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Childhood Obesity your population of interest, how and who you will sample, and the basic study design. Provide information on proposed statistical analysis and a sample data shell.   
Childhood obesity happens to be a very serious challenge of current days (WHO). It is a condition when excessive body fat harmfully affects a childs healthiness, fitness or wellbeing. The analysis of obesity is often based on BMI (World Health Organization 9). Not only due to the growing frequency of obesity among children but also its various unpleasant health effects, it is being regarded as a grave public health concern. Emotional or psychological problems are usually first to occur in the overweight. Childhood obesity can also lead to severe life-threatening conditions, which include diabetes, high blood pressure, heart diseases, sleep problems, cancer, and other disorders.   
Body mass index is usually used to determine obesity in children of 2 years and older. Best population of interest could be school children where sample criteria could be broken down class/age/height/weight-wise. Let’s say class sample could be selected fromm classes 1 to 3, 4 to 5, 5 to 7, 7 to 10. Age could be broken down into categories: age 2 to 5, 6 to 9 and so on, height could be divided into 75 cm to 100 cm, 101 cm to 125 cm and weight categories could be: 20 to 25 kg, 26 to 30 kg. Sample selection could be done via probability like simple random sample, stratified sample or non-probability sample selection. These samples could be applied to the population selected in such way that would give us an objective measure of child obesity.   
Basic study design would revolve around social indicators like lifestyle, diet, and physical activity, genetic and environmental influences on a child. Unhealthy diet could simply lead to obesity in a child, which has grown common in the US, for example. Diet itself could be broken down into sub-indicators like combination of different meals through the day with respect to child’s consumption. A scorecard could be developed to give scores on the variance of the actual diet with the perfect diet. Scores could itself be broken down into different classes (e. g., score 1-3 being good, 4-6 being average and 7-10 being poor). Evaluating lifestyle would be a complex, yet helpful measure on obesity. Again these scores would be based on variance analysis and would vary from child to child due to the geographical location where he/she lives. Study design based on genetic and environmental influences on a child is something new and important. A child with hereditary obesity is not liable for it and, thus, requires a different type of treatment as compared to those children who don’t have hereditary obesity. Every child lives in a different environment, so it is exposed to different diet and lifestyle. Environmental designing of the study should incorporate different scenarios and try to come up with a comparable result via scorecard.   
Works Cited   
WHO. Childhood overweight and obesity. n. d. Web. 29 January 2012.   
World Health Organization. Obesity: preventing and managing the global epidemic. World Health Organization, 2000.