

The Origin and Development of the Indian Suryanamaskar Exercise System: A Historical Study

Dr. Davender Singh Yadav¹, Dr. Satnam Singh²

Assistant Professor, DIET/ SCERT Delhi
Assistant Professor, DIET/ SCERT Delhi

ABSTRACT

When performed with complete devotion, Suryanamaskar (SN) confers a multitude of advantages on the practitioner at each and every level of life. There are many different kinds of SN; the author has counted at least fifty of them; the number of asanas that make up a set may range anywhere from ten to twenty-nine. A scientific inquiry is necessary in order to determine whether or not an ancient kind of physical activity that originated in India many years ago and is being performed there today is relevant to the modern day. This system has unique properties that set it apart from others. It is said that it contributes to improved health and physical fitness. It does not matter what gender or age a person is; it is appropriate for them all. To carry out, a limited amount of room is required. It does not need much in the way of equipment and is rather affordable. It produces physiological effects on many bodily systems that are analogous to those that are brought about by the practise of other types of physical activity..

Keywords: Origin, Development, Indian Suryanamaskar

INTRODUCTION

Origin of Suryanamaskar

‘It is neither an asana, nor is it regarded to be a component of conventional yoga, but Suryanamaskar, sometimes known as the "sun salute," is a series of dynamic postures. It is said that the King of Aundh, Late Shrimant Balasaheb Pant Pratinidhi, thought up and popularised Suryanamaskar in the 1920s. It was further popularised by Sri K V Iyer and Sri Krishnamacharya. Suryanamaskar is a comprehensive kind of physical training. It was discovered that the Danda exercises that are described in Vyayama Dipika are the foundation for the Suryanamaskar models that were provided by Sri Krishnamacharya. Wrestlers and martial artists in India have been known to put their bodies through a rigorous and time-honored routine called dandaal for decades.

It's possible that Dandaal is where the pushups that are common in western nations for the sake of bodybuilding got their start. The parallels between Dandaal and Suryanamaskar are shown below in a schematic form and will be described in more detail later. In the course of time, Suryanamaskar evolved into a traditional synthesis of the practises of two distinct methodologies, namely physical culture and Yoga; as a result, it emerged as the precursor practise of modern-day physical exercises. Further reduced forms were adopted by various schools of Yoga like the Swami Sivananda Yoga Vedanta centre, the Bihar School of Yoga (BSY), and the Swami Vivekananda Yoga Anusandhana Samsthana (SVYASA). These versions were gradually absorbed into modern-day yogic practises. [1-3]

According to one of the most well-known yoga instructors in the world, Shri K. Pattabhi Jois, the practise of Suryanamaskar, also known as sun salutation, dates back to ancient times and serves as the cornerstone upon which the science of Yoga relies. Suryanamaskar might be regarded to be the optimum approach to practise yoga due to the unique mix of asana, pranayama, and meditation that it entails. On the one hand, it serves to strengthen the power of the body and mind, and on the other, it assists in the development of spiritual concentration. According to the yoga books, students cannot be confident of avoiding injury or making enough progress in their practise unless they first get their minds to a condition in which they are able to drive their bodies through the many phases of yoga practise. Even in certain Western nations, like as Poland, the benefits of Suryanamaskar have been acknowledged at the state level and are being actively pursued for further research. This practise should be employed by Polish schools as a type of corrective (therapy) exercises, according to an official recommendation that was published by the Polish Ministry of National Education in the year 2001 and given the number 1173/2001.

Evaluation of the effect of sun worship on Indian culture:

This truth derives from the historical study that was done above in that the Mandakini of Suryopasana, which is continually impacted by the past, continues flowing all the way up to the present day. Throughout its lengthy voyage, Suryaprasana has had a profound impact on the way of life and culture in India, and it has become an essential component of Indian traditional culture. In the following, an effort will be made to take a high-level look at the influence that Surya Sadhana has had on numerous aspects of Indian culture. [4]

Impact on Indian Language:

When we go beyond the Neolithic period and the solar art symbols of the Indus Valley and reach the Vedic period, we find that beginning with the Rigvedic period, sun worship has left its mark on the literature. This can be traced back to the beginning of the Vedic period. This impact may be seen throughout the Samhitas, Brahmanas, and Upanishads, amongst other ancient texts. The Gayatri Mantra, which has also been referred to as the Veda Mata Mantra, is a petition to Savita, which is another name for the sun, for a pure mind. Therefore, it should not come as a surprise that the Sun is portrayed as the source of unadulterated intelligence in the first Suryaprasang of the Vedas. The number of names that are interchangeable with the sun rises during the course of the Rigveda, until it reaches the point where it is referred to as the twelfth (twelve), which is the name that we continue to refer to as the twelfth Aditya. The epics, which come after the Vedas, are likewise discovered to be painted in the hue associated with sun worship. Aditya provides knowledge on the heart source in the Valmiki Ramayana. Following the chanting of this heart source, Rama had defeated Ravana and dealt him a deadly blow to win the battle.

There is a text referred to as the Surya Sahastra that can be found in the Shanti Parva of the Mahabharata. This text provides evidence of the worship of the sun during that time period. The Maga priests of Iran are credited with initiating the custom of sun temples and sun idols in the first century AD. Shortly after this time period, sun worship in the region of India saw an explosion of extraordinary proportions. As a direct consequence of this, the Surya Vashiyak Uppuranas were written, among which the most well-known are the Samb Purana, Bhavishya Purana, Barah Purana, Skandha Purana, and Markandeya Purana, amongst others. In addition to this, there are several extremely uncommon Upapuranas that are of a lesser value that have been written. Surya Purana, Saur Dharma Purana, Saur Dharmottara Purana and Bhaskar Purana etc. In addition to the Upapuranas that have already been mentioned, many Surya Shataks have also been written, including a Suryashatak written by Mayurrit Suryashatka, a Suryashtak written by Sriswar Vidyalkar, a Suryashatak written by Raghavendra Saraswati, a Suryashtak written by Linga Poet, and a Surya Satakram. This enables us to realise that our whole culture was saturated with writing on the sun worship practised in Bengal.

The five systems of Surya Namaskar described by Satavalekar:

Instead of describing just one system, Satavalekar ji has presented five distinct systems, which go progressively farther away from simplicity toward complexity. It would seem from the fact that he refers to the Surya Namaskar exercise as the "Surya-Bhedan" exercise that he places this kind of physical activity solely within the realm of the Hatha Yoga tradition. Due to the fact that the descriptions of the six chakras, such as the Surya Chakra and others, can only be found in the literature of Hatha Yoga.[5]

First Suryabhedan System:

Satavalekar ji names it as "Ashtanga Pranitasana" and the ten physical states under it have also been named after the asanas, which are from one to ten respectively.

- (1) Namaskarasana (2) Hastapadasana (3) Ekapada Prasaranasana (4) bipedal propagation
- (5) Ashtanga Pranipatasana (6) Sasan (7) bipedal propagation (8) one foot prasaranasana
- (9) Hastapadasana (10) Namaskarasana

Second Suryabhedan exercise system:

The second exercise in the Suryabhedan exercise method is called "Chaturanga Pranipatasana." It gets its name from the fact that over the course of its practise, a person only touches the ground with a maximum of four portions of their body, namely two legs and two hands. The important thing to remember about the first system is that. The maximum number of limbs that make contact with the ground at stage five is eight; they include two hands, two knees, two legs, one chest, and one head.

A cycle of the same ten asanas that were established under the first system is generated under this system, which was discussed in the context of the first system. The sole distinction is that the fifth position is now known as Chaturanga Pranipatasana rather than Ashtanga Pranipatasana. This is the only state in which there is a difference between the two styles.

When it comes to pranayama, the situation is exactly the same as how it was outlined for the first system.

Third Suryabhedan exercise system:

Satavalekar ji calls the name of this exercise system 'Bhubharasana'. This system is tougher than both the preceding systems. There are fifteen stages in it, which the author has addressed with the names of different asanas. From one to fifteen these asanas are as follows:

(1) Namaskarasana (2) Urdhvanamaskarasana (3) Hastapadasana (4) One foot prasaranasana (5) bipedal propagation (6) Bhudharasana (7) Ashtanga Pranipatasana (8) Sarpasana (9) Bhubharasana (10) bipedal propagation (11) Ekapada Prasaranasana (12) Hastapadasana (13) Urdhvasana (14) Namaskarasana (15) Urdhva Namaskarasana

Fourth Suryabhedan Exercise System:

The name of this system is 'Veer Bhadrāsana'. This system is longer than all the previous systems. Thirty-two asanas come in one of its cycles. The higher number of asanas is partly due to the higher frequencies of the asanas and some due to the addition of new asanas. There are three new asanas namely Veer Bhadrāsana, Hadsanga Pranipatasana and Supta Ushāsana. The details of the new rugs are as follows

Veer Bhadasana - To come in this asana, from the position of a pada Prasaranasana, lift both the hands from the ground and move them to the position of vertical salutation and bend the knee slightly with the legs extended behind.

Dwadsang Pranipatasana – It is practiced from the position of Ashtanga Pranipatasana, in which the eight limbs (two feet, two knees, two hands, chest and mouth) touch the earth. From this position, applying the left and right ear, head and chin to the ground, leads to Dwadsang Pranipatasana.

Supta Ustrasana- From the position of Dwadsang Pranipatasana, by keeping the navel and its four-fingered region on the ground, from behind, by holding the feet above the heels with their hands, try to straighten both the legs backwards, in this way the waist The body from the neck to the neck and both the thighs rise above the earth and the body becomes in the shape of a bow.[6-8]

Suryanamaskar from other schools of Yoga

Krishnamacharya Vinyasa Yoga tradition

This has a total of thirteen vinyasas (postures). The first Vinyasa is Samasthiti/pranamasana and then Tadasana/Hastautthanasana. Uttanasana, also known as Pada hasthasana, and Utkatasana come next after this (hip stretch pose). The practitioner will next raise their heels and leap, landing on their big toes, into the position of Chaturanga Dandasana. The Danda samarpna follows after that (complete surrender; similar to Ashtanga namaskar). After coming back to Chaturanga Dandasana from this pose, the practitioner will first go into Urdhwa mukha swanasana, which is quite similar to Bhujangasana, and then they will move into Adhomukha swanasana (Parvatasana). Then this is followed by Utkatasana, Uttanasana (Pada hasthasana), Tadasana and Samasthiti. In Krishnamacharya Yoga, there is a strong emphasis placed on doing perfect breathing while simultaneously reciting mantras. This is done when establishing a pose.

The practitioner begins with an inhalation, then holds their breath during Samasthiti while shifting their concentration to the first mantra, and then inhales smoothly while raising their arms in Tadasana, all the while holding their breath throughout the reciting of the mantra. The next step is to let out an exhalation as you come into Padahasthasana, followed by an inhalation and finally an exhalation as you bend your knees to come into Utkatasana. As a general rule, the practitioner will not breathe while mentally repeating the mantra while in any of the postures. After that, the yogis and yoginis will exhale, then hold their breath while they elevate their heels till they reach the position of Chaturanga dandasana. The practitioner inhales deeply, holds their breath for a while, and then exhales gradually as they transition from the previous position to Danda samarpna. In spite of the fact that this tradition has a number of additional iterations of Suryanamaskar, we have focused on the most widespread and accessible form in order to make a comparison with other traditions..

Sivananda Yoga Vedanta Centre tradition

This sequence contains a posture called Phalakasana as step 5, rather than Parvatasana, during which the breath is retained, and the posture known as Adhomukha swanasana takes the place of Parvatasana as step 8 in the series. The remainder of the yoga postures follow a practise that is traditional to the Bihar School of Yoga, both in terms of their approach and their breathing patterns.[9-11]

OBJECTIVES OF THE STUDY

1. To study on Evaluation of the effect of sun worship on Indian culture:
2. To study on five systems of Surya Namaskar described by Satavalekar

Reviews

L.Prasanna Venkatesh (2017) Although Suryanamaskar was not regarded an asana in ancient Yoga, it is now recognised to be a part of modern-day yogic practises. Traditional Yoga did not include Suryanamaskar. The practitioner receives a complete boost of energy throughout the day as a result of practising Suryanamaskar before beginning their daily routine tasks. There is a line of illustrious people who popularised this dynamic group of asanas, beginning with the Raja of Aundh, who is credited with being the first person to introduce surya namaskar. These notable individuals include T. Krishnamacharya, Swami Sivananda, and Swami Satyananda from the Bihar school of Yoga, amongst others. Because of their contributions, this wonderful set of asanas was made available to the practitioners. A marvellous collection of asanas that also incorporates dynamic breathing patterns at each position and provides a sort of comprehensive practise by incorporating both pranayama and asanas is what we call yoga. The Suryanamaskar practise consists of a total of 12 postures, and there are a total of 24 steps in one round. This takes the form of a salute to the "Sun," and it is performed in conjunction with the chanting of the sun god's twelve names. In this analysis, we highlight the significance of Suryanamaskar by focusing on its impacts on the body's physical, psychological, and physiological components, and we do it on the basis of research that has previously been conducted. In addition to this, the importance of the sun salutation as a single, all-encompassing practise for the entirety of the body is highlighted..[15]

Dr. Vikas C. Kathane(2019)Salutations to the sun are the literal translation of the term "Surya Namaskar," which translates to "Sun Salutations." Since the time of the Vedic civilization, this practise has been passed down from generation to generation. Surya Namaskar was initially devised by ancient Hindus who revered the sun (Surya) as the creator of all things. This practise dates back thousands of years. One of the most beneficial exercises that a person may do is the Surya Namaskar, which is also sometimes referred to as the Sun Salutation. The human body goes through constant and positive physiologic shifts as a result of practising yogic practises, which has been demonstrated by scientific studies. The effect of doing Surya Namaskar on the physical fitness of a normal individual, particularly their cardiorespiratory endurance, is the topic of discussion in this research report..[16]

Dr. Sarvesh Kumar Yadav(2018)Suryanamaskar (Sun salutation) is combination of Asanas. The yoga concept that is part of the vedic traditions is where it all started. The energetic series of movements known as Suryanasmaskar, also referred to as the "Sun Salutation," is the most effective strategy to reduce weight and burn calories. The Suryanamaskar sequence encompasses the entirety of yoga. It helps address the metabolic imbalances that lead to and are perpetuated by obesity, while also toning the entire body and having a unique influence on the endocrine, circulatory, respiratory, digestive, and neural systems. When performed on a regular basis, not only will it assist you in achieving your weight loss goals, but it will also bring flexibility to your spine and joints. It will bring out your natural attractiveness and extend both your life and your youth. It is preferable to perform this task on an empty stomach. In recent years, there has been a rise in interest in yoga within the medical community. The practise of Suryanamaskar, which is considered to be a comprehensive workout, is a component of traditional yoga. In the current study, the effectiveness of Suryanamaskar in Sthaulya was investigated. The research was carried out on a total of 150 participants. After a follow-up period of forty-five days, the effects of Suryanamaskar were analysed statistically using the perma that had been produced. It was discovered that 45 days of practising Suryanamaskar brings about a reduction in Sthaulya. According to the findings of this research, the practise of Suryanamaskar is beneficial for Sthaulya..[17]

Singh Kanwaljeet(2019)The purpose of this study is to investigate the effects of the yoga posture suryanamaskar on the muscular endurance and flexibility. Both the material and the methods: Thirty different female students between the ages of 17 and 25 who had consented to take part in the study were picked at random. They were split into two groups, referred to as A (the experimental group) and B (the control group) (control). The participants were put through a suryanamaskar yogasana training programme that lasted for a total of six weeks. The significance of the difference in mean scores between the groups was analysed using the "t" test to determine whether or not the differences were meaningful. A value of 0.05 was chosen to represent the level of significance. The comparison between group A and the control group revealed that group A had considerably greater improvements in both muscle endurance and flexibility. It is possible that doing Suryanamaskar asana would help enhance one's muscular endurance as well as their flexibility..[18]

Dr. Abhijit Thander (2017) Over the past several decades, there have been a plethora of research conducted on the psychophysiological and biochemical shifts that occur as a result of practising yoga. Given below are some of the researched benefits that have been quite well proven in order to facilitate an understanding of how yoga works at least on the physical level. However, we are yet to research and understand the subtler effects of yoga, so this information is provided only for reference purposes. The objective of the study was to determine the impact that suryanamaskar and other forms of physical exercise had on the physiological characteristics of males who play intercollegiate cricket. The participants in the study were all college students, and the total number of participants was 45. There were a total of 15 patients chosen for each group, which were divided evenly between the

experimental groups I and II, as well as the control group. The data that were obtained were subjected to statistical analysis, in which analysis of covariance was used, and the threshold of significance was set at 0.05. The results of the research indicated that suryanamaskar had a more substantial impact on both the systolic and diastolic readings of blood pressure than the physical activities group did..[19]

VandhanaS.(2017)It is not an asana, nor is it considered to be a part of traditional yoga, but Suryanamaskar, also known as the "sun salutation," is a series of dynamic postures. It is said that the King of Aundh, Late Shrimant Balasaheb Pant Pratinidhi, thought up and popularised Suryanamaskar in the 1920s. It was further popularised by Sri K V Iyer and Sri Krishnamacharya. Suryanamaskar is a comprehensive kind of physical training. It was discovered that the Danda exercises that are described in Vyayama Dipika are the foundation for the Suryanamaskar models that were provided by Sri Krishnamacharya. Wrestlers and martial artists in India have been known to put their bodies through a rigorous and time-honored routine called dandaal for decades. It's possible that Dandaal is where the pushups that are common in western nations for the sake of bodybuilding got their start. [20]

RESEARCH METHODOLOGY

Benefits of Suryanamaskar

Physical and physiological benefits

When harnessed effectively, the power of the sun and the energy it provides may confer significant advantages on the human race. The dynamic motions that make up each step of Suryanamaskar cause the body to alternately contract and extend its muscles, which helps tone the joints while also strengthening the muscles. This causes the blood that has been stagnant in the inactive muscles and joints to be diverted back to the kidneys and lungs in order to be purified. Performing Suryanamaskar on a consistent basis not only helps to guarantee that the muscles and joints of the body are operating correctly and effectively, but it also stimulates the body's internal organs. In particular the stomach as well as the other organs in the abdominal region because it alternates between extending and compressing the space around the abdominal region. In addition to this, Suryanamaskar improves the peristalsis of the intestines, stimulates blood circulation throughout the body, massages and tones up the kidneys so that waste products can be easily and efficiently eliminated from the body, and assists the body in eliminating toxins through increased perspiration.

Elimination of toxins is an essential procedure for maintaining good skin, and it also plays a role in preventing illnesses that affect the skin. Performing Suryanamaskar improves the rate of breathing because it increases the amount of gaseous exchange that occurs at alveoli. Through the generation of antibodies and a number of other defence mechanisms, the immune system guards the body against the pathogens that are responsible for illness. The practise of Suryanamaskar strengthens the function of the immune system. Kinematics experiments conducted with 10 healthy yoga practitioners utilising three-dimensional motion capture shown that doing Suryanamaskar increased the range of motion in practically all of the body's joints. According to reports, various Suryanamaskar postures elicit distinct patterns of muscular activation. These patterns are said to be dependent on the skill levels of the practitioner. The improvement in schoolchildren's cardiorespiratory and respiratory fitness that was attributed to the practise of Suryanamaskar was measured using cardiovascular parameters and pulmonary function. There have been reports of improvements in muscular strength, the participation of isometric contraction, and the expansion of the chest that occur during the varied postures of Suryanamaskar. The benefits of doing Suryanamaskar at various speeds indicated that fast tempo Suryanamaskar is more comparable to aerobic exercise because to the improved muscular endurance and power it produces. On the other hand, the impacts of slow pace practise led to a decrease in cardiovascular parameters to normal levels, which is comparable to the effects of yoga training..

Table 1 The names of the positions in Suryanamaskar, the appropriate Beeja Mantras and other mantras to be recited, and the Chakras that should be focused on throughout each position.

Steps	Name of the Posture	Beeja Mantra/Mantra	Associated Chakra
1	<i>Pranamasana</i> (prayer pose)	<i>Om Hraam/Om Mitraya Namah</i>	<i>Anahata</i>
2	<i>Hasta Utthanasana</i> (raised arms pose)	<i>Om Hreem/Om Ravaye Namah</i>	<i>Vishuddhi</i>
3	<i>Padahasthasana</i> (hand to foot pose)	<i>Om Hroom/Om Suryaya Namah</i>	<i>Swadhisthana</i>
4	<i>Ashwa Sanchalanasana</i> (equestrian pose)	<i>Om Hraim/Om Bhanave Namah</i>	<i>Ajna</i>
5	<i>Parvatasana</i> (mountain pose)	<i>Om Hraum/Om Khagaya Namah</i>	<i>Vishuddhi</i>
6	<i>Ashtanga Namaskara</i> (salute with eight parts or points)	<i>Om Hrah/Om Pushne Namah</i>	<i>Manipura</i>
7	<i>Bhujangasana</i> (cobra pose)	<i>Om Hraam/Om Hiranyagarbhaya Namah</i>	<i>Swadhisthana</i>
8	<i>Parvatasana</i> (mountain pose)	<i>Om Hreem/Om Marichaye</i>	<i>Vishuddhi</i>

		Namah	
9	Ashwa Sanchalanasana (equestrian pose)	Om Hroom/Om Adityaya Namah	Ajna
10	Padahasthasana (hand to foot pose)	Om Hraim/Om Savitre Namah	Swadhisthana
11	Hasta Utthanasana (raised arms pose)	Om Hraum/Om Arkaya Namah	Vishuddhi
12	Pranamasana (prayer pose)	Om Hrah/Om Bhaskaraya Namah	Anahata

Secondary Sources: Data Is Collected From Books, Journals, Magazines, Websites and other Internet Sources

In everyday life, someone who suffers from a cardio-respiratory ailment is regarded to have a common condition. Walking, other forms of physical exercise, practising yoga, going to the gym, and other similar activities all help humans safeguard their hearts and the function of their hearts in their own unique ways. There have been several reports looking at the cardiorespiratory reactions that yoga practitioners have during a Suryanamaskar practise. Patients suffering from coronary artery disease were put through a series of yoga postures, including Bhujangasana (step 7) and Hastha uthanasana, and their pre- and post-practice parameters were recorded and compared (step 2). This research indicated a substantial reduction or modification in several linked physiological indicators, including heart rate, body fat, cholesterol, triglyceride, and LDL levels. This finding emphasises the usefulness of these Asanas in patients who have such conditions. Both healthy persons and cardiac patients may benefit from the practise of Suryanamaskar, which has been shown to increase the efficiency of the cardiovascular and respiratory systems.

DATA ANALYSIS

Proposed daily practice of Suryanamaskar

The daily practise routine for the different age groups is presented below for consideration. Beginning with youngsters, who often have boundless flexibility and high activity levels, it is possible for them to participate in rapid or slow speed Suryanamaskar depending on their energy levels, the requirements of their bodies, and other factors. Suryanamaskar should be followed by Yoganidra (also known as Complete Relaxation Practice) and Pranayama for adolescents who are in good health and have active metabolic rhythms. Teenagers should complete 12 to 24 cycles of Suryanamaskar. It is common for persons in their middle ages to suffer from lifestyle problems in today's society. For these individuals, the practise of 6–12 rounds of Suryanamaskar, followed by Yoganidra, Pranayama, and meditation, is suggested. Older persons who are under 70 years old may practise Surya namaskar according to their comfort level, both in terms of the number of rounds and the postures. This applies to both the number of rounds and the postures. These are some of the recommended everyday routines for the various age groups of individuals; however, the practitioner in charge of the patient should take into account any potential health risks associated with any of these activities, taking into account the patient's current state of health. Those who lead regular lives should merely follow the specified practise as a guideline; nevertheless, spiritual aspirants who were used to practising more than the mentioned cycles may continue to do so according to their own agenda (personal communication)[12]

Table 2 The human body's chakras and their corresponding anatomical locations

Chakra	Anatomical Location	Physically correlated glands
Mooladhara	Perineum	Gonads
Swadhisthana	Coccyx	Genital organs
Manipura	Navel	Gastric glands, Pancreas, Adrenal
Anahata	Heart	Thymus
Vishuddhi	Throat	Thyroid
Ajna	Top of spine	Pineal
Sahasrara	Crown of the head	Pituitary

Disease management with Suryanamaskar

The practise of Suryanamaskar for a prescribed number of rounds has been an essential component of the yogic management of many diseases, including ulcers, constipation (up to 12 rounds), malabsorption states (up to 10 rounds with full awareness of abdominal breath), tonsillitis, diabetes (up to 12 rounds at the 4th week of practise), hepatitis (3e7 rounds at sunrise), obesity, Musculoskeletal system and joints (with specific prescriptions based on the disease condition), and menstrual After taking a cold shower, males who have reproductive issues are

encouraged to do as many as 12 rounds. It is recommended that Suryanamaskar be carried out first thing in the morning with the practitioner facing the sun when it is first coming up.

When the perspiration is allowed to dry on the body surface while resting in Shavasana at the end of the practise, this kind of practise is beneficial to skin health and assists in the treatment of skin conditions. In a research carried out by AIIMS in India, it was shown that the use of yogic intervention was effective from a therapeutic standpoint in the treatment of diarrhea-predominant irritable bowel syndrome. When compared to conventional therapy, yoga treatment demonstrated improved parasympathetic reactivity, indicating that it is more helpful to the patients than traditional treatment. In this research, a total of 12 different Asanas were performed, with Padhahastasana (step 3) being one of them. Obesity is a major cause for worry when it comes to one's health since it has been shown to be a contributor to the development of a variety of ailments. Following practise of Suryanamaskar, obese women demonstrated a statistically significant decrease in mean body weight, a reduction in body fat, an improvement in muscle mass, and an increase in upper limb muscular endurance. All of these factors indicate to the practise of Suryanamaskar as an efficient method for weight management, boosting physical fitness, and enhancing cardiorespiratory fitness. Therefore, from a therapeutic point of view, this approach has enormous potential as a one-man army to treat illnesses such as obesity and other similar conditions. A synopsis of the study done on Suryanamaskar with regard to the treatment of diseases and the results of that research

DISCUSSION

According to the World Health Organization's (WHO) definition [30], health is defined as "a condition of full physical, mental, and social well-being and not only the absence of sickness or disability." [Citation needed] The primary objective of Yoga is to accomplish and continue achieving this condition of health, as it has been articulated. Suryanamaskar is the only Asana that works on the whole body, as opposed to the other Asanas, which only act on a certain area of the body. It is like taking a health supplement for the full body. As a result of the previous debates, we have come to the conclusion that Suryanamaskar assists in the mobilisation of the joints and the increase of one's physical stamina by allowing them to breathe to the utmost extent possible. During the practise of pranayama and meditation, it enables individuals to maintain comfortable sitting positions for longer amounts of time, which in turn allows them to protect the health of their spines. This is perhaps the most essential benefit of all. However, as Suryanamaskar is the primary focus of this article, we will restrict our discussion to that practise alone. In general, Suryanamaskar is done in conjunction with other yogic practises such as asana, pranayama, and meditation. In the yogic tradition, the method of breathing known as yogic breathing, which also goes by the name conscious breathing, is considered to be the optimal method of respiration since it includes an expansion of the chest, shoulders, and belly. Not only does this assist in delivering more oxygen to the body, but it also facilitates the exhalation of carbon dioxide to the greatest extent that is physically feasible. The breathing component that is a part of surya namaskar serves this purpose by assisting the lungs in functioning to the best of their abilities. Additionally, this component naturally assists the practitioner in lengthening the duration of both inhalation and exhalation, which is necessary for achieving the ratio of inhaling and exhaling patterns that is frequently emphasised in pranayama practise. The exhalation of waste products is the primary mechanism by which toxins are removed from the body. Through consistent practise of Suryanamaskar, this process may be improved upon and rectified. [13-14]

CONCLUSION

The practise of Suryanamaskar, which has its roots in the ancient physical training of India, is the asana sequence that has gained the greatest popularity worldwide. It also includes a great deal of variety with reference to the many yogic traditions that are practised in India in the present period. The review provides the physiological advantages of the practise, including the enhancement of muscular strength and vitality, the enhancement of joint mobility, and the extension of joint mobility. The article also cites relevant research. Aside from the enhancement of the body's mental health and the normal functioning of the endocrine glands, the physiological benefits of increasing the metabolic rate, stimulating the cardiovascular system, and increasing respiratory capacity were also covered in this article. In addition to highlighting the advantages of practising Suryanamaskar from a yogic point of view, the article also highlighted the good impact that Suryanamaskar has on puberty, the menstrual cycle, and delivery. We can draw the conclusion from the information presented above that the practise of Suryanamaskar is essential not only for people who regularly engage in yogic practises or who are looking for spiritual enlightenment, but also for the average person who wants to maintain their physical, physiological, and mental health while devoting very little of their own time to the endeavour. If youngsters start engaging in this activity when they are 7 or 8 years old, it not only helps them develop better physically, but it also helps them maintain wonderful mental health.

REFERENCES

- [1]. L. Prasanna Venkatesh (2021) "Insights on Surya namaskar from its origin to application towards health" *Journal of Ayurveda and Integrative Medicine* 13 (2022) 100530

- [2]. Krzysztof Stec (2018) "Suryanamaskar - Sun Salutations" July 2017 Publisher: MOTILAL BANARSIDASS PUBLISHERS PRIVATE LIMITED ISBN: 978-81-208-4092-8 Project: Effect of dynamic suryanamaskar
- [3]. Godse AS, Shejwal BR, Godse AA. Effects of suryanamaskar on relaxation among college students with high stress in Pune, India. *Int J Yoga* 2015;8(1): 15e21.
- [4]. Bhavanani AB, Ramanathan M, Balaji R, Pushpa D. Immediate effects of Suryanamaskar on reaction time and heart rate in female volunteers. *Indian J Physiol Pharmacol* 2013;57(2):199e204.
- [5]. Potiaumpai M, Martins MC, Rodriguez R, Mooney K, Signorile JF. Differences in energy expenditure during high-speed versus standard-speed yoga: a randomized sequence crossover trial. *Compl Ther Med* 2016;29:169e74.
- [6]. Hoyt LT, Falconi AM. Puberty and perimenopause: reproductive transitions and their implications for women's health. *Soc Sci Med* 2015;132:103e12.
- [7]. Nidhi R, Padmalatha V, Nagarathna R, Ram A. Effect of a yoga program on glucose metabolism and blood lipid levels in adolescent girls with polycystic ovary syndrome. *Int J Gynaecol Obstet* 2012;118(1):37e41.
- [8]. Dhawan V, Kumar M, Deka D, Malhotra N, Dadhwal V, Singh N, et al. Meditation & yoga: impact on oxidative DNA damage & dysregulated sperm transcripts in male partners of couples with recurrent pregnancy loss. *Indian J Med Res* 2018;148(Suppl):S134e9.
- [9]. Polis RL, Gussman D, Kuo YH. Yoga in pregnancy: an examination of maternal and fetal responses to 26 yoga postures. *Obstet Gynecol* 2015;126(6): 1237e41.
- [10]. Dangel AR, Demtchouk VO, Prigo CM, Kelly JC. Inpatient prenatal yoga sessions for women with high-risk pregnancies: a feasibility study. *Compl Ther Med* 2020;48:102235.
- [11]. Chatterjee S, Mondal S, Singh D. Effect of 12 Weeks of yogic training on neurocognitive variables: a quasi-experimental study. *Indian J Community Med* 2021;46(1):112e6.
- [12]. Stec, K. Dynamic Suryanamaskar – Sun Salutations. India: Swami Vivekananda Yoga Prakashan. 2013, s296.
- [13]. Talbott J.H., Edwards H.T., Dill D. B., and Drastich L. Physiological responses to high environmental temperature. *Am. J. Trop. Med.* 1955, 13; 381-397.
- [14]. Talbott J.H. and Michelsen J. Heat cramps. A clinical and chemical study. *J. Clin. Invest.* 1933, 12; 533-549.
- [15]. L.Prasanna Venkatesh (2017)"Insights on Surya namaskar from its origin to application towards health" *Journal of Ayurveda and Integrative Medicine* Volume 13, Issue 2, April–June 2022, 100530
- [16]. Dr.Vikas C. Kathane(2019)"A Comprehensive Study On Effect Of Surya Namaskar On Cardio-respiratory Endurance" *Journal of Research in Ayurved Science A Web based quarterly online published peer reviewed National E-journal of Ayurveda*. Vol. 1 Issue- IInd
- [17]. Dr. Sarvesh Kumar Yadav(2018)"Assessment Of The Efficacy Of Surya Namaskar In Management Of Sthaulya "Volume 6, Issue 6, 1035-1044 Research Article ISSN 2278 – 4357
- [18]. Singh Kanwaljeet(2019) "The Effect Of Suryanamaskar Yogasana On Muscular Endurance And Flexibility Among Intercollege Yoginis" June 2010 *Journal of Physical Education and Sport* 27(2)
- [19]. Dr. Abhijit Thander(2017)"Effect Of Suryanamaskar And Physical Exercise On Physiological Variables Among Intercollegiate Men Cricket Players" *MODERN PERSPECTIVES OF SPORTS SCIENCE AND YOGA FOR THE ENHANCEMENT OF SPORTS PERFORMANCE* At: Melasivapuri, Ponnamaravathi, Pudukkottai– 622 403, Tamil Nadu, India.
- [20]. VandhanaS.b(2017)"Insights on Surya namaskar from its origin to application towards health" *Journal of Ayurveda and Integrative Medicine* Volume 13, Issue 2, April–June 2022, 100530