

YOGIC INTERVENTIONS FOR PSYCHO-PHYSICAL WELL-BEING UNDER COVID-19 TIMES & AFTER

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ABSTRACT

Health indeed is Wealth. The Corona Virus Pandemic has impacted the best health-care systems world-wide; even as the world grapples with the massive loss of human life causing pain to millions. The Pandemic is no more just a medical health challenge; it has thrown up spiritual and emotional challenges as it is affecting our belief system.

“Prevention is Better than Cure is the mantra”. Since there is no allopathic medicine solution available; people are adopting various measures like social distancing and personal sanitization. There is an urgent need to assist the individuals to take all the preventive measures possible to boost their immunity, improve the respiratory system, and lessen the anxiety, stress, and depression. It can be difficult to not feel anxiety and sometimes panic over the coronavirus outbreak, with the onslaught of updates on news and social media.

Yoga has emerged as the perfect tool that an individual can follow to establish physical, mental, and spiritual balance to develop robust health and combat physical and emotional challenges. Yoga offers another path, a fresh perspective with which to deal with events that are beyond our control. The different *asanas* of yoga can help us to prevent COVID-19 by boosting our immune system and managing the stress that one is going through in this time of uncertainty.

This study tries to specifically evaluate the impact of the preventive measures undertaken through Yoga practice. 126 respondents from different states of India were

requested to perform yoga daily for 30 days. Significant changes were observed and are mentioned in detail.

KEYWORDS

Yoga, COVID-19, Social distancing, Pranayama, Asana.

INTRODUCTION

The Corona Virus pandemic has engulfed the whole world in a matter of days and months. It has taken the fear and anxiety to every door-step world-wide. It has foisted fear on – developed, developing and poor nations. It has impacted the healthcare systems without sparing anyone. A large number of casualties are those who are working on the frontlines. Thus, the pandemic has unleashed a reign of terror and horror without a single bullet being fired. It has destroyed the global economic systems that were created after the Second World War. The pandemic is now more than just a physical health problem or a respiratory disease. It's a catastrophe that has forced every individual to respond to the crisis.

Since there is no cure the focus has been prevention. It is up to the individual to take measures to protect themselves and the whole society. People have had to dig deep into their beliefs and faith, spiritual and traditional solutions, healthcare systems, food, and diet to build immunity to prevent the disease from taking a heavy- toll. Every country is trying to investigate and learn more about this disease

and the manner of its development. [1, 2] Not everyone exposed to this virus is getting infected and not every infected sufferer develops a serious respiratory illness. This infectious disease has caused an intense global health crisis. No one is safe until everyone is safe. On a personal level it has created a virtual battlefield within each one of us. The battle between our fears and desires is raging within everyone. The response must be strengthened via actions on the physical, emotional, and spiritual scale.

Everyone is worried about their survival. Seeing the fact that it has impacted the world very badly but still, we are all waiting for the vaccine to be invented. Social distancing and other measures are followed by everyone but still, people are looking for an urgently needed course of action which can make them fight this virus. Out of every five infected patients, around one is prone to become seriously ill and suffer from breathing problems. Anyone can get infected by this virus and it can get transmitted to others even if the host has mild symptoms. [3] This virus mainly gets transferred from one person to another through small droplets from the infected host's nose or mouth while sneezing, coughing, or speaking. It has been found that people with weak immunity are getting more infected by this virus. Most of the infected patients (80 %) can recover from the attack of this virus without treatment at hospitals if they have a strong immune system.

Yoga is one such practice that can help in boosting the immune system. [4,5] Moreover, yoga is a practice that is appreciated around the world for promoting health and wellness. [6] For the last three decades research has been conducted to study the impact and efficacy of yoga practices in improving wellness, physical performance, body flexibility, and mental health. [7, 8] Even the Indian Government invite different proposal to evaluate the impact of yoga on improving the respiratory system, immunity, and other issues such as depression, anxiety, stress, and disruption of normal life.

This study tries to present a few preventive measures that should be adopted by everyone to improve their respiratory reserve, immunity, cardiovascular function, and in the management of psychological stress (which includes - tension, anger, fatigue, depression, esteem-related effect, vigor, confusion). Yoga guru Baba Ramdev suggests that by practicing yoga, anyone can fight this virus in a better way.

LITERATURE REVIEW

This virus normally has three dimensions – related to immunity, respiratory system, and stress (as everyone is worried and this gets increased, with everyone being at home all the time). All the practitioners, scientists, and clinicians around the world are working very hard to utilize all the modern tools of bio-sciences and life science to find out solutions to the existing pandemic. [1]

Strong immunity of the host is essential to fight this infection. It has been observed that most of the infected cases have been found to have a disturbed immune system. These coronaviruses are biggest among the other viruses while we humans have much bigger white blood cells (WBC), which constitute our (defense) system which fights from different foreign bodies invading our system. Moreover, every human body has more than millions of WBCs, whereas the number of SARS-CoV-2 are very less in number. WBCs being the first one to serve against any attacking viruses helps in controlling the spread of the virus and consequently the tissue damage. So, we have good chances to combat and win from this virus attacking if our immune system is strong. Thus, people with a weak immune system will not able to fight with this virus and they may get infected very easily.

Previous research has shown that some *pranayamas* (breathing techniques), meditation, and specific *asana* practices help in building the immune system in the body, which sub-sequential helps in fighting with viral infections. [9, 10, 11] One of the research studies conducted on yoga suggests a complementary role in the management of pulmonary tuberculosis. [12] According to another study, one month of integrated yoga can improve immunity and lower the depression in HIV-1 infected adults. [13] Practicing yoga helps in lowering blood pressure [14] and in improving the perception of anxiety and mood. [12, 13] According to different authors yoga improves the immune system. [15, 16, 17]

The upper part of the respiratory tract is the doorway for the entrance of this virus, therefore is it important to have a healthy respiratory system. Many clinical trials have reported the positive impact of yoga on pulmonary function in individuals who are infected with chronic obstructive pulmonary disease. [18, 19] While maintaining all the norms such as social distancing, isolation of the infected person and their contacts, frequent handwashing, etc., we should try to boost the immunity in both bodies as

well as minds of the individuals. As suggested by researchers, yoga can help us in building the immune system. Yoga guru Ramdev, also recommended doing yoga regularly, as this will boost the immune system and hence can act as a preventive measure for Covid-19. Yoga is the practice of mind and body having a history of more than 5,000 years in ancient Indian philosophy. In the last two decades, it has become a very popular form of physical practice/exercise which helps in enhancing the control of body and mind and improves mental well-being of an individual.

To help everyone to fight this virus swami Ramdev started sharing and performing various yoga *asanas* (specific yoga posture) on India TV, which is a national news channel of India. These yoga *asanas* can help individuals to strengthen their immunity to fight COVID-19. These *asanas* can be performed from anywhere even being at home to safeguard one from the Coronavirus. According to him, Ayurveda has a solution to every disease and by taking precautionary measures like yoga *asanas* and *pranayama* everyone can protect themselves from the infections easily. He has advised everyone to not sit idle at home but to imbibe the yogic practices exercise to boost their immunity. Individuals with strong immunity and good health are less prone to get affected by diseases and infections. Swamiji had been teaching yoga on the national channel every day for about 45 minutes both morning and evening since April 4, 2020.

He has advised five yoga *asanas* and *pranayama* which will help to boost the immune system. Following are the pranayamas as suggested by him-

1. BHASTRIKA PRANAYAMA

This is a breathing technique that produces heat in the body. This is very helpful for the individuals who have *Kapha* body composition or are water dominated, as per the *Ayurveda*. *Bhastrika* is done through the chest and engages the lungs. In this *pranayama*, both inhalation and exhalation are forced. It is very beneficial for the lungs and especially for the individuals who suffer from repetitive flu, allergies, cough, respiratory issues, or breathlessness. [20] This *pranayama* helps in boosting the immunity of the lungs. [21]

FIGURE 1- BHASTRIKA PRANAYAMA

BHASTRIKA PRANAYAMA THE BELLOW'S BREATH



2.KAPALABHATI PRANAYAMA

The word *Kapalabhati* is made up of Sanskrit word '*Kapal*' & '*Bhati*'. *Kapal* means 'Skull or Frontal head' & *Bhati* means 'Shinning'. [22] *Kapalabhati* is a yoga technique in which belly intentionally draws in to produce forced & sharp (active) exhalations through nostrils followed by automatic passive inhalations. When *pranayama* added in *Kapalabhati*, it becomes a practice to consciously watch your breath and movements of inner organs. Baba Ramdev suggested that doing this regularly will help to strengthen the internal organs. It helps to release toxins from the body and thus boosting the immune system. [23]

FIGURE 2- KAPALABHATI PRANAYAMA

KAPALBHATI PRANAYAMA SKULL SHINING BREATH



3. ANULOM-VILOM PRANAYAMA

Another form of yoga (*pranayama*) which is highly recommended is *Anulom-Vilom*. This *pranayama* is a simple breathing exercise that should be performed regularly as it helps to balance the *tridoshas* (three *doshas*) in the body namely 'Vata', 'Pitta', and 'Kapha'. Most of the disorders in our body are only because of an imbalance in these three *doshas* in the body. Practice of this *pranayama* is the most effective, comfortable, and easiest way to stay healthy and fit. By doing *anulom-vilom* regularly, it will build stamina in the lungs which will help to prevent coronavirus from infecting. It also helps to remove toxins from the body and helps to balance and relax the nervous system. [24]

FIGURE 3- ANULOM-VILOM PRANAYAMA

ANULOM VILOM PRANAYAMA (ALTERNATE NOSTRIL BREATHING)



4. BHRAMARI PRANAYAMA

This *pranayama* is another breathing technique that has got a name from an Indian black bee called *Bhramari*. This exercise is very effective in calming down the mind of an individual instantly. This *pranayama* is one of the best breathing technique which helps the minds to get relaxed and make it free from anxiety, anger, frustration, and agitation to a great extent. It helps to lower the stress level. This exercise helps in smoothening the nerves and calming them down especially near the forehead and brain. The exhalation in this *pranayama* resembles the humming sound of a bee. Since this sound has a natural calming effect on the mind. [25]

FIGURE 4- BHRAMARI PRANAYAMA

BHRAMARI PRANAYAMA THE HUMMING BEE BREATH



5. UDGEETH PRANAYAMA

"It is an art of conscious breathing. It entails primal sound reverberations to resonate and awaken the mind to its inherent, immense potential. Mind, woke up and attentive to its potential, and is capable of realizing no matter it focuses on." This *Pranayama* helps to heal insomnia, lack of concentration, depression, and other brain-related problems. It involves chanting of AUM (OM) with every exhalation, which should last for at least twenty seconds as this calm and relaxes the mind. [26]

FIGURE 5- UDGEETH PRANAYAMA

UDGEETH PRANAYAMA CHANTING OF OM

TAKE A DEEP BREATH
AND CHANT OM



In addition to *pranayama*, he also suggested doing Surya Namaskar at least 10 times a day, as this is very useful in boosting immunity and preventing individuals from different infections. [27] This is an ancient technique, where gratitude is expressed to the almighty sun. It includes 12 postures which made the body flexible and light.

Apart from *pranayama* and *asanas*, Baba Ramdev has shared home remedies that are very useful in preventing infections and building immunity. He claims that (*tulsi*) *Ocimum tenuiflorum*, commonly known as holy basil, *Ti'nospora cordifolia* (*giloy*), Guduchi, ginger, black pepper, and Indian gooseberry is the most useful things you can find at your home that can help keep you safe from coronavirus. He insists that one should add vitamin C and protein in their diet to build immunity as a good immune system is the biggest shield for everyone at this time. [28]

Yoga is a skill in action. Beyond flexibility, balance, and strength; Yoga can help quieten mental chatter [29] and deepen spiritual awareness. It enables breath manipulation and balancing of the nervous systems that help quell fears and anxieties thus reducing stress and its impact on the mind, body, and soul. It enables us to take actions where we use our intelligence and discernment to find the best course of action – without being distracted by fears and anxieties.

Modern-day science helps us to understand the workings of some yoga techniques that have stood the test of time. The key to finding peace and tranquility can be found within our Autonomic Nervous Systems (ANS), which acts largely unconsciously and regulates our respiratory system, among other things. [30] Two key branches of this system are the Sympathetic Nervous System (SNS) – responsible for the fight or flight reflex, and the Parasympathetic Nervous System (PNS) – responsible for the rest and digestive reflex. [31]

To stimulate the PNS to reduce anxiety and relax, we can use yoga techniques that act on the Vague Nerve that runs from the brain to the abdomen. Research has shown that different forms of "*Pranayama*" or breath work, lead to greater vagal tone, to balance ANS. As you breathe your heart rate generally speeds up and slows down when you exhale. The greater the difference between the inhalation and exhalation heart rates, the higher the vagal tone, and the more readily your body can relax. One of the simplest breathing techniques is deep conscious diaphragmatic

breathing – or belly breathing – while slightly constricting the opening of the throat.

While inhaling, the breath first fills the lower belly, rises to the lower rib cage, and moves into the upper chest and throat. Called "ujjayi", or victorious breathing, it is typically performed with an inhale-exhale ratio of 1:2. The inhale is through both nostrils with the exhale through the left nostril only, by closing the right nostril with the thumb. Begin by inhaling for four seconds and then exhaling for eight seconds, ensuring that the breathing is smooth and even. You may want to practice for five minutes to start and build up gradually. Done correctly, this technique can both energize and relax the body, as you begin to meditate.

In recent years there has been significant progress made in understanding the benefits of meditation, especially the forms that focus on loving-kindness and compassion. Through yoga nidra you can experience healthier emotional states and even deeper spiritual awareness. A form of meditation that is particularly helpful for calming the nervous system is "yoga nidra" (yogic sleep), a mindfulness practice performed lying down, in which the body is completely relaxed. [32]

Studies have shown its benefits in US army veterans suffering from post-traumatic stress disorder, in health care workers suffering from physical and mental exhaustion, in stressed-out college students, and seniors with depression, among others. [33] Techniques that encourage breath manipulation and help to balance the nervous system can help us overcome fears and anxieties, whether they relate to the current coronavirus outbreak or indeed any challenging situation. Keep calm and breathe on.

In the book *Altered Traits*, psychology and psychiatry professor at the University of Wisconsin-Madison Richard Davidson offers a compelling overview of meditation's benefits – including greater control over our emotions, developing goodwill and understanding, boosting our immune system and our physical and mental health. [34] Even novice meditators can experience significant benefits, though it requires an enormous commitment over many years to develop long-term sustained changes to brain activity.

RESEARCH METHODS

This research utilized tele-yoga-based intervention. A request was made to 126 participants across India to practice yoga with Baba Ramdev (on the virtual platform) daily at their place by watching yoga guru performing live on India TV. This method was adopted considering all the limitations during this period. Participants were requested to give their consent for being a part of this research and after receiving their consent, they were requested to perform the practice for thirty days without giving any break in between and were also requested to keep a record of their blood pressure. Consent for all the

participants below 18 years, was taken from their parents and legal guardians. Also, while selecting these participants randomly, the selection was done for those who have not been practicing yoga earlier.

After the completion of 30 days' period, a telephonic interview was conducted for all the participants asking about their experience. Questionnaire was prepared by using items from a standardized tool which measure's the psychological distress of the respondents. [35] All the respondents were asked about the change in their blood pressure.

TABLE 1. RESPONDENTS' PROFILE

RESPONDENTS' PROFILE		
GENDER	FREQUENCY(S)	%
Female	56	44.44
Male	70	55.56
Age		
5-10 years	3	2.38
11-20 years	13	10.32
21-30 years	42	33.33
31-40 years	36	28.57
41-50 years	21	16.67
51-60 years	11	8.73

TABLE 2. MEASUREMENT OF CHANGE IN STRESS LEVEL, ENERGY LEVEL AND SLEEPING DURATION

S.NO	VARIABLES	INCREASED		DECREASED		NEUTRAL	
		N	(%)	n	(%)	n	(%)
1	Stress Level	1	0.79	120	95.24	5	3.97
2	Energy Level	116	92.06	1	0.79	9	7.14
3	Sleeping duration	122	96.83	0	0	4	3.17

RESULTS

The research was conducted for a sample where respondents participated were of the age group from 5 years to 60 years. Most of the yoga practices involve deep relaxation which helps in minimizing the stress and tensions thereby making our immune system stronger to fight with the viruses. And the same was observed after conducting this research. About 95.24 % of the participants reported that their stress level has decreased during this tenure of 30 days. Around 92.06 % of respondents mentioned that they feel more energetic after performing yoga regularly for these 30 days. 96.83 % of participants reported that during this tenure they could sleep better and were at ease. All of them reported that their flexibility has increased. Some of the participants mentioned that they attained peace of mind. Many of them reported that their digestion problems were resolved. Many reported that their problem of constipation is resolved. They have started living a better life, where they feel themselves to be very active the entire day. One of the participants reported that performing these *pranayamas* his urge for alcohol and cigarette has come down and he even mentioned that he will try to leave consuming alcohol daily. Which suggests that yoga can help you to leave the drugs, one is addicted to. People having high blood pressure reported that after performing these *asanas* their blood pressure got controlled. Before starting these yoga practices, we requested all the respondents to measure their weight. Surprisingly many of them reported that they have lost about 4 to 5 kg of weight one of the respondents reported that he could lose 9 kg within 30 days. This is commendable, as because of lockdown everyone is at home for 24*7, and people have got involved more into eating. Most of the respondents reported that they are less tensed now. Most of the participants reported that their immunity has improved, and they have become less prone to getting infected from flu, common cold, and fever, etc. All participants were happy and want to continue this practice lifelong. Many of them reported that their family members and friends have also started performing yoga after visualizing the changes in them. One of the respondents reported that his relationships with his wife have improved to a great extent. Both males and female members reported that their anger level has come down. They now remain calm in any situation and all the participants are sure that they can fight this virus in all situations.

DISCUSSION

One of the most popularly quoted verses in the Gita is "yoga is a skill in action", but some may wonder how to achieve this calm, selfless state of being in which our emotion of fear does not overwhelm our thinking. One of India's most celebrated texts, the centuries-old Bhagavad Gita ("The Song of God"), is the story of a discussion between the warrior Arjuna and his charioteer Krishna. While the scene in the story is an actual battlefield, the importance of the story is how it can be interpreted to mean the battlefield within each of us – the constant battle between our fears and desires. This text covers several different, but overlapping, types of yoga, but here this study wants to put the spotlight on "karma yoga", the yoga of action.

The Gita calls us to act without focusing on the fruits of our actions, merely to act without selfishness and with detachment from the results. The medical personnel on the front line of the coronavirus battle, who put aside their fears for their personal safety to help others, exemplify karma yoga. Like theirs, our actions should come from a place of centredness where we use our intelligence and discernment to find the best course of action – without being distracted by fears and anxieties.

We are all living in a world that is full of uncertainty, where everyone is facing a new set of challenges. Ayurveda always acknowledges the importance of Yoga. It becomes a popular form of exercise and meditation. It is a practice of mind and body having a 5,000-year history in ancient Indian philosophy. In more recent years, it has become a popular form of physical exercise which has improved control of the mind and body and enhances well-being and also helped in boosting the immune system which can act as a preventive measure to COVID-19. The different *pranayama* and *asana* of Yoga boost our immune system. With this, a healthy diet strengthens the immune system and makes our organs fight against the coronavirus. So, every one of us should perform yoga practices to keep our immune system stronger to fight against all such viruses existing around us. Let us become warriors against these viruses.

FUTURE SCOPE AND LIMITATIONS

Future clinical trials are needed to examine the impact of yoga on boosting the immune system and see how yoga help in fighting COVID-19 and other viruses can. Additional studies using rigorous methodologies are needed to examine the health benefits of the various types of yoga. Due to Lockdown in the country the researchers were not able to perform a quasi-experimental study where the results could have been more useful. This became one of the reasons for not including a control group in this study. Since there was a wide range of participants between the age group of 5 years to 60 years, it is difficult to generalize results.

COMPETING INTERESTS

The authors declare they have no competing interests.

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