Obesity

Finance

Analysis of a Statistical Obesity Study Here Here Here Here Analysis of a Statistical Obesity Study Obesity is a serious problem in Western society (Pietiläinen et al., 2012). A variety of factors have contributed to the rise of weight gain, including the explosion in the availability of " junk" food that has occurred in recent decades. Children have become especially at risk for obesity, possibly due in-part to parental influences, or a lack thereof. As these issues have become a greater concern, efforts have been (and continue to be) made to curb obesity through interventions at several levels of influence, including via medical, governmental, educational systems (Melendez, 2011).

The success of obesity-reducing strategies is highly unlikely without the utilization of research as a foundational tool in the design process. A 2012 study by Epstein and colleagues examines two different approaches to childhood obesity intervention designs. The researchers conducted this research with the goal of illuminating differences in several outcome measures between groups based on the focus of the intervention being either a reduction in high energy-dense food consumption, or an increase in dietary components with low energy density. A multitude of additional variables were also included in the analysis, and are described below.

This study primarily relies on the use of inferential statistics, though a number baseline descriptive measurements (age, gender, height, weight, percent overweight, body mass index, and diet trends) are appropriately added to the report. The primary dependent variable in this experiment is the change in standardized body mass index (zBMI) associated with each group, as measured at three different time periods following the implementation of an intervention program (0-6 months, 0-12 months, and

0-24 months). Secondary dependent variables were also evaluated at these intervals, including changes in eating behaviors like food choices, and the results of questionnaires related to parenting changes. The independent factor in this study was the dietary focus on either reducing high energy-dense food consumption, or increasing low energy-density ingestion.

The population of focus for this study was composed only of children between the ages of eight and twelve who are able to read above a grade three level, are in a percentile higher than the 85th of the BMI average, are not currently on other weight loss treatments including pharmaceuticals, have parents who are not in weight loss programs, have at least one parent willing to participate in the study, and dont have any physical or psychological restrictions in achieving weight loss. Participants were recruited through a variety of methods, such as flyers, posters, mail, television coverage, and professional referrals. Families were screened for the criteria listed above, leaving 41 of 105 initial applicants (18 more qualified but denied an offer to participate) to take part in the intervention experiment. After being placed in cohorts to eliminate the effect of eating habits, the subjects were randomly assigned to one of the two conditions (high density food reduction vs. low density food increase) using a gender-stratified algorithm.

The results of statistical analyses of the data, including chi-squared tests, t-tests, and mixed regression models, allowed the researchers to reach a number of conclusions. As predicted, there was a significantly greater amount of weight loss and zBMI reduction in the group treated with the increased low-energy food approach over the two year period. This group was also less likely to experience a return of the lost mass as time passed

during the study. These results apply to both children and parents who participated in the treatment condition. Additionally, parental trends became less restrictive within the increase low-dense food group. The data used in this study was collected under strict conditions, with thorough amounts of variables and analyses included to maximize the usefulness of research that may otherwise be limited by a stringent screening process.

References

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