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Effectiveness of a holistic approach of yoga therapy on quality of life in lifestyle diseases

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Abstract

In Siddha system of medicine, Yogam (Yoga) forms an important part. Among the Siddhars dealt with yogam, Thirumoolar is notable. Siddhars have advised Yogam for all categories of people. Lifestyle diseases better known as non-communicable diseases (NCDs) and diseases of civilization, characterize those diseases whose occurrence is primarily based on the daily habits of people and also as a result of an inappropriate relationship of people with their environment. The main factors contributing to lifestyle diseases include bad food habits, physical inactivity, wrong body posture, disturbed biological clock, drug abuse, tobacco smoking, alcohol drinking. The main types of Lifestyle diseases are Cardiovascular diseases, Cancers, Chronic respiratory diseases and diabetes. The other Lifestyle diseases include Hypertension, Obesity, Osteoporosis, Alzheimer’s disease, Arthritis, Atherosclerosis, Chronic Liver disease and so on. Siddha system is a holistic approach to combat Lifestyle diseases boosting the whole health system in the society. This paper deals with how the lifestyle diseases can be controlled through yoga practices.

Keywords: Yogam, Lifestyle diseases, yoga practices.

Introduction

In Siddha System of Medicine, Yogam (Yoga) forms an important part. Among the Siddhars dealt with yogam, Thirumoolar is notable. He details nicely the Attangayogam i.e. the eight steps or the eight stages of yogam in his work ‘Thirumanthiram’. The term ‘Yogam’ means ‘union’. Siddhars have defined yoga as an art which controls the mind by preventing it from distracting through sense and sense organs and unite it with the divinity after realizing the true entity of eternal bliss. Yoga is defined simply as “A perfect scientific art that unites the mind with the God or the Truth”. Yoga was defined as a mind-body practice that originated in India and is becoming increasingly recognized and used in developed nations as a health practice for a variety of immunological, neuromuscular, psychological, and pain conditions (¹, ²). Yoga includes traditional physical postures and may incorporate other components, such as breathing exercises and meditation. Yoga impacts on nervous system regulation and physiological system functioning (e.g., immune, endocrine, neurotransmitter, and cardiovascular) and improve psychological wellbeing (e.g., frequency of positive mood states and optimism) and
physical fitness (e.g., strength, flexibility, and endurance)\(^{(2)}\).

Decreased physical activity of humans, as machine plays the place of that. It leads to less usage of the energy which leads to diseases like stroke, obesity, hypertension, etc. Continuous and long time work without breaks (people working in IT/financial sector) will lead to spinal problems. Exposure to the same environments without physical or mental rest leads to malignancy of the path exposed, Lung diseases, cerebral vascular diseases, etc. Use of junk foods, packed foods for a long period leads to cancerous growth, arthritis, nutritional deficiencies, etc. Excessive usage of mobile phones and computers by the youngsters leads to skin diseases, computer vision syndrome, depression, etc\(^{(3)}\).

**Objectives of the study**

Lifestyle diseases include Heart attack, Diabetes, Stroke and Cancer which are four main causes of death in India. The other Lifestyle diseases include Obesity, Osteoporosis, Alzheimer’s disease, Arthritis, Atherosclerosis, Chronic Liver diseases and so on. The risks of developing such diseases are bad food habits, physical inactivity, wrong body posture, disturbed biological clock, drug abuse, tobacco smoking, alcohol drinking. The ultimate goal of this study is to suggest some suitable life style/yoga to reduce /control these diseases.

**Causes /Reasons for lifestyle diseases \(^{(3)}\)**

**(A) Habits**

Diet and life style are major factors thought to influence susceptibility to many diseases. Drug abuse, tobacco smoking and alcohol drinking as well as lack of exercise may increase the risk of developing diseases especially later in life.

**(B) Unhealthy lifestyles**

The unhealthy life style behaviors are, having low quality diet and being physically inactive and sedentary life.

**(C) Practices**

Excessive eating, Untimely sleeping, watching TV throughout, Hard work without rest are some of the practices lead to life style diseases.

**Yoga and its practices \(^{(4,5)}\)**

When we talk about yoga, immediately coming to our mind is sitting/standing postures of “yogis” for prolonged time in prayer. Whatever the postures/yoga we are following, each has its own impact on controlling/curing life style diseases. The role of yoga is controlling the origin and progress of various diseases as follows.

1) **Diabetes Mellitus**

Diabetes is due to increase of blood sugar level. It may be type1 and type 2. It is also described as a group of metabolic diseases in which the person has higher blood glucose (blood sugar), either because insulin production is inadequate or the body’s cell does not respond to insulin properly or both.

To reduce diabetes, practise “Bhujanga asanam”, “Dhanurasanam”, “Salabhasanam”, “Nadi sodhana pranayamam”.

2) **Cardiac diseases**

They are classified into four. They are Heart valve problems, Arrhythmia, Heart attack and Stroke. The heart attack occurs when the blood flow to a part of the heart is blocked by a blood clot. If this clot cuts off the blood flow completely, the part of the heart muscle supplied by that artery begins to die.

To control heart attack/cardiac arrest, practising “Artha pavana mukthasanam”, “Vakrasanam”, “Thadasanam” is good.

3) **Obesity**

It is a medical condition in which excess body fat has accumulated to extend that it may have a negative effect on health, leading to reduced life expectancy and or increased health problems. If
the BMI (Body Mass Index) is 25 to 29.9, it is treated as overweight and above 30 is treated as Obesity.

To reduce obesity, practise “Surya namaskaram”, “Usthasanam”, “Padahasthasanam”, “Sarvangasanam”. By doing this yoga/Asanas, fat metabolism will be increased. This fat metabolism from abdomen, thigh and buttocks, etc will enhance obesity control.

4) Hypercholesterolemia

It is the presence of high levels of cholesterol in the blood. It is a form of hyperlipidemia (elevated levels of lipids in the blood) and hyperlipoproteinemia (elevated levels of lipoproteins in the blood).

To reduce Cholesterol, practising “Bhujiangasanam,” “Salabhasanam”, “Surya namaskaram”, “Artha matyasanam” is good.

5) Hypertension or high blood pressure

It is the measure of strength or force exerted by blood on the walls of the vessels it is flowing through. This pressure largely depends on the efficiency with which our heart pumps the blood throughout the body. Harder the heart pumps, the arteries become narrower and the force is exerted.

To reduce Blood pressure, practising “Bhujangasanam”, “Parsva thrikonasanam”, “Patchimo thasa nam”, “Dhanurasanam”, “Yoga nidhra” are found effective.

Materials and Methods

Inclusion criteria

The participants were chosen according to their strength. Participants who had undergone 4 months basic training were chosen as sample. They were asked to practise one hour daily and “Pranayama” regularly. Before starting yoga, they had not undergone any type of basic exercises or practices. The study was conducted among 20 participants who came for practising yoga and having regular attendances. The selected respondents did not have any cholesterol, BP, etc in hereditary. The age group of the respondents was between 20 and 50 years. They were selected from different centers where they were practising yoga and Data was collected from both male and female participants. Before starting the practices of yoga, the respondent’s Sugar, cholesterol levels, etc were checked.

After the completion of the course (4 months), their Sugar, cholesterol levels, etc were checked and a good improvement in the parameters was observed. No marked difference was noticed in the blood pressure of the participants, after the participants had completed 4 months of practices. This may be due to short duration of observation. Athletes were excluded from the survey. All the participants were followed with same type of diet and the food habits were not changed during the yoga practice. While the participants joined for yoga, they were not in a position to sit in “Suhasanam”. But it was observed that before the end of the course, they were able to sit in “Suhasanam” for prolonged time.

Measures of preventing Life-style diseases

Daily practise some yoga like “Surya Namaskaram”. Yoga practices can also be oriented on the prevention of diseases involved (each yoga practice has its own advantage to keep away /control some diseases). Practise “Pranayama”. Read religious books daily. The practice of the Pranayamas will normalize the cardiac efficiency and peripheral resistance. BP will get controlled. Decrease the usage of mobile phone, computer, smart phones, etc. Make both mind and body comfortable. Reduce the consumption of alcohol and avoid smoking. Consume low energy dense foods which are fewer in calories per unit volume. Avoid processed foods. Utilize more physical and mental power than the usage of machines. Make a happy environment at home. Practise to be calm from the hectic load at the work place. Take small breaks from the work by taking some nourishing food suitable for the time.
Tables of study

1) Number of participants

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

2) Age group of the participants

<table>
<thead>
<tr>
<th>Age group</th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of participants</td>
<td>5</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

Majority of the participants were in the age group of 30 to 40 years.

3) Fasting Blood sugar (FBS)

(a) FBS before practising yoga

<table>
<thead>
<tr>
<th>Age group in years</th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of BS</td>
<td>5- normal</td>
<td>3- normal</td>
<td>2- normal</td>
</tr>
</tbody>
</table>

Majority of the participant’s FBS was above normal before start practising yoga.

(b) FBS after four months of practice

<table>
<thead>
<tr>
<th>Age group in years</th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of BS</td>
<td>5- normal</td>
<td>7-normal</td>
<td>6- normal</td>
</tr>
</tbody>
</table>

Majority of the participant’s FBS was normal after the practice of yoga.

4) Total Cholesterol

(a) Total cholesterol before practising yoga

<table>
<thead>
<tr>
<th>Age group in years</th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of cholesterol (in mg)</td>
<td>2-normal</td>
<td>3-normal</td>
<td>3- normal</td>
</tr>
<tr>
<td></td>
<td>3- 250-280 range</td>
<td>5- 240-270 range</td>
<td>4- 230-270 range</td>
</tr>
</tbody>
</table>

Majority of the participants were found to have cholesterol before the start of yoga practice.

(b) Total cholesterol after four months of practice

<table>
<thead>
<tr>
<th>Age group in years</th>
<th>20-30 yrs</th>
<th>30-40 yrs</th>
<th>40-50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of cholesterol (in mg)</td>
<td>5- all are normal value (below 200 mg)</td>
<td>6- normal value</td>
<td>5 –normal</td>
</tr>
<tr>
<td></td>
<td>2- 220 mg range</td>
<td>2- 220-230 mg range</td>
<td>2- 220-230 mg range</td>
</tr>
</tbody>
</table>
It was observed that after the practice of yoga for a period of 4 months, majority of the participant’s cholesterol level was reduced to normal and the entire participant’s cholesterol level had been reduced to a controllable limit.

5) About BMI

The participant’s BMI is checked before start practising yoga. The values chosen for BMI were, BMI less than 18.5 as underweight, between 18.5 and 24.9 as normal weight, between 25 and 29.9 as overweight, and above 30 as obesity.

<table>
<thead>
<tr>
<th>Age group in years</th>
<th>Total participants</th>
<th>Participants with overweight/obesity</th>
<th>Participants without obesity/normal</th>
<th>Average BMI value</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 yrs</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>1-30.5, 4- between 19 and 24.4</td>
</tr>
<tr>
<td>30-40 yrs</td>
<td>8</td>
<td>2</td>
<td>6</td>
<td>2- 27.5, 29.3 6- between 18.6 and 24.5</td>
</tr>
<tr>
<td>40-50 yrs</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>3- 27.2, 27.5, 27.7 4- between 18.8 and 24.8</td>
</tr>
</tbody>
</table>

It was observed that after undergoing 4 months practice of yoga, the BMI of participants (noted as overweight/obese) has improved its value nearer to normal.

**Results and Discussion**

1) After practicing yoga for four months, participant’s blood sugar drastically comes down to normal or nearer to normal value. Dhanurasanam, Salabhasanam, etc are practised to control this blood sugar which leads to the control of diabetes.

2) The participants who had undergone this four months practice of yoga are able to control their total cholesterol to a controlled level. Surya namaskaram, Artha matyasnam, etc are practised to control this cholesterol of the participants to a limited value. 3) It is observed in general that the participants are becoming fresher, leading a peaceful and happy life, without any stress or tension.

**Conclusion**

We conclude that most of the life style diseases can be controlled by practising yoga. “What is needed today is an extension of focus from organ based expertise”. A new holistic approach is required which needs the dedicated team efforts of Physician, Dietician and Yoga experts who work across their traditional vault. Yoga is effective for controlling all types of diseases. Our recommendations above will allow researchers to work alongside yoga practitioners to craft potent, standardized programs that are also amenable to evidence-based evaluation in a research environment.
References