

The Combined Effect of Yogic Practices with Electromagnetic Therapy on Body Mass Index among the Obese Tribals Living In the Urban Area nearby Thriuvallur District

¹L.Durai, ²Dr. K. Venkatachalapathy

¹Ph.D. Yoga Research Scholar, Karpagam University, Coimbatore, India

²Asst Prof., Centre of Yoga Studies, Annamalai University, Annamalainagar India

Abstract: The purpose of this study was to investigate the combined effect of yogic practices with EMT on BMI among the obese tribals. For that, 30 obese tribal were selected from the tribals who are living in the urban area nearby Thiruvallur District close to Arumbakkam and Navalur Reserve forest areas, with the mean age 39 ± 9.4 years old, height 162 ± 7 cm and weight 85 ± 17.3 kg. Subjects were randomly divided into two groups. Yogic practices with Electromagnetic therapy (n=15), were given training for 12 weeks (3 days/w morning 6.00 to 7.00 AM, Asanas 30 minutes, pranayamas 15 minutes, yoga nidra 15 mts, E.M.T Evening 6.00 to 7.00 PM same days. The second (n=15) group was treated as control group. It did not participate in any of the above training. yogic practices such as proper food (sathvic food) proper exercise (asanas), proper breathing (pranayama) and proper relaxation (yoga muidhra) were taught before training to the treatment group only. BMI level of Tribal at the base line and after training were recorded. Mean, mean difference, standard deviations and paired 't' test were applied for examining the hypothesis. The result of statistical analysis showed that there is significant difference on BMI found after training and no improvement in control group.

Keywords: EMT – (Electro Magnetic Therapy), BMI – (Body Mass Index), YT-(yoga Therapy).

1. INTRODUCTION

Obesity is one of the health risk factors; it causes increased blood sugar and Hypertension. Many observations made at Sathyamangalam forest area by the press media of The Hindu daily paper published that the Tribal living there, are affected by Asthma though they are in good environmental condition. The obesity as a risk factor for major health problems is observed even among the tribal community located around the Thiruvallur district in Tamilnadu. They are living very near the ridges of the S.V.G puram pulikunram in Mathur Forest areas. The medication facilities are less in that area. The yogic practices are likely to improve their health conditions Similarly the electromagnetic therapies also provide help in improving health. Survey of yoga practitioners viewed that frequency of yoga practice predicts health in managing obesity.

The ancient people acknowledged yoga as a therapy as a vidya and treated it time immemorial yogic practices exist among the people. These are well established in the "Taittiriya Upanishad" in which the pancha koshas were treated as Brahman. Yoga includes practices such as taking sathvic food, asanas, pranayama, meditation and relaxation. Is an alternate medicine yoga provides way to prevent diseases and improves the health condition. So there is a need to find out the yogic practices as a therapy oriented approach.

Electro Magnetic Therapy:

Electro Acupuncture Therapy includes electric and magnetic therapy. Its effect is apparent, and there is no side effect caused by taking medicines and inoculation. At present the therapy is very popular in the field of family hygienic.

The Content of Electric Therapy:

In 1780 carboni, a western scientist discovered rules about electric current in reverse and flashes while he was processing experiment on frogs. In 1783, A Japanese scientist – Hshimoto Soukichi performed a experiment on human body by using electricity. In 1825, a French researcher, salender began using Galvanic acupuncture to heal the diseases of nervous system. In 1859, Sakuma shoyan, a Japanese scientist made electric current instrument to heal diseases.

In 1950 a Japanese doctor, Nakatani yoshio made use of direct current resistor device to measure the amount of electric current under skin from a patient with renal diseases. He discovered that there were a series of acupuncture points and twelve other channels. He claimed that acupuncture points are easy to conduct electricity. We have made use of Electric resistor device to probe acupuncture points. When we find that the resistor is too strong it symbolizes that electric current is too weak and it means deficiency of vital energy, and when the resistor is too weak it symbolizes electric current is too much and it means full of energy.

The Content of Magnetic Therapy:

The Earth is a big magnet. In the inner side and surroundings of the earth, there is a magnetic power line passing through. The place with passing of magnetic power line is magnetic field. The place which our human live in, is a place full of magnetism from the beginning. When the magnetism of the earth changes we humans will be influenced. People in the modern world have suffered due to the shortage of magnetic energy in their bodies. The shortage of magnetism will cause the diseases of autonomic nervous system.

Electro Magnetic Therapy:

Electromagnetic therapy combines the therapeutic principles of electricity and magnetism and the effects one more apparent.

Tiens – Life Electro Acupuncture instrument is used to find out the electromagnetic deficiency in the organs through accupoints in the palm, already found out by the research scholars, and also uses to improve the immune power of human body.

Following are the functions about Tiens-life-Electro Acupuncture instrument,

First, it can improve blood circulation and enhance the amount of oxygen of cry thought and dilute blood vessels and improve metabolism.

Second, it can enhance the muscle contraction when the electric current occurs, and be good for the patients with hemiplegic, paralysis and pains.

2. METHODS OF THE STUDY

For the purpose of research study, 30 subjects were selected randomly from the voluntary tribals who are living in urban area of Thiruvallur District at the foothills of the reserved forest and their age ranged from 30 to 49 years. The subjects were divided into Two groups, by adapting “Lottery Method”. One group was treated as Experimental group and other one was treated as control group. Height and weight to find out BMI level of both the group members were recorded at the baseline.

The yogic practice combined with Electro-magnetic therapy was given to the subjects of experimental group for the period of 12 weeks. Weekly three days, morning 6.00 to 7.00 a.m one hour yogic practices and evening 7.00 to 7.15PM, 15 minutes Electromagnetic treatment by Tiens Acupuncture machine was given to the 15 subjects of treatment group. The subjects of the control group were not given any treatment, for same 12 weeks.

After 12 weeks end of the treatment to find out BMI level, the height and weight of the group members were recorded. The pre test and post test scores were taken as data for statistical analysis mean, mean difference, standard deviation SEM were taken and student ‘t’ test was applied.

3. TRAINING PROTOCOL

The experimental group-I underwent yogic practices combined with electromagnetic therapy for 12 weeks, weekly three days, morning one hour yogic practices evening 15 minutes electromagnetic therapy. The yogic practices comprises of proper diet (sathvic food), proper exercise (asanas), proper breathing (pranayama) and proper relaxation (yoga mudhra) and electromagnetic therapy treatment by tiens aculife machine.

The second group was treated as control group no training or treatment given.

4. TRAINING SCHEDULE

Table.1:

S.No.	Group	Duration of Training	Asanas	Pranayama	Relaxation
1,	Group – I Experimental Group (15 Subjects) (Yogic Practices + Electro Magnetic therapy)	A, 12 weeks 3 days weekly Morning one hour 6.00 AM to 7.00 AM B, Electro- magnetic acupuncture Evening 7.00 to 7.15 PM In the palm accupoints	Suriya namaskar- 3 sets/ 5min Ustrasana – 3 sets/ 5 min Dhanvrasana – 3 sets/ -5min Pavanamothisana- 3sets /10min <hr/> 25 min	Suryabedhana – 20 breaths – 3 set/-5 min Chandrabedhana -20 breaths-3 sets/ 5 min Nadisuddhi- 10 breath- 3 sets/ 5 min Kabalabathi –25 breaths- 3 sets -5 min <hr/> 20 min	Yoga nithra <hr/> 15 min
2,	Group – II Control Group (15 Subjects)	12 weeks	No specific Treatment		

5. DATA OBTAINED

Table.2: mean, mean difference, SEM and its significance for Experimental Group – (Yogic Practices combined with Electro Magnetic Therapy)

S.No	Variable		Mean	Mean difference	SEM	Paired ‘t’ test ‘T’ value
1,	Body Mass Index	Pre Test	30.43 ± 3.09	3.35	1.835	** 9.101
		Post Test	27.08 ± 4.02		1.652	

** Significant @.05 level “T” value is 2.145, the obtained “T” value is 9.1016,

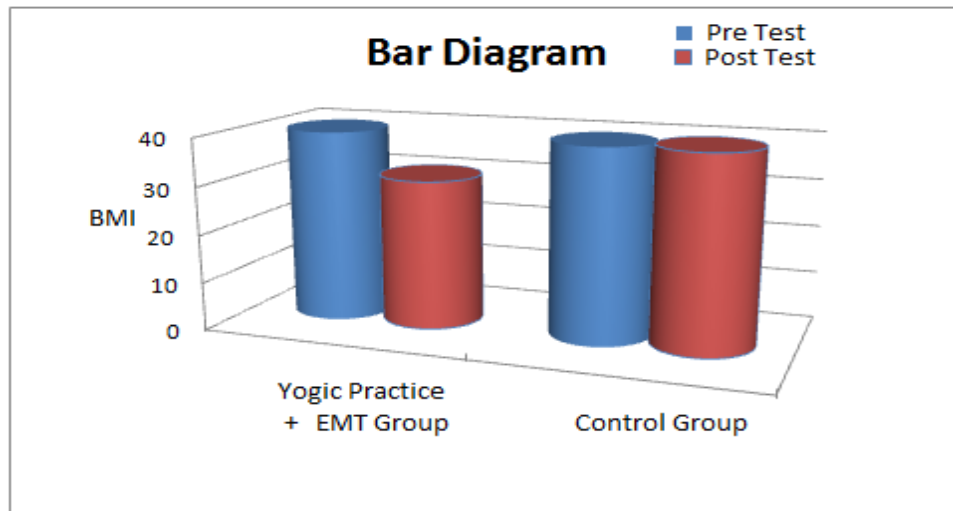
Table.3: mean, mean difference, SEM and its significance for (Control Group) – No Treatment given

S.No	Variable		Mean	Mean difference	SEM	‘T’
1,	Body Mass Index	Pre Test	33.56 ± 7.65	0.52	0.754	NS 1.196
		Post Test	33.04 ± 7.50		0.885	

Non significant as in above table since the obtained table “T” value is 1.196 this is less than “T” value 2.145 (as in pair “T” test significant at 0.05 level)

7. STATISTICAL ANALYSIS

The data obtained was recorded. Pre and Post level BMI of both groups before and after the treatment was conducted. Parameter BMI was assessed. Paired “t” test was used for analysis & comparison between two states. Mean, mean difference and “t” ratio were taken from pre training and post training. Results are expressed as mean ± SD, p<0.05 was considered as significant.



8. RESULT AND DISCUSSION

The data of mean level, mean difference, SEM and 'T' value of the experimental group (yogic practices combined with Electromagnetic therapy) were recorded. Table – 2 shows the base line (pre test) Mean \pm S.D 30.43 ± 3.09 , after treatment it was 27.08 ± 4.02 , the mean difference noticed is 3.35. Applied pair 't' test 't' value is 9.101 in the experimental group.

In control group as shown in table – 3 pre test BMI mean \pm S.D 33.56 ± 7.65 , in post test it is 33.04 ± 7.50 , mean difference 0.54 and in pair 't' test, 't' value is 1.196.

The above result from the table – 2, BMI mean \pm S.D 30.43 ± 3.09 was become 27.08 ± 4.02 it is because of applied yogic practice combined with electromagnetic therapy. The mean difference 3.35 indicates the positive effect of the training to reduce BMI level in order to get good health. 'T' value 9.101 is more than student 'T' value table 2.145 at 0.05 significant level. It is confirmed that the significant positive effect due to application of the yogic practices combined with E.M.T., But in control group there is no positive improvement taking place since the 'T' value 1.196 is less than the significant level 'T' value 2.145.

This research more or less is in accordance with the research done by Vijay Tundawala et al, Dept. of Medicine, S.P Medical College, Bikaner (5) in their research paper "A study on effect of yoga and various asanas on obesity, Hypertension and Dyslipidemia, they mentioned the B.M.I level in pre test mean \pm S.D 29.03 ± 4.83 became 26.63 ± 4.59 in post test. Swetha kumari.N et al (1) in their presentation "Effect of yoga Therapy on Body Mass Index and oxidative status: found there was a significant decline in the body weight after yoga therapy and is identified beneficial in maintaining better health. Madan mohan (2), B.K. Sahay (3), Shinde et al (4), Dae yun seo et al (6), all have concluded the yogic practices such as asanas, pranayama have provided significant improvement to regulate the BMI level and thus supplied in maintaining better health. These research findings confirmed the above mentioned students.

9. CONCLUSION

If is evident that the 12 weeks of yogic practices combined with electromagnetic therapy programme provides significant improvement in weight reduction, in balancing B.M.I level of obese tribals living nearby the reserve forest area of Thiruvallur district. This yogic practice programme was reported to enhance the beneficial effects of the management of the tribal welfare. It can be used as an alternate therapy to the tribals to achieve better living condition and keep them free from medication. It is suggested that separate research may need to find out the effects on B.M.I through the parameters either yogic practices or E.M.T., individually.

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