

IMPACT OF YOGA ON PSYCHOSOMATIC STABILITY: - A SURVEY STUDY

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ABSTRACT

Background: Yoga means not only bending and twisting your body in odd shapes; it has a much broader view. Simply put, Yoga means to care for your body, mind, and breathing. Yoga is derived from the Sanskrit verb 'Yuj' which means to join. Yoga means the union of an individual with supreme reality. Yoga means the harmonization of the body with mind and breath through the means of various yogic postures (asanas), various breathing exercises (pranayama), and meditation. There are enumerable benefits of yoga on the maintenance of mental and physical health; improves flexibility, builds strength, increases muscle tone, improves balance, supports joint health, prevents pain, maintains respiratory health, fosters mental calmness, reduces stress, increases self-confidence etc., provided if yogic practices are done regularly, it is said one who patiently practices yoga in all aspect, attains success irrespective of being young, old, diseased or weak. **Aim:** To study the effect of yoga on mental and physical stability. **Material and Method:** E- questionnaire was prepared and data obtained was used to analyse the result of the study. The parameters used to calculate physical and mental health were the Body Mass Index and PHQ-9 Questionnaire. **Observation and Result:** The present survey shows that people know yoga and accept it as one of the best ways to live a healthy life. **Conclusion:** A positive result will encourage more and more individuals to practice yoga.

KEYWORDS: Yoga, Mental and Physical Stability, E-Questionnaire, BMI and PHQ-7.

INTRODUCTION

Yoga means the restraint of modifications of the Chitta with awareness.^[1] Though the ultimate aim of yoga is spiritual upliftment, its importance for health promotion, disease prevention, and rehabilitation can't be ignored. Major killers nowadays are diseases like cancer, coronary heart disease, diabetes mellitus, obesity, gastrointestinal problems (irritable bowel syndrome, Crohn's disease, chronic constipation, and many more) psychiatric disorders (depression, anxiety, stress), and thyroid disorders (hyperthyroidism and hypothyroidism), etc. Effective treatment of such diseases is prevention rather than cure; no doubt timely and accurate treatment is important but prevention of such diseases is given prime importance to minimize further risk which can be achieved through adaptation of proper lifestyle & yogic practices.

Though global acceptance of yoga is seen; most people in India lack awareness about yoga and its benefits. The current study helps common people assess their health through E-questionnaires and create enthusiasm toward yoga and yogic practices. Modern medicine also has a psychosomatic approach to the problem of health

and disease. Most of the metabolic disorders are psychosomatic in origin. Langly and Brand (1971) discussed the problems of the body-mind relationship and they criticized the concept of body & mind. Many researchers think that body and mind are not two separate entities rather part of the same soul. Psychosomatic disease is one whose main cause is psychological and manifestations are mostly seen in the body. Stress has given prime importance in the causation of disease, after bacteriological and immunological etiology, stress is the widely applicable cause of disease. Frustration and conflict when overriding the adjustment limit leads to stress which brings about unhealthy changes in personality perception, attitude, and behavior pattern. Further changes in bodily level can be brought about by mental stimuli just like bacteria and toxins and such changes disturb functions of the body. Initially, there is a functional disturbance; it gradually leads to tissue changes of organic origin currently seen in the COVID-19 pandemic. Patients who have Avar satva have disturbed emotional health and are more difficult to cure rather than those having Pravara satva i.e. those who are fearless. No doubt co-morbidity plays a vital role. Emotional health can be achieved through the adaptation

of various yogic practices, Asana, and Pranayam along with lifestyle modulation given in ayurvedic literature as Dinacharya, Ritucharya, and Code of Conduct.

Though psychosomatic approach towards disease is a recent development in the modern system of medicine, it has been the basis of Ayurvedic Siddhanta; this can be best illustrated with the definition of health as one whose *Dosha* (fundamentals governing the body), *Agni* (digestive fire), *Dhatu* (body tissue), *Mala* (body waste), are in a state of equilibrium and who has a cheerful mind, intellect and sense organ is termed as Healthy.^[2]

AIM

To study the effect of yoga on the mental and physical stability.

OBJECTIVES

- To review the study of mental and physical health.
- To review psychosomatic disorders through modern and ayurvedic aspects.
- To evaluate the influence of yoga on mental and physical stability.

MATERIAL AND METHOD

- 1) Detailed study of Mental health, physical health, and psychosomatic disorders.
- 2) Study of mental and physical stability with the help of a Questionnaire (PHQ 9) and Body Mass Index (BMI).

What is Physical Health

Physical health is 'The ability to perform daily tasks and live comfortably in one's body. As per the American Heart Association, "Physical activity boosts mental wellness. Regular exercise helps to relieve stress, tension, depression, anxiety, and temper. An instant refreshing feeling arose after physical activity."^[3] People are now inclined towards spiritual growth and neglecting our body's physical health, which is a storehouse for our spirit and is equally important as the spirit. And only because of such negligence out of the 56.9 million deaths worldwide in 2016, more than half (54%) were due to Heart diseases, Cancer, Chronic respiratory diseases, Accidents, and Stroke.^[4]

Good physical health can be achieved through the adaptation of various measures like 1) A healthy diet which includes all types of food fruits, vegetables, vitamins, minerals, etc., in simple words of Ayurveda "Nitya Sarvarasabhyasa" 2) Regular Exercise increases energy levels, improves muscle strength and brain function reducing the risk of many diseases. Director of the Mayo Clinic Dr. James Levine, Arizona State University says, "Sitting is more hazardous than smoking, affects more people than HIV, and is more dangerous than parachuting. We are proceeding ourselves to death."^[5] Researchers also found that long hours of sitting increases the risk of serious diseases like cancer, coronary heart disease, type 2 diabetes, etc. Whatever

stage of life you are currently at; there are plenty of different exercise options to try. Exercise doesn't just mean going to the gym or doing strenuous workouts. It may be as simple as walking to and from the shops instead of getting in the car or getting off the bus a few stops earlier.^[6] 3) Screening - Screening tests can detect disease early. 4) Lack of sleep is one of the largest risk factors for obesity. In a short study on sleep duration, researchers found that adults not getting enough sleep were 55% more likely to be obese and children were more adversely affected; they were 89% likely to be obese. Besides this, Lack of good sleep can lead to tiredness, weak memory, excessive daytime sleepiness, depression and anxiety, so getting enough good quality sleep is crucial for all.

What is mental health?^[7]

Mental stability focuses on a positive state of mind thus resulting in a good performance i.e. "readiness for performance". World Health Organization (WHO) stated mental health is "The state of well-being in which the individual realizes his or her abilities, can deal with the normal stresses of life, can work productively and fruitfully, and can contribute to the community."^[8] Three components of mental health are 1) Emotional well-being includes happiness, interest in life, and satisfaction 2) Psychological well-being includes liking most parts of one's personality, being good at managing the responsibilities of daily life, having good relationships with others, and being satisfied with one's own life 3) Social well-being refers desire to contribute the society as a part of a community.^[9,10] Jahoda subdivided mental health into three domains: The sense of self-realization, the sense of control over the surroundings; and the sense of autonomy, i.e. ability to identify, and solve problems.^[11]

In other words, Mental Stability can be defined as a Dynamic state of internal equilibrium that empowers individuals to use their abilities in coherence with the universal values of society. Basic intellectual and social skills; ability to identify, express, and restrain one's own emotions, and sympathize with others; adjustment to adverse life events and function in social roles; and harmonious association between body and mind represent important components of mental health. "Dynamic state of internal equilibrium" means different life eras require changes in the acquired stability for ex-adolescent crises, marriage, becoming a parent, or retirement are good examples of life stages. Intellectual skills include the ability to pay attention, recollect and organize information, solve problems, and make decisions; social skills involve communicating and interacting with others. Emotional regulation i.e. the ability to recognize, express, and control one's emotions serves as a mediator of stress adjustment. Empathy, i.e., the ability to experience and understand what others feel without confusion enables individuals to communicate and interact in effective ways and to predict the actions, intentions, and feelings of others. The absence of

empathy is not only a risk factor for violence but also a feature of antisocial personality disorder.^[12] Adjustment i.e. flexibility and the ability to cope with adverse events. Flexibility can be understood as the ability to face accidental obstacles and adapt to the changes concerned with different life epochs. The harmonious relationship between body and mind is based on the concept that mind, body, and surroundings are heavily interrelated and can't be separated from each other.^[13]

Psychosomatic Disorders^[14]

Previously psychosomatic disorders were thought to be a separate group of disorders in which stress and psychological disturbance are the leading causes. Examples were peptic ulcers, arthritis, and dermatitis. It is well established that all diseases may have social, psychological, behavioral, and physical aspects too. The World Health Organization defines psychosomatic disease as "the study of biological, psychological, and social variables in health and disease." This can be best explained with the example of heart disease which is caused by many factors including inherent biological factors, age, sex, and genetic enhancement, physiological factors, such as high blood pressure, smoking, alcohol consumption, and increased blood cholesterol level; and psychological and social factors, which include depression, anxiety, and certain forms of stress.

Psychosomatic disorders through Ayurveda point of view^[15]

It is stated in Ayurvedic Literature that a man whose *Atman*, *Manah*, and *Indriyas* are happy or in other words whose mind is healthy and whose *Dosha*, *Dhatu*, *Mala*, and *Agni* are balanced is termed as *Swastha Purush* i. e. Healthy. On the contrary, a disease or a *Vyadhi* is the state that causes pain and anxiety to the body as well as mind. Also, *Sukha* (a feeling of well-being) and *Dukha* (a feeling of ill-being) have been described as the features of health and disease respectively. These terms implicate the psychosomatic approach. The inclusion of *Kama*, *Krodha*, *Dwesha*, *Matsarya*, etc into the category of *Roga* or *Vyadhi* again indicates the significance of a similar approach.

According to Ayurveda *Prakruti* is divided into different manners, the most important one is the *Doshaja Prakriti* viz. *Vata*, *Pitta*, and *Kapha* are essential constituents of the living organism. The natural predominance of these three *doshas* presents the characteristics of individuals. In the Ayurvedic system of medicine, the whole concept of health, disease, prevention, and treatment is based on these three constitutions.

According to *Acharya* physician should have a comprehensive approach to the study of the body and the mind of a patient before he thinks about the management of his illness. The fundamental causes of disease as stated in the *Ayurvedic* system of medicine are *Pradnyaparadh*, *Asatyaendriyarth* *samyoga*, and

parinam. The analysis of the concept of these three causative factors indicates that the basic factor involved is stress. *Asatmyaendriyarth* *Samyoga* is the term to describe all kinds of physical incompatibilities which can be explained in terms of deficient, excessive, or altered use of different *Indriyas*. For instance, an exposure of the eyes to excessive light for a long-time non-utilization of the eyes, or looking towards undesirable objects may lead to *Atiyoga*, *Ayoga*, or *Heenyoga* of *Indriyas*. Similar events with other *indriyas*. are nothing but examples of different kinds of stressful states. The prolonged and increased stressful state may lead to the failure of the adaptive mechanism both in the body as well as in the mind. This leads to the development of the disease. Thus, the disease is not the direct effect of a stress factor but is the result of the bodily failure to adapt to the stressful state. Thus, the minimal degree is a usual affair and may be essential for the development of varied biological adaptation but beyond a limit may cross stress-bearing capacity leading to disease.

Secondly, *Pradnyaparadh* is nothing but an action taken by an individual due to the lack of *buddhi*(intellect), *smruti*(memory), and other mental factors; similar situation as described above. Similarly, *Acharya Charaka* emphasizes stress and anxiety as a cause and aggravator of disease. It is also stated *Vishado*(anxiety) is the most important among the factors aggravating a disease in contrast to *Harsha* (happiness) which is responsible for growth and nourishment. *Charaka* very clearly emphasizes that under circumstances a mental disease may be converted into a bodily illness and vice versa. 3 things can help you obtain stability in your mental health. These include first developing resilience which is the power to rebound after difficult times. Self-reflection is one of the main things you can do to develop resilience. Second, focusing on important things, and last developing a sense of meaning and purpose in your life, may be a little difficult but can be achieved by asking some questions to you e.g. what excites and energizes me? Giving positive instructions to yourself.

Test Methods and Procedure

The entire individuals above the age group of 18 were selected for the study. They were invited to participate online questionnaire circulated among different WhatsApp groups and social media platforms. Following is the link for the project https://docs.google.com/forms/d/e/1FAIpQLSe3oalVWtcZKRPrWzewj_n3qXwbXyhM68RlQN56sAHjTrjNQA/viewform?usp=sf_link

Information given to the entire participant as follows

You are being invited to participate in the survey study titled Psychosomatic Stability in individuals practicing and not practicing Yoga.

The survey is conducted by Dr. Shital Bolkuntwar M.S.(Ayurveda) working as Asso. Prof. in O H Nazar Ayurved college, Surat, Gujrat

The purpose of the study is to see mental and physical stability in individuals undergoing regular yogic practices. Parameters used for this study are BMI and a questionnaire. Your participation in this study is ENTIRELY VOLUNTARY. You can withdraw at any time. The total time required will be hardly 1-2 mins only. Participant identification won't be revealed.

Data obtained will help to analyze the effect of yogic practices on health promotion and disease prevention. The participant with any query can contact Dr. Shital Bolkuntwar. shituu.bolkuntwar07@gmail.com

Sample Size:- 417.

Distribution Binomial

Proportion -0.953 Confidence level-95%

Confidence interval- Two side

Inclusion and Exclusion Criteria

Inclusion criteria- Age 18 years & above

Both sex

Population having HTN, DM, Thyroid and Asthma

Exclusion criteria- Age below 18 years

Handicap, populations having active diseased condition

The parameter used for the study

1. The parameter used for the assessment of mental health is PHQ-9 (Patient Health Questionnaire).
2. The parameter used for assessment of physical health is BMI (Body mass index)

PHQ-9^[16,17]

The Patient Health Questionnaire (PHQ) is a new instrument for making criteria-based diagnoses of depression and other mental disorders commonly encountered in primary care. The PHQ depression scale which we call PHQ-9 is half the length of many other depression measures, has comparable sensitivity specificity, and consists of the actual 9 criteria upon which the diagnosis of depressive disorders is based. The **PHQ-9** is given to patients in a primary care setting to screen for the presence and severity of any mental disorder. The results of the PHQ-9 may be used to make a depression diagnosis according to DSM-IV criteria and take less than 3 minutes to complete. The total of all 9 responses from the PHQ-9 aims to predict the presence and severity of depression.

The PHQ is a self-administered version of the **Primary Care Evaluation of Mental Disorders (PRIME-MD)**, a screening tool that assesses 12 mental and emotional health disorders. The PHQ is a 59-question instrument. It has modules on mood (PHQ-9), anxiety, alcohol, eating,

and somatoform disorders. Dr. Robert J. Spitzer, Dr. Janet B.W. Williams, Dr. Kurt Kroenke, and colleagues from Columbia University developed the PHQ in the mid-1990s and the PHQ-9 in 1999 with a grant from Pfizer. Responses of PHQ-9 range from "0" (Not at all) to "3" (nearly every day). The result was interpretable from the sum of the responses given by the subject (Table 1). The PHQ-9 is available in over 30 languages and it has been validated for use in different ethnicities. Currently, Pfizer owns the copyright of the PHQ-9 but allows it to be accessed for free.

BMI^[18]

BMI is a tool meant to tell an individual if their weight is too much, too little, or just right in simple words BMI helps us to determine our physical health. The BMI is defined as the body mass (weight in kg) divided by the square of the height (in meters) and is universally expressed in units of kg/m². The BMI is a convenient rule of thumb used to broadly categorize a person as underweight, normal weight, overweight, or obese based on tissue mass (muscle, fat, and bone) and height. BMIs under 20 and over 25 have been associated with higher causes of mortality. (Table 2)

OBSERVATION AND THE RESULT

The importance of yogic science is increasing day by day. The present survey shows that people are becoming aware of yoga and accepting it as one of the best ways to live a healthy life. The survey study was carried out with the help of E- Questionnaire circulated among common populations through various WhatsApp groups. The data collected through the survey study was presented in a graphical format. All the observed data was subjected to rigorous statistical analysis and was presented to evaluate mental and physical stability in the individual practicing and not practicing yoga.

417 individuals participated in the study among which 39.4% were male and 60.3% were female. Most participants were from the age group 18- 27 years i.e. 65%. Survey shows that 50.4% of the population is practicing yoga; it means people have started recognizing the importance of yoga which is a good sign for the development of yogic science. The maximum number of participants (32.7%) started practicing yoga very recently, (28.7%) started practicing yoga in the last year, (20.3%) are in this field for more than 5 years, and (9.9%) have been practicing yoga for one to three years. The least number (8.4%) were involved in practicing yoga for three to five years. So, lack of consistency is seen among the people which should be reduced by telling them the importance of regular practice of yoga. Those who were practicing yoga were familiar with different yogic practices i.e. Asana, Panayama, and shuddhikriya. The health status of 72.9% of the people was normal, the rest had issues of asthma, diabetes, hypertension, hypothyroidism, and hyperthyroidism. Some of them have a history of typhoid, malaria, jaundice, and TB.

As the survey started during the pandemic, they were asked about their history of COVID-19 infection. It was seen that only 13.2% of people were infected among them 75.9% population had mild symptoms, and 18.5% had moderate symptoms. The parameter used to calculate physical stability was BMI (body mass index). Out of 417, the participants responded 377 among which 41.38% had a normal BMI between 18.5 – 25 kg/m², 10.61% had a BMI between 25-30 kg/m², they were overweight, 3.71% had BMI between 30-35 kg/m², they were moderately obese, 7.43% were having BMI between 16-18.5 kg/m² they were underweight, each 0.53% were severely underweight and severely obese.

The parameter used for the calculation of mental stability was the PHQ-9 questionnaire. Out of 417, the participants responded 347 among which 55.6% of the population were normal having a score of 0-4, 27.4% had a score of 5-9 i.e. mild symptoms, 11.5% had a score of 10-14 i.e. moderate symptoms of depression need counseling, 3.7% of participants had moderately severe symptoms needs treatment along with counseling, score 15-19, least number i.e. only 1.7% were having a score between 20-27 who were severely depressed needs referral to higher center.

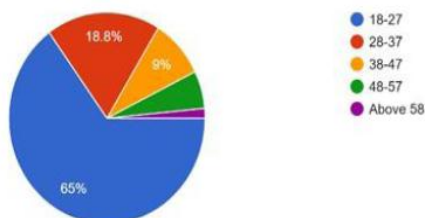
Table 1.

PHQ-9 Score	Depression severity	Suggested Intervention
0-4	None- minimal	None
5-9	Mild	Repeat PHQ-9 at follow-up
10-14	Moderate	Make a treatment plan, consider counseling, follow-up, and/or prescription drugs
15-19	Moderately severe	Prescribe prescription drugs and counseling
20-27	Severe	Prescribe prescription drugs. If there are poor responses to treatment, immediately refer the patient to a mental health specialist for counseling.

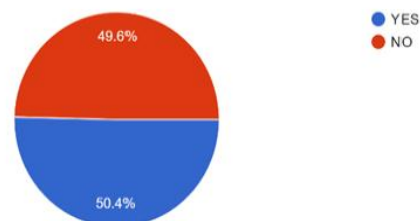
Table 2.

Category	BMI(Kg/m2)	
	From	To
Very severely underweight		15
severely underweight	15	16
Underweight	16	18.5
Normal (Healthy weight)	18.5	25
Overweight	25	30
Obese Class I (Moderately obese)	30	35
Obese Class II (Severely obese)	35	40
Obese Class III Very Severely obese)	40	

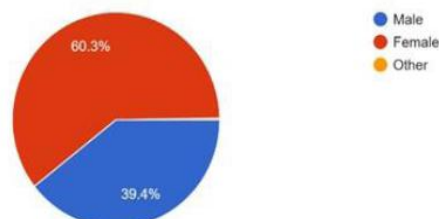
Age wise Distribution



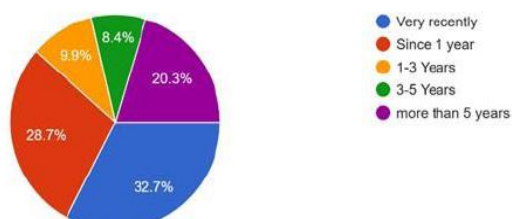
Participants practicing Yoga



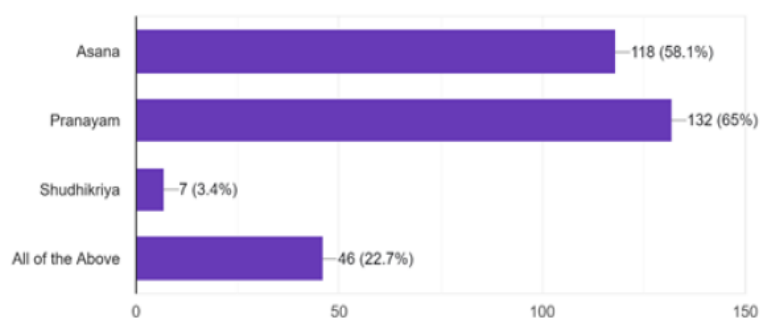
Sex wise Distribution



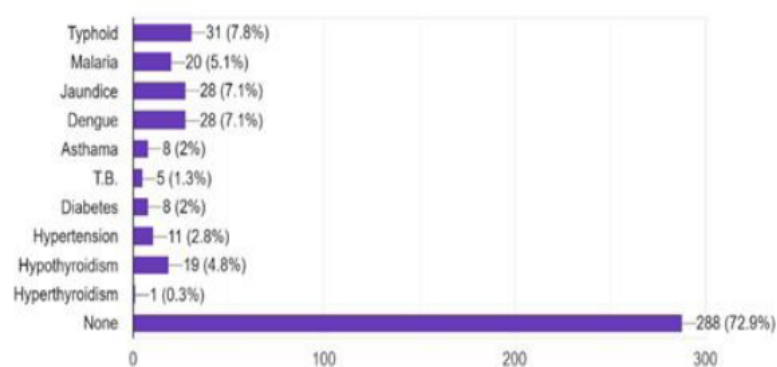
Duration of Yogic Practice



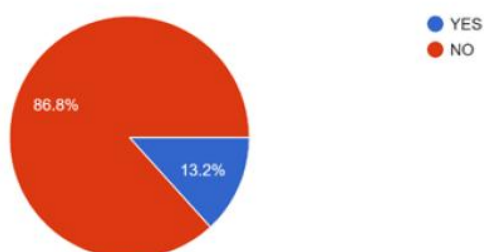
Awareness about Yogic Practices



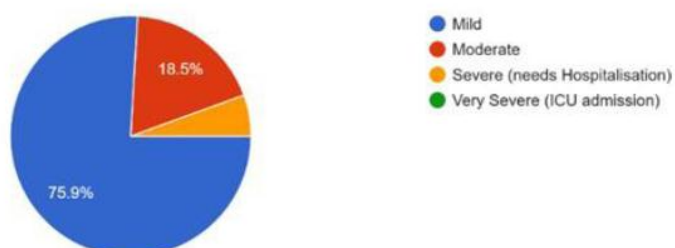
History of systemic diseases

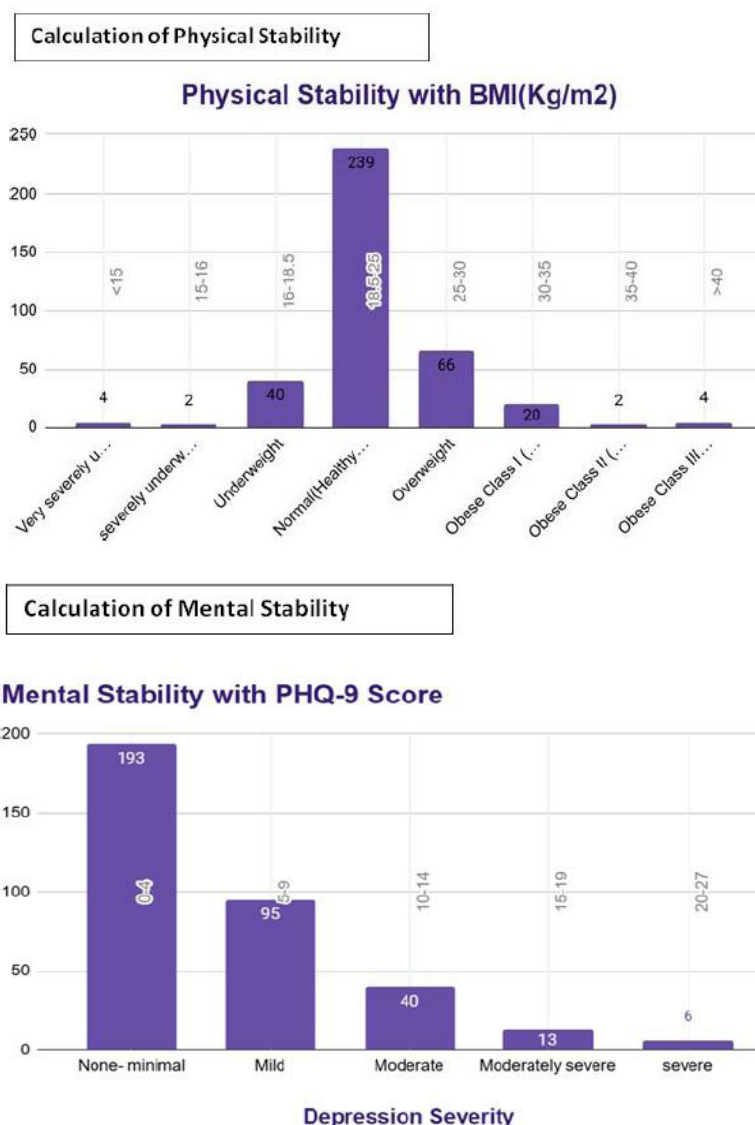


Participants infected with COVID -19



Symptoms of COVID -19





DISCUSSION

This study aimed to create awareness among common people about the importance and benefits of yoga in day-to-day life. The majority of participants were practicing yoga but many of them were not consistent but had normal BMI and PHQ-9 scores, this will encourage them to restart yoga. Participants having abnormal values of BMI and Score of PHQ-9, (Those participants who were not practicing yoga) will accept the path of yoga. Due to the current hectic lifestyle people are ignoring their health. This survey will help to better understand their physical and mental status and they will pay attention to their health.

From this survey, we observed that the youngsters are doing yoga regularly as they are the future generation, they will carry ahead this yogic tradition for physical and mental balance in life.

Limitations of the study

- Though the idea behind the survey conducted was very good i.e. to create awareness among people

about the importance and benefit of yoga, 417 people who participated in the survey, 70 were not aware of the E- Questionnaire so couldn't fill the form properly. Some of them have filled out the form but not submitted thus response was not generated.

- People were so lazy that they didn't want to give 2-3 minutes to fill out the form, so continuous bombarding was the only choice
- Among 417, 40 participants didn't give proper responses regarding BMI and the PHQ-9 Questionnaire rather they didn't understand.
- The positive side is that 50.4% population practiced yoga but what about others? So, there is a large scope to create awareness among people about the need for yoga for a healthy lifestyle.

Scope of the study

- ❖ There is always scope for improvement. Large population size, simplicity in the survey forms, and longer duration are some of the key points to remember while conducting any survey.

- ❖ In a nutshell, I can say that this study will encourage people to accept yoga for their well-being. This was the first step introduced on the path of yoga many more such surveys should be conducted in the future for global acceptance of yogic science.

Conflict of interest:- No.

Financial Support:- No.

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