

YOGA-ITS AWARENESS AND BENEFITS ON HEALTHSofia Noor¹, K. V. S. Prasad², G. Krishnababu³**HOW TO CITE THIS ARTICLE:**

Sofia Noor, K. V. S. Prasad, G. Krishnababu. "Yoga-Its Awareness and Benefits on Health". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 36, May 04; Page: 6248-6256, DOI: 10.14260/jemds/2015/909

ABSTRACT: BACKGROUND: In spite of the benefits of yoga not much is being done for incorporating it along with conventional methods of treatment for chronic diseases. It has been a subject of research for the past few decades as a complementary therapy for chronic diseases, but still lot needs to be done regarding it being used as a non-pharmaceutical method for treatment. This study was carried out to find out the benefits of yoga if practiced regularly for a period of 3 months. **OBJECTIVES:** To find out the awareness regarding the benefits of yoga and to find out the benefits on various ailments of regular yoga practice for a period of 3 months. **MATERIALS & METHODS:** Data was collected from adults who followed a regular regime of Yoga from 3 centers in the city of Kakinada in a pretested questionnaire which contained both open and close ended questions in the beginning and at the end of 3 months of regular yoga practice. Analysis was done using epi info and significance was tested using Chi square tests. **RESULTS:** There was significant improvement in Joint pains and low back ache, obesity, Stress and digestive problems of the respondents. The general awareness level about the benefits of yoga were low. **CONCLUSIONS:** The observed favorable effects of yoga on all the said variables needs to be substantiated by more rigorous studies. However much needs to be done to create awareness as well to include yoga as a complementary as well as preventive therapy for most chronic diseases.

KEYWORDS: Yoga, Regular practice, Awareness, Health benefits, chronic diseases.

INTRODUCTION: Yoga has been around for about 5000 years and is really a comprehensive practice that integrates physical, mental and spiritual elements. Swami Vivekananda Yoga Anusandhana Samasthana highlight a variety of health benefits from regular yoga practice. Some of them include cardio respiratory functions, increased flexibility, reduced joint and low back pain and improved digestive functions, reduced stress and a feeling of general well-being. Weight loss and improved appetite with reduced craving for food is another added advantage of yoga. Many different methods of yoga exist and each has its own technique for treating and preventing diseases. Despite yoga having received increased attention of late, there are a very few studies on yoga and its benefits. The present study was conducted to find out the benefits of yoga on the various aspects of physical and mental health.

MATERIALS AND METHODS: This study was carried out among the adult residents (≥ 18 years) of the city of Kakinada practicing regular yoga at 3 centers in the city of Kakinada.

A pretested questionnaire that contained both open ended and close ended questions were administered to the subjects willing to share their medical details and participate in the study. Pain in any large joint or backache which caused discomfort to the individual while carrying out activities of daily living was taken as symptom present. Total cholesterol and lipid profile was seen for improvement in cardiac problem. Broca's index was used for calculating obesity. Weight more than 10 % of the ideal height was taken as all the overweight. Bergen Insomnia Scale containing six items

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pertaining to sleep onset, maintenance and early morning awakening was used to measure insomnia. Perceived Stress Scale by Sheldon Cohen ranging from 0 to 4 was used for measuring stress. Rest symptoms were subjective to the individuals. Complete confidentiality was maintained regarding the identity of the individual.

Data was collected in the month of July 2013 and upto December 2013 from all the individuals on both occasions. The centers were visited twice daily for a period of 15 days to include maximum number of participants. Only those found to practice regularly were administered the questionnaire. Several studies have shown that a period of 12 weeks of continuous yoga brings about a marked difference in the health profile of the individual and hence the study period was taken as 3 months. Data analysis was done using epi info. Variables were presented as frequencies and percentages. Chi square was used to test for significant associations.

Inclusion Criteria:

- Respondents practicing regular yoga (ie 1 hour of yoga daily for at least 5 days a week.)
- Willing to share their medical details.

Exclusion Criteria:

- < 18 years of age.
- Not doing regular practice of yoga.
- Respondents found on only one occasion after 3 days of continuous visit.
- Not willing to participate in the study.

RESULTS: Sociodemographic characteristics of respondents.

Age of the respondents ranged from 18 to 79 years with a mean of 35.4+ 15.10 years. The majority (82.9) were less than 47 years old, males (65.8) and singles (47.1%).Two thirds of respondents (67.6%) had atleast secondary education.

The sociodemographic charecteristics are represented in table 1.

Age group	No. of respondents
18-26	118 (31.0)
27-35	127(33.4)
36-44	49(12.9)
45-53	35(9.2)
54-62	20(5.3)
63+	31(8.2)
Gender	
Males	250(65.9)
Female	130(34.2)
Marital status	
Currently married	160(42.1)
Widowed & separated	41(10.8)
Single	179(47.1)

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Occupation	
Job holders	122(32.1)
Business	146(38.4)
Students & housewife	112(29.5)
Education	
Illiterate	08(2.1)
Primary	115(30.3)
Secondary	101(26.6)
Above	156(41.1)

Table 1

Table 2 represents the awareness regarding the benefits of regular practice of Yoga. 196 (51.6%) of the respondents were aware of the benefits of yoga. Among the younger age group <44years were more aware 59.9% whereas in >44years only 30.3% were aware of the benefits. Chi square was 35.7, $p < 0.001$ which is significant.

Not much difference was noted among the males and females 56% and 43.1%. The chi square was 5.71, $p < .02$ which is statistically significant.

Separated, single and widowed were more aware 127(57.7%) compared to currently married couples which was 69(43.1%).

Chi square value 10.8, $p < .001$ which is again significant.

Secondary and above educated respondents were more aware 161 (62.6%). Chi square value is 38.8, $p < .001$ which is highly significant.

Looking at the occupation of the respondents 105(71.9%) business people were more aware compared to job holders 60(49.2%) or even students and house wives 31(27.7%)

Respondents aware of 3 or more benefits were considered as being aware of the benefits of yoga.

1. Age group	Aware (n=196)	Unaware(n=184)
<44 years	176(59.9)	118(40)
>44 years	20(30.3)	66(76.7)
2. Gender		
Males	140(56)	110(44)
Females	56(43.1)	74(56.9)
3. Marital status		
Currently married	69(43.1)	91(56.9)
Single, widowed & separated	127(57.7)	93(42.3)
4. Education		
Secondary and above	69(43.1)	91(56.9)
Below secondary	35(28.5)	88(71.5)
5. Occupation		
Business	105(71.9)	41(28.1)
Jobholders	60(49.2)	62(50.8)
Students & housewives	31(27.7)	81(72.3)

Table 2: Awareness Regarding the Benefits of Yoga

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Health problems as in Table 3 shows 252(66.3%) of the respondents suffered from low backache or joint pains of varying degrees of severity. 220(57.9%) had either cardiac or respiratory ailments.

257(67.6%) had either difficulty in falling asleep or were unable to sleep for more than 4 hours at a stretch. A small group 123 (32.4%) had a feeling of general unwell or felt stressed out with their routine work. 160(42.1%) of them were overweight. Wt. more than 10% of the expected was taken as overweight. 28(33.7%) had digestive problems which included constipation and acid peptic disorders.

Health problem	Males (n=250)	Females (n=130)	Total (n=380)
Joint pains & Low back ache	149	103	252 (66.3)
Respiratory & cardiac diseases	137	83	220 (57.9)
Obesity	70	90	160 (42.1)
Digestive problems	163	94	128 (33.7)
Insomnia	96	32	257 (67.6)
General unwell & stressed	96	27	123 (32.4)

Table 3: Respondents health problems at the beginning of yoga sessions

Health problems	Improved	Not improved	Total	Chi square	P value
Joint & low backache	140	112	252	4.74	0.029 (s)
Respiratory & Cardiac Problem	127	93	220	4	0.249 (ns)
Overweight	69	91	160	38.9	0.001 (s)
Insomnia & stress	56	72	128	7.91	0.005 (s)
Digestive problems	161	96	257	1.33	0.001 (s)
General Wellness	35	88	123	35.7	

Table 4: Outcome of the health problems after 3 months of regular yoga practice

The benefits of yoga of the respondents were noted depending on their medical reports, tests and examinations conducted and their subjective feeling. There was significant improvement in the respondents musculoskeletal problems of joint pains and low back ache, chi square 4.74 p<0.02.

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A significant reduction of weight of the respondents, chi square 38.9 $p < 0.001$. Improvement in digestive problems also showed a significant change, chi square 1.33 $p < 0.001$. Relieved of the feeling of stress and sleep disturbance also showed a significant improvement, chi square 7.91 $p < 0.005$. Feeling of overall wellbeing was lower. Only 20.5% of the respondents had a better feeling at the end of three months of regular yoga practice.

DISCUSSION: The practice of yoga has long been in existence worldwide and its practice continues to increase both in developed and developing countries. The prevalence of Non Communicable is also on an increase in developing countries. The practice of Yoga does have a beneficial effect if practiced along with conventional medical treatment.

In the present study there was a significant improvement in the musculoskeletal pains of the back and joints of the respondents (55.5%) chi square 4.74 and p value 0.029. The findings of a study conducted by Kimberly Williams, Lois Stienberg and John Petronis in 2003^[1] show a decrease of 68% in low backache patients.

Yoga based lifestyle modifications helped regression of coronary artery disease and improvement in myocardial perfusion in a prospective study conducted by Yogendra J et al in 2004.^[2]

Yoga increases regression and retards progression of arteriosclerosis in patients with cardiac disorders as shown by a randomized control trial conducted by Bijlani RL et al in 2005^[3] on patients of proved coronary heart diseases by angiography who practiced yoga for a period of 1 year. These patients showed decrease in the number of angina attacks, improve exercise capacity and decrease in body weight.

The present study also shows a finding of 57.7% of the respondents showing improvement in their cardiorespiratory symptoms and also an improvement in their total cholesterol and lipid profile levels. The chi square results of this study was not significant.

There is a vast difference in the results of total cholesterol and lipid profile of the following studies. A study by Balaji PA, Smitha VR and Sadat AS in 2011^[4] shows a significant reduction of total cholesterol, triglyceride and LDL level but non-significant change in HDL level. Study of Singh S et al in 2008^[5] and Bijlani RL in 2005^[3] shows a reduction in free fatty acids LDL, VLDL and a rise in HDL levels. Malhotra V et al in 2004^[6] found a non-significant but lowering of LDL, VLDL and Triglyceride with 40 days of yoga practice.

Yoga significantly improves the respiratory functions and reduces the use of medications as shown in the study conducted by Reddy TP in 2010.^[7] Bronchial asthma patients also show a reduction in the number of attacks and use of medication as found by Bijlani RL in 2005.^[3] Fulambark A et al^[8] also found at Yoga has a positive effect on COPD patients.

Obesity and even overweight is a risk factor for almost all chronic diseases which can be easily managed without medical intervention also. The present study shows a significant reduction chi square 38.9 and p value 0.001 of 10% of the extra weight of the respondents. Yoga for 1 hour in the morning for 3 months resulted in decrease in BMI and waist hip ratio in a study by Balaji PA, Smitha VR and Sadat AS in 2011.^[9]

The present study shows a significant reduction chi square 7.91 and p value 0.005 in stress level and problems of insomnia. A study conducted by Michalsen A et al in 2005^[10] and west J et al in 2004^[11] also showed the positive effects of yoga on stress. Nagarathna Ret al in 2012^[12] found a significant reduction in BMI and stress.

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Digestive problems were also found to be significantly improved after 3 months of regular yoga practice in this study chi square 1.33 p value 0.001. Yoga can relieve stress and hence the digestive ailments.

The present study could find that the overall feeling of unwell which was found in 123(32.4%) of the respondents showed only a improvement by 28.5%. The cause for the unwell feeling which is a vague symptom needs to be investigated in detail. Though studies regarding various system ailments are there no study regarding general well-being could be found.

CONCLUSIONS: As per this study the practice of yoga is more common in younger age group ≤ 44 years though non communicable diseases increase with increasing age. Awareness level regarding the benefits are also less. Not many educated people know about the benefits. This study also concludes that businessmen have a better knowledge regarding the benefits than job holders. More awareness has to be created through various mass media regarding the usefulness of yoga as age advances. The results of this study also indicate that there is also a significant improvement in most of the ailments when the respondent has practiced yoga regularly for a period of three months. It may be possible to have still better results i.e. delay the onset of non-communicable diseases if the practice of yoga is started at younger age and done routinely. Yoga has to be done under the supervision of a trained instructor only.

The observed favorable effects of yoga on all the said variables needs to be substantiated by more rigorous studies.

However much needs to be done to create awareness as well to include yoga as a complementary as well as preventive therapy for most non-communicable diseases.

ACKNOWLEDGEMENT: We sincerely thank the participants for their co-operation during the entire period of study. We also thank the computer operator Sai for his help in preparing the manuscript.

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Date of Submission: 09/04/2015.
Date of Peer Review: 10/04/2015.
Date of Acceptance: 24/04/2015.
Date of Publishing: 02/05/2015.