi Ajay	Kayamkulam	16	47	122/133	4.207	4.586		113	81	28	22
Biji K Vargh	Puthuppally	17	40	121/147	4.172	5.069		77	93	37	33
PreethaKri	Puthuppally	18	44	116/133	4	4.586		80	64	20	30
Saraswathi	Oachira	19	58	78/139	2.689	4.793		66	92	54	26
Savthrydev	Mavelikkara	20	55	75/105	2.586	3.621		112	54	51	25
Chandraku	Puthuppally	3	63	122/118	4.207	4.069		84	96	48	48
Priya P.M	Mavelikkara	22	33	112/151	3.862	5.207		67	72	32	21
Resmi.s	Mavelikkara	23	35	99/156	3.414	5.379		78	66	44	7
Devayani.S	Mavelikkara	24	15	106/146	3.655	5.034		58	86	36	18
Preethi .P	Mavelikkara	25	31	104/139	3.586	4.793		81	44	43	15
Ashakumai	Mavelikkara	26	38	89/148	3.069	5.103		104	55	48	14
Gayathri.P	Thattarambalam	27	33	100/151	3.448	5.207		103	67	41	9
Arathi Part	Mavelikkara	28	23	128/147	4.414	5.069		66	75	45	10
SeenaBabu	Mavelikkara	29	47	122/149	4.207	5.138		107	74	45	15
Athira	Mavelikkara	30	14	84/143	2.896	4.931		54	81	52	22
			mean		3.683733333	4.754733		79.53333	74.56667	39.23333	23.33333333
			sd		0.631659169	0.451485		17.24091	15.09235	9.507468	9.865765725
			Mean difference		1.07				4.97		15.9
			t test		6.10113E-10				0.247959		3.51866E-08