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Effect on Hatha Yogic Sadhana with and without Diet Counseling on Dining Habits among Obese Children

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Abstract

The purpose of the study was to found the effect on hatha yogic sadhana with and without diet counseling on dining habits among obese children. The study was conducted on 90 obese children and they are divided into three equal groups of 30 each. Group – I as Control group, Group –II as Hatha yoga sadhana with diet counseling and Group – III as Hatha yoga sadhana without diet counseling. Experimental group underwent 25 weeks practice in Hatha yoga sadhana with and without diet counseling whereas the control group did not underwent any of the yogic practice. The dining habits were measured before and after the experimentation. The data were analysed by Analysis of Covariance (ANCOVA) and it was concluded that the hatha yoga sadhana with diet counseling, hatha yoga sadhana without diet counseling had significant (P< 0.05) effect on the dining habits level.

Keywords: Hatha yoga sadhana, Dining Habits, Obesity, Diet.

Introduction

Obesity increases the likelihood of various diseases, particularly heart disease, type 2 diabetes, obstructive sleep apnea, certain types of cancer, and osteoarthritis (Haslam DW, 2005). Obesity is most commonly caused by a combination of excessive food energy intake, lack of physical activity, and genetic susceptibility, although a few cases are caused primarily by genes, endocrine disorders, medications, or psychiatric illness. Evidence to support the view that some obese people eat little yet gain weight due to a slow metabolism is limited. On average, obese people have greater energy expenditure than their thin counterparts due to the energy required to maintain an increased body mass (Kushner, 2007).

The health status is usually measured in terms of life expectancy at birth, infant mortality rate, fertility rate, crude birth rate and crude death rate. These indicators of health are determined by numerous factors such as per capita income, nutrition, housing, sanitation, safe drinking water, social infrastructure, health and medical care services provided by government, geographical climate, employment status, incidence of poverty and the like (Reddy and Selvaraju 1994).

Advertising of unhealthy foods correlates with childhood obesity rates. In some nations, advertising of candy, cereal, and fast-food restaurants is illegal or limited on children's television channels. (Lobstein, 2005) The media defends itself by blaming the parents for yielding to their children's demands for unhealthy foods.

Childhood obesity is a condition where excess body fat negatively affects a child's health or well-being. As methods to determine body fat directly are difficult, the diagnosis of obesity is often based on BMI. Due to the rising prevalence of obesity in children and its many adverse health effects it is being recognized as a serious public health concern. The term overweight rather than obese is often used in children as it is less stigmatizing. The first problems to occur in obese children are usually emotional or psychological. Childhood obesity however can also lead to life-threatening conditions including diabetes, high blood pressure, heart disease, sleep problems, cancer, and other disorders. Some of the other disorders would include liver disease, early puberty or menarche, eating disorders such as anorexia and bulimia, skin infections, and asthma and other respiratory problems. Studies have shown that overweight children are more likely to grow up to be overweight adults. Obesity during adolescence has been found to increase mortality rates during adulthood. (Bessesen DH, 2008)

Calorie-rich drinks and foods are readily available to children. Consumption of sugar-laden soft drinks may contribute to childhood obesity. In a study of 548 children over a 19-month period the likelihood of obesity increased 1.6 times for every additional soft drink consumed per day. Calorie-dense, prepared snacks are available in many locations frequented by children. As childhood obesity has become more prevalent, snack

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vending machines in school settings have been reduced by law in a small number of localities. Some research suggests that the increase in availability of junk foods in schools can account for about one-fifth of the increase in average BMI among adolescents over the last decade. Eating at fast food restaurants is very common among young people with 75% of 7th to 12th grade students consuming fast food in a given week. (French SA, 2001) The fast food industry is also at fault for the rise in childhood obesity.

Methodology

The purpose of the study was to find out the effect on hatha yogic sadhana with and without diet counseling on dining habits among obese children. For the purpose of this study, ninety obese children were chosen on random basis from Chennai only. Their age group ranges from 8 to 12 years. The subjects were divided into three groups of thirty each. The Group-I Control group did not undergo any yogic practice, Group-II underwent Hatha yogic sadhana with diet counseling, Group-III underwent Hatha yogic sadhana without diet counseling. The pre tests and post tests were conducted before and after the yoga practice. The practice was given for 25 weeks. The collected data were statistically analyzed by using analysis of covariance (ANCOVA). Diet counseling for the children's and the parents conducted monthly once to give the awareness about the nutritious food and to monitor the children's food intake during the practice period of 25 weeks (6 months).

Results

The statistical analysis comparing initial and final means of the dining habits due to Hatha Yogic Sadhana with and without diet counseling among obese children is presented in Table 1.

Table 1

Analysis of Covariance on Dining Habits of Hatha Yogic Sadhana with and without Diet Counseling among Obese Children

	Control Group	Hatha Yogic Sadhana with Diet Counseling Group	Hatha Yogic Sadhana without Diet Counseling Group	Obtained 'F' ratio
Pre Test Mean	35.2 ± 1.01	35.23 ± 1.11	35.20 ± 0.997	0.0002
Post Test Mean	35.16 ± 1.80	63.93 ± 1.09	55.13 ± 1.26	259.94*
Adj. Post Test Mean	35.17	63.93	55.13	261.31*

*Significant at .05 level of confidence. The table value required for significance at 0.05 level of confidence for 2 and 87 is 3.10 and 2 and 86 is 3.10.

Since significant improvements were recorded, the results were subjected to post hoc analysis using Scheffe's Confidence Interval Test. The results were presented in the Table 2.

Table 2

Scheffe's Test for Control Group Hatha Yogic Sadhana with Diet Counseling and Hatha Yogic Sadhana without Diet Counseling

Control Group	Hatha Yogic Sadhana with Diet Counseling	Hatha Yogic Sadhana without Diet Counseling	Mean Difference	Required C.I
--	63.93	55.13	8.7*	3.74
35.17	63.93	--	28.76*	3.74
35.17	--	55.13	19.96*	3.74

***** Significant at 0.05 level

Discussion

Hence, taking into consideration of the pre test means, post test means and adjusted post test means were determined and analysis of covariance was done and the obtained F value 261.31 was greater than the required value of 3.10 and hence it was accepted that the hatha yogic sadhana with diet counseling and the hatha yogic sadhana without diet counseling significantly improved the dining habits of the obese children.

The post hoc analysis of obtained ordered

adjusted means proved that there was significant difference existed between hatha yogic sadhana with diet counseling and control group, hatha yogic sadhana without diet counseling and control group on dining habits. This proved that due to twenty five weeks of hatha yogic sadhana with diet counseling and hatha yogic sadhana without diet counseling on dining habits was significantly improved among obese children.

The analysis of co-variance of dining habits indicated that group I Control group and group II (hatha yogic sadhana with diet counseling) and group III (hatha yogic sadhana without diet counseling) were significant difference on the dining habits. It may be due to the effect on hatha yogic sadhana with and without diet counseling. The findings of the study showed that the group II (hatha yogic sadhana with diet counseling) had improved the dining habits more than group III (hatha yogic sadhana without diet counseling). Nearly everything in life requires balance. Hatha Yoga Sadhana and Diet on its own is a good step towards a healthy lifestyle. However, as individual, it is important to understand that we need to work on our body as well as our mind. We can use Hatha yoga sadhana and diet not only as part of a program to reduce the dining habits, but also as a way to assist in attaining other goals.

Conclusion

The result of the study indicated that due to the effect on hatha yogic sadhana with and without diet counseling the dining habits of the obese children has significantly changed. The findings of the study also showed that the hatha yogic sadhana with diet counseling had improved the dining habits more than the hatha yogic sadhana without diet counseling.

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