ANALYSIS

**Introduction**

Since 1980, the amount of overweight children has doubled and overweight adolescents has tripled (WHO, 2007). Children's obesity and overweight levels are likely to remain through adulthood (Witaker et al., 1997).

Survey Analysis (Research Questions #2 – #3)

- **Descriptive Analysis:** Means, standard deviations, and frequencies were reported for pre- and post-survey results.
- **Exploratory Factor Analysis:** Cronbach's alpha was used to assess the construct validity and to determine the dimensionality of the survey items. Each survey item fell within specific factors that may explain variations and exercise behaviors. It is believed that some items would correlate with different constructs depending on the frequency of engagement in the intervention sessions.
- **Dependent t-Test:** A dependent t-test was used to analyze differences in survey results before and after treatment.

**Weeks Progress Monitoring Analyses (Research Questions #7 - #10)**

- **Group Growth Curve Analysis:** Both the amount of overweight children and youth BMI growth rates continuously throughout group attendance. LGCM has several advantages over other traditional approaches (e.g., repeated measures ANOVA) including (a) the ability to test for differential growth rates over time, (b) the ability to take into account the correlation of multiple variables, (c) the use of zero-inflated data (e.g., BMI, Weight, Sedentary, & Alp & Alp, 1999), and (d) the ability to simultaneously assess the factors that are associated with the outcome variable.

**Multiple analyses were performed to assess the hypothesis (a) the construct validity of the survey; (b) changes in subjective parent and child behavior changes before and after attending the group; and (c) objective changes in BMI across time.**

**Results**

**Research Question #1:** What types of families took advantage of the group?

- Of the 120 families who enrolled in the group, 60% attended at least one Healthy Families session.
- Fifty percent of families attended at least one follow-up session. A total of 120 families and 147 children were included in the data analyses. Overall, families attended the Healthy Families Group as a family unit.
- Forty-three percent of families met or exceeded 60% of their weekly goals. Families who met or exceeded 60% of their weekly goals became a major factor in weight loss. Of the 60% of families who met or exceeded 60% of their weekly goals, 30% of them had the largest decrease in BMI.

**Research Question #2:** What time emerged during what in the survey?

- Participants were engaged in both modifying unhealthy habits and developing healthy habits.
- In both phases of the treatment, the goal of the group was to decrease family members' BMI during group attendance.

**Discussion**

Participants were engaged in both modifying unhealthy habits and developing healthy habits. The effect of decreased BMI was mediated by goal attainment: Those whom attained their weekly goals lost weight. This may, in part, be due to decreased BMI. The effect of decreased BMI was mediated by goal attainment: Those whom attained their weekly goals lost weight. This may, in part, be due to decreased BMI.

**Research Question #4:** What are types of family lifestyle changes patients attend to improve their eating/physical activities?

- Participants attended the Healthy Families Group to improve their eating/physical activities. The group was lead by an interdisciplinary team comprised of pediatricians, nurses, PT's, a social worker, and a psychologist.

**Research Question #5:** How is progress monitored?

- Progress is monitored both subjectively (pre/post surveys) and objectively (weekly family weigh-ins).

**Research Question #6:** What factors predict eating and activity changes?

- **Independent variables:** Parental involvement, child's physical activity, and social support from the group.
- **Dependent variables:** Changes in eating and activity habits.
- **Methods:** A linear growth curve modeling (LGCM) was used to analyze the data. LGCM is a multivariate regression technique that allows the assessment of longitudinal change in response to repeated measures over time. LGCM incorporates the use of repeated measures and is particularly useful for analyzing data collected from interventions with repeated measures over time. It allows for the examination of both within-group and between-group differences in change over time.

**Conclusion**

- Family-based weight-loss programs are shown to be most effective when: (1) engaging in Bad Habits, (2) engaging in Healthy Habits; (3) Parent Control of Environment, and (4) Emotions related to Eating/Activity Behaviors.

**Future research directions**

- Addressing the heterogeneity of outcomes and populations served, specific, individualized goal setting and ongoing care may account for a significant amount of individual difference in the degree of change in BMI.

**Appendix A:**

- **Survey instrument:** A survey instrument was developed to assess the child's eating and activity habits. The survey was designed to assess the child's eating and activity habits before and after the intervention.

**Appendix B:**

- **Participant satisfaction survey:** A participant satisfaction survey was developed to assess the participants' satisfaction with the intervention.

**Appendix C:**

- **Participant demographics:** Participant demographics were collected to assess the demographic characteristics of the participants.

**Appendix D:**

- **Participant outcomes:** Participant outcomes were collected to assess the effectiveness of the intervention.

**Appendix E:**

- **Participant outcomes:** Participant outcomes were collected to assess the effectiveness of the intervention.

**Appendix F:**

- **Participant outcomes:** Participant outcomes were collected to assess the effectiveness of the intervention.