International Journal of Multidisciplinary Innovative Research
ISSN: 2583-0228 Volume 2, Number 1 (Jan' 2022) pp. 26-32

https://www.ciir.in

Effect of Selected Yogic Practices on BMI Variables among Residential Females in Shimla District, Himachal Pradesh: A Study of the Age Group of 30 to 60 Years

Dr. Satyaprakash Pathak

Assistant Professor (Yoga), Department of Yoga Studies,

Himachal Pradesh University Summerhill, Shimla, India.

Email: drpathak78@gmail.com

ABSTRACT: ***Yogic Sādhanā-s is practiced with a therapeutic intention in the form of Yogic Therapy, it can help prevent and aid recovery from Physical and Mental ailments. The continuous practices of Yoga Abhyāsa (practices) have much effect on the Human Body and Mind such as: All round health fitness, Weight loss, Stress relief, Inner peace, Improved immunity, Living with greater awareness, Better relationships, Increased energy, Better flexibility and posture, Better intuition etc. The benefits accrued by being a regular practitioner are numerous. Some very discernible ones are – improvement a health, Protection from strength, improvement or Physical strength, protection from injury and detoxify the Body. Yogic Therapy is gaining among mainstream medical practitioners. As more clinicians use these techniques either for themselves or for their patients and as more Gurū-s (Masters) designs more specific applications of Yoga Sādhanā, the spectrum of Yogic Therapy grows exponentially.***

BMI is an approximate measure of your total Body fat. Being underweight or overweight can cause health problems, especially if you are also inactive. Your waist circumference is a better predictor of Health risk than BMI. Body Mass Index (BMI) is one method used to estimate your total amount of Body fat. It is calculated by dividing your weight in kilograms by your height in meters squared (m2). If you are overweight (with a BMI over 25) and physically inactive, you may develop: Cardiovascular (Heart and Blood circulation) disease, Gallbladder disease, High Blood pressure (Hypertension), Type 2 Diabetes, Osteoarthritis, Certain types of Cancer, such as colon and Breast Cancer, Depression and other Mental Health disorders. Risks of being underweight are: Compromised immune function, Respiratory disease, Digestive diseases, Cancer, Osteoporosis etc.

Result: There was a significant decline in the Body Weight (p=0.000), Height value was not significant at any level of confidence and significant increase in

BMI (p=0.000) after Yoga when compared to that before the Yogic therapy.

Conclusion: Yogic therapy is beneficial in maintaining better Health by regulating BMI.

KEYWORDS: Body Mass Index, Yogic Therapy.

INTRODUCTION

The word Yoga has been derived from Sanskrit grammar the verb root √yuj in a Sanskrit grammar In Sanskrit literature on Yoga seems to use the word in all the three senses [1].

√ Yuj Samādhau – Integration,√ Yuj Saṃyamane – Control √ Yujir Yoge – Joining So far, the first two meanings are concerned; all the literatures and schools of Yogic Sādhnā-s have unanimously accepted these meanings. Patañjali, the first systematize of the Yogic discipline – seem to accept the meaning of Yoga as integration–since the first commentator of Pātañjalayogasūtram on Vyāsa in his commentary writes: Yogaḥ Samādhiḥ i.e. Yoga is Samādhi. Patañjali does not subscribe to the other meaning of √Yuj i.e.Yujir Yoge 'joining'. This is mainly because Patañjali-s philosophy is based on Sāṁkhyan metaphysics and Sāṁkhyan believes in separation of Puruṣa from that of Prakṛti. – With which Puruṣa has wrongly got itself identified. Similarly Patañjali considers Draṣṭā Seer Principle to be separated from Dṛśya (Seen Principle) with which it has got identified. Thus separation of these two principles is supposed to be Yoga [2]. We also find meaning of Yoga as separation in Śrīmadbhagavadgī. Yoga helps in the co-ordination and control of the subtle forces within the Body. Yoga brings in perfection, peace and everlasting happiness; one can even have increased energy, vigor, vitality, longevity, resistance, calmness, and good sleep at times by the Yogic Abhyāsa (Practice). The Yoga Abhyāsa will help people to control the emotions and passions and resistance power increases and removes the disturbing elements from Mind. The aim of Yogic Sādhanā-s (Practices) is to overcome all kinds of sufferings that lead to a sense of freedom in every walk of life with holistic health, happiness and harmony.

Yogic Sādhanā-s is practiced with a therapeutic intention in the form of Yogic Therapy, it can help prevent and aid recovery from Physical and Mental ailments. The continuous practices of Yoga Abhyāsa (practices) have much effect on the Human Body and Mind such as: All round health fitness, Weight loss, Stress relief, Inner peace, improved immunity, living with greater awareness, Better relationships, increased energy, Better flexibility and posture, Better intuition etc. The benefits accrued by being a regular practitioner are numerous. Some very discernible ones are – improvement a health, Protection from strength, improvement or Physical strength, protection from injury and detoxify the Body. Yogic Therapy is gaining among mainstream medical practitioners. As more clinicians use these techniques either for themselves or for their patients and as more Gurū-s (Masters) designs more specific applications of Yoga Sādhanā, the spectrum of Yogic Therapy grows exponentially [3].

BMI is an approximate measure of your total Body fat. Being underweight or overweight can cause health problems, especially if you are also inactive. Your waist circumference is a better predictor of Health risk than BMI. Body Mass Index (BMI) is one method used to estimate your total amount of Body fat. It is calculated by dividing your weight in kilograms by your height in meters squared (m2). If you are overweight (with a BMI over 25) and physically inactive, you may develop: Cardiovascular (Heart and Blood circulation) disease, Gallbladder disease, High Blood pressure (Hypertension), Type 2 Diabetes, Osteoarthritis, Certain types of Cancer, such as colon and Breast Cancer, Depression and other Mental Health disorders [4]. Risks of being underweight are: Compromised immune function, Respiratory disease, Digestive diseases, Cancer, Osteoporosis etc.

MATERIALS AND METHODS

The present study was conducted to assess the Effect of Selected Yogic Practices on BMI Variables among Residential Females in Shimla District, Himachal Pradesh: A Study of the Age Group of 30 to 60 Years. The present study involved 38 subjects. The study was conducted in Aura Wellness

Studio ladies at Shimla Himachal Pradesh. The research protocol was approved by Dr. Satayprakesh Pathak Assistant Professor (Yoga), Department of Yoga Studies Himachal Pradesh University, Shimla and Dr. B.S.Ranjan Assistant Professor (Yoga), Department of Yoga Studies Himachal Pradesh University, Shimla. All the subjects were subjected to Yoga Abhyāsa (practices) for two month. The Yoga Abhyāsa (practice) was performed six days per week between 8 am to 9:30 am under the direct supervision of a trained Yoga expert. This practical session utilized a standard sequence of selected Pre Practice: Sukhāsana and Prayer, Pre-requisite Practices: Śodhankriyā-s, selected Yogic Sūkṣmavyāyāma and Sūryanamskāra, Main Practices: Āsana-s, Prāṇāyāma-s, Relaxing Practices and Dietary Advice [5-8].

The various Pre Practice included in the present study are Sukhāsana, Oṁkāra Uccāraṇa and selected Mantra [9-11]. The Pre-requisite Practices were Śodhankriyā-s: Kuñjala/Gajakarṇī, Agnisārakriyā and Kapālabhāti, Sūkṣmavyāyāma: Udara-Śakti-Vikāsaka-1to10, Kati-Śakti-Vikāsaka-1to5, Vaksa-Sthala- Śakti-Vikāsaka-1or2 and Sūryanamskāra [12-15]. Main Practices Āsana-s was: Virbhadarāsana, Trikonāsana, Naukāsana, (Prone Position) Śalbhāsana, Cakrāsan, Karṇpiḍāsana, Śaśāṅkāsana and Paścimottānāsana. The different Prāṇāyāma-s were Nāḍīśodhana Prāṇāyāma, Bhastrikā-kumbhaka-Prāṇāyāma and Suryabhedana-Kumbhaka-Prāṇāyāma Relaxing Practices were Śavāsana, Dhyāna Oṁkāra Uccāraṇa and Śāantipāth Dietary advice are to take a Santulita, Sātvik Āhāra or modern diet according to hath yoga text only. The Body Mass Index (BMI) was estimated in all the participants before and after the experimental procedure using the formula, BMI = Weight in kg/ Height 2 in meter [16].

Statistical Analysis: The data obtained was analyzed for the statistical significance using a paired "t" test .$p < 0.01$ was considered the level of significance.

RESULTS

The present study involved the assessment of Effect of Selected Yogic Practices on BMI Variables among Residential Females in Shimla District, Himachal Pradesh: A Study of the Age Group of 30 to 60 Years [17-21]. The present study showed that the BMI Variables subjects reduced their Body Weight and improves the BMI level in Body. The significant reduction in Body Weight ($p=0.000$, Fig- 1), and BMI ($p=0.000$, Fig-2), after Yoga when compared to that before the Yoga therapy. This decline was the clear evidence that two month Yogic therapy throw yogic practices improved the BMI level in human Body, which further indicates that two month Yogic therapy improves the BMI level in the Human Body.

DISCUSSION & CONCLUSION

The present study confirmed the positive effects of Yogic therapy on BMI variables subjects. The significant reduction in the Body Weight and BMI as recorded in the present study. According to Yogic therapy, increased Body mass is the indication of imbalance in the Triguna and Tridosha. The root causes of the abnormalities are adhi or mental stress. To overcome the stress the person habituates overeating leading to the deposition of fat in the Body [22]. To manage Overweight or Obesity, one has to reduce the Mental Stress and has to provide the sufficient Physical activities. The Yogic Sādhanā-s Abhyāsa (practice) can regulate all the Body functions in a balanced manner and helpful in providing sustainable Health. Analysis of our results clearly indicated that the complications of BMI can be reduced by Yogic therapy. The reduction in the Body Weight might be due to reduction in the deposited fat on adipose tissue.

Table 1: Comparison of Height between Pre Test and Post Test of Residential Females in Shimla District, Himachal Pradesh (A Study of the Age Group of 30 to 60 Years) in respect of Mean and 't` Value.

Height	N	Mean	S.D	R	S.E.M	DF	't' value
Pre Test	**38**	**1.5890**	0.09538	0.00000	0.01547	37	0.000
Post Test	**38**	**1.5890**	0.09538				

Interpretation of Table 1:

Table- 1 Shows that the value of "t" = .000 is not significant at any level of confidence. Hence it may be inferred that there is a not any significant difference in the two means. On the perusal of means, it is clear that post-test mean (1.5890) is equal to the pre-test mean (1.5890). Hence it may be concluded that Yogic practices do not affect Height significantly [23]. The fact related to mean values of height of Residential Females in Shimla District; Himachal Pradesh; the Age Group of 30 to 60 Years is further supported by the graphic depiction in figure 1.The height of histogram drawn in same of pre-test and post-test.

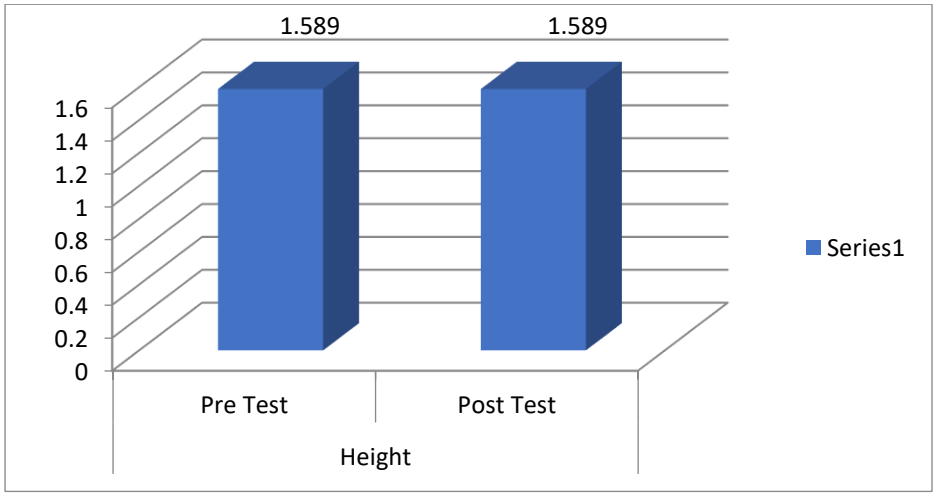

Figure 1: Comparison of Mean Values of Height among Pre Test and Post Test of Residential Females in Shimla District, Himachal Pradesh; the Age Group of 30 to 60 Years.

Table 2: Comparison of Weight between Pre Test and Post Test of Residential Females in Shimla District, Himachal Pradesh; the Age Group of 30 to 60 Years in respect of Mean and 't` Value.

Weight	N	Mean	S.D	S.E.M	r	df	't' value
Pre Test	38	68.4395	9.66391	1.56769	0.984	37	13.647
Post Test	38	64.4184	8.93142	1.44887			

Interpretation of Table 2:

Table 2 shows that the value of "t" = 13.647 is more than the Table value of "t" which is 2.704 for DF = 37 at 0.01 level of confidence. Thus this value of "t" is highly significant at 0.01 level of confidence. Hence it may be inferred that there is a significant difference in the two means. On the perusal of means, it is clear that post-test mean (68.4395) is less than the pretest mean (64.4184). Hence it may be concluded that *Yogic* practices do affect weight significantly [24].

The fact related to mean values of weight of pre-test and post-test is further supported by the graphic depiction in figure 2. The height of histogram drown in favour of pre-test is higher than post test.ss [25]. The fact related to mean values of height of Residential Females in Shimla District; Himachal Pradesh; the Age Group of 30 to 60 Years is further supported by the graphic depiction in figure 1.The Height of histogram drawn in same of pre-test and post-test.

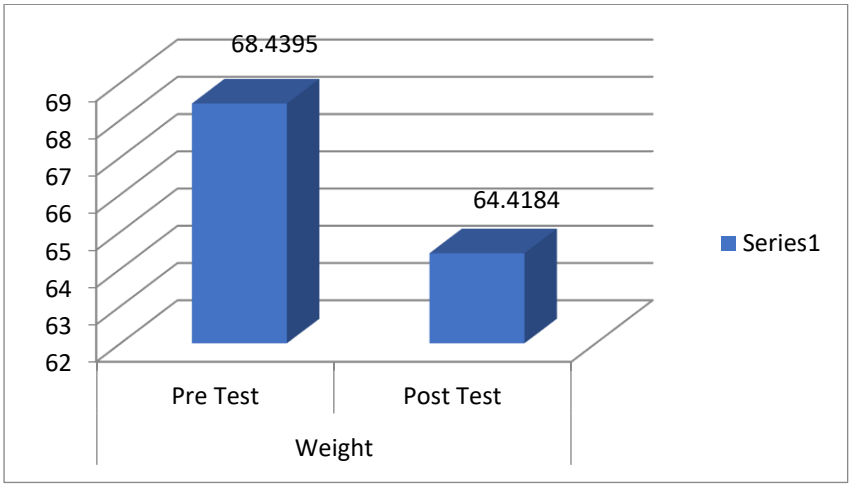

Figure 2: Comparison of Mean Values of Weight among Pre Test and Post Test of Residential Females in Shimla District, Himachal Pradesh; the Age Group of 30 to 60 Years.

Table 3: Comparison of BMI between pre-test and post-test of Residential Females in Shimla District, Himachal Pradesh; the Age Group of 30 to 60 Years in respect of mean and 't' value.

BMI	N	Mean	S.D	S.E.M	R	Df	't' value
Pre Test	38	27.2316	4.01282	0.65097	0.984	37	13.389
Post Test	38	25.6421	3.78315	0.61371			

Interpretation of table 3:

Table 3 shows that the value of "t" = 13.389 is more than the Table value of "t" which is 2.704 for DF = 37 at 0.01 level of confidence. Thus this value of "t" is highly significant at 0.01 level of confidence. Hence it may be inferred that there is a significant difference in the two means [26].

On the perusal of means, it is clear that post-test mean (25.6421) is less than the pretest mean (27.2316). Hence it may be concluded that yogic practices do affect BMI significantly [27]. The fact related to mean values of BMI of pre-test and post-test is further supported by the graphic depiction in figure 3. The height of histogram drown in favour of pre-test is higher than post-test.

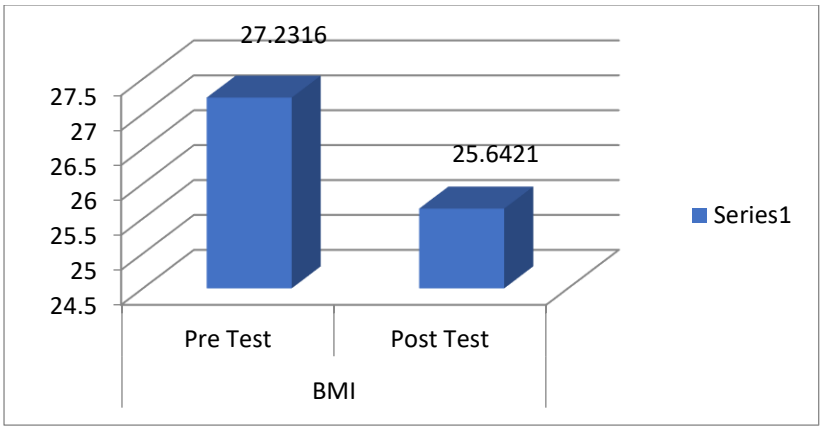

Figure 3: Comparison of Mean Values of BMI among Pre-Test and Post-Test of Residential Females in Shimla District, Himachal Pradesh; the Age Group of 30 to 60 Years.

REFERENCES

[1] Dr Aruna Goel, (2007). "Yoga Education philosophy and Practice", Deep & Deep Publications, F-159, Rajouri Garden, New Delhi, p. 10.

[2] Ministry of AYUSH, Govt.of India, (2017). "21 June International Day of Yoga Common Yoga Protocol", Publisher Director Morarji Desai National Institute of Yoga 68, Ashok Road, New Delhi, pp. 5-7.

[3] Hathayoga ke Adhar Evm Prayoga, by Dr.S.P.Pathak, Publications by; by M.D.N.I.Y New Delhi.

[4] Concept of Yoga & Its Traditional Aspects by Dr.S.P.Pathak, Publications by; ICDEOL, Himachal Pradesh University Shimla-5.

[5] Dr. Usha Lohan, (2006). "Scientific Investigation of Yogic Practices", R.D. Pandey, Satyam Publishing House, N-3/25, Mohan Garden, New Delhi, pp. 15-16.

[6] Therapeutic References in Traditional Yoga Texts- the lonavla Yoga institute (India 2010).

[7] Antonio Sausys, Introduction to Yoga Therapy - Yoga Therapy ATH Yoga Co-Editor.

[8] Therapeutic References in Traditional Yoga Texts- the lonavla Yoga institute (India 2010).

[9] India Ashram - Yoga Vidya Gurukul, Village Talwade, Trimbak, Nasik, India.

[10] Eat for health: Australian dietary guidelines (summary), National Health and Medical Research Council, Australian Government. About BMI for children and teens, 2015, US Centers for Disease Control and Prevention.

[11] Mooney SJ, Baecker A, Rundle AG 2012, "Comparison of anthropometric and body composition measures as predictors of components of the metabolic syndrome in a clinical setting", Obesity Research and Clinical Practice, vol 7, no. 1, pp. 55-66.

[12] BMI classification, 2015, World Health Organization (WHO).

[13] Suchetha Kumari N,et.al (2011), "Effect of Yoga Therapy on Body Mass Index and Oxidative Status" Nitte University Journal of Health Science NUJHS Vol. I, No.1-3, September 2011.

[14] V Parthiban and Dr. V Vallimurugan (2016), Effects of variation of Yogic practices on BMI and flexibility among obese college men, ISSN: 2394-7500, International Journal of Applied Research 2016; 2(7): 391-393.

[15] Anita Herur*, et.al (2011), "Effect of body mass index and gender on the cardiovascular and mental response to Yoga" Biomedical Research 2011; 22(4): Pp 499-505.

[16] Dr. Aloke Sen Borman (2016), "Effect of Yogic asana on body mass index", International Journal of Physiology, Nutrition and Physical Education 2016; 1(1): 01-04, ISSN: 2456-0057.

[17] C. Selvaraji, & Dr. S.Sivasankar (2017), "Effect of Hatha Yogic Practices With and Without Sūryanamskār on Body Mass Index and Span of Attention of

[18] Over Weight Rural High School Boys" International Journal of Adapted Physical Education & Yoga IJAPEY ISSN: 2455-8958.

[19] Dinkar R. Kekan (2013), Effect of Kapālbhāti Prāṇāyāma on Body Mass Index and Abdominal Skinfold Thickness Indian Medical Gazette — November 2013.

[20] Mini Paul and Dr. Rajeev Kumar (2017), "Effect of Yoga on the reduction of Body mass index" International Journal of Yogic, Human Movement and Sports Sciences 2017; 2(2): 84-86 ISSN: 2456-4419.

[21] Patil Smita, et al (2016), "Effect of Prāṇāyāma on Body Mass Index in Young Medical Students" International Journal of Research and Review E-ISSN: 2349-9788; P-ISSN: 2454-2237.

[22] Chandrasekharan Nair Kesavachandran, Vipin Bihari & Neeraj Mathur (2010), "The normal range of body mass index with high body fat percentage among male residents of Lucknow city in north India" Indian J Med Res 135, January 2012, pp 72-77.

[23] Bharat Thakur, (2007). "Yoga for Weight Loss", Wisdom Tree 4779/23, Ansari Road, Darya Ganj, New Delhi, pp. 9-11.

[24] https://www.artofliving.org/in-en/yoga/yoga-benefits.

[25] www.oprah.com/.../yoga-therapy-health-benefits-of-yoga.

[26] https://theyogatherapyinstitute.org/benefits-yogatherapy.

[27] https://www.goodtherapy.org/learn-about-therapy/.../yoga-therapy.