The Association of Caregivers' Educational Level and their Knowledge of Children's Nutrition and Exercise Behavior

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ABSTRACT

TITLE:
The association of caregivers' educational level and their knowledge of children's nutrition and exercise behavior

BACKGROUND:
Parents play an instrumental role in modeling their children's health behaviors and exposing them to new foods, and engaging them in physical activities.

OBJECTIVE:
To assess the association of parents' educational level on their nutritional and physical activity knowledge.

METHODS:
This is a cross-sectional study of 72 participants from a nutrition and wellness program targeting parents of African American preschoolers. Socio-demographic, child's nutritional and physical exercise habit survey and anthropometric data were collected from all participants at baseline.

RESULTS:
77% of the participants were grandmothers or mothers; the mean age was 44.8 and 13% of participants were college graduates. 66% were obese. The mean scores for nutrition and physical activity knowledge were 41 % and 58%, respectively. 89% of the participants reported that their children exercised at least once a week. 51% of the participants' children drink soda or sweetened beverages. Mothers' educational level was significantly associated with nutrition knowledge (p =.01).

CONCLUSIONS:
Larger sample size and longer time evaluation are needed to assess the association and impact of maternal education on parents' knowledge of physical activity and nutrition and their children's behavior.

BACKGROUND

- **The prevalence of obesity among U.S. children age 2-19 is 17%.**
- **Obesity rates among black children are disproportionately higher than their white counterparts.**
- **Obesity is affected by physical and social exposures during childhood, adolescence, young adulthood and late adult life.**
- **Among the many proven determinants of childhood obesity is the parental influence and home environment.**
- **Parents are instrumental in exposing children to certain foods, engaging them in physical activities and modeling other behaviors that contribute to energy balance and diet composition.**
- **Educational level and nutritional knowledge of parents also play a major role in childhood obesity.**
- **Several studies have demonstrated the positive association between nutrition knowledge of parents and the consequent nutrition behavior and physical activity habits.**

OBJECTIVE

- **To assess the association of parents' educational level on their nutritional and physical activity knowledge.**

METHODS

Study Design

- **The study was done in context of the *Fit Family Jr.*, an obesity prevention program targeted to the caregivers and teachers of African American preschoolers.**
- **All relatives (parents, aunts, uncles and grandparents) of children ages 6 and under living in a low-income neighborhood of Washington, DC were eligible.**

Data Collection

- **Participating families completed baseline questionnaires that contained questions concerning their nutritional and physical activity behavior, knowledge tests on physical activity and nutrition and information on their socio-demographics.**
- **Weight and height of the participants was obtained at baseline.**

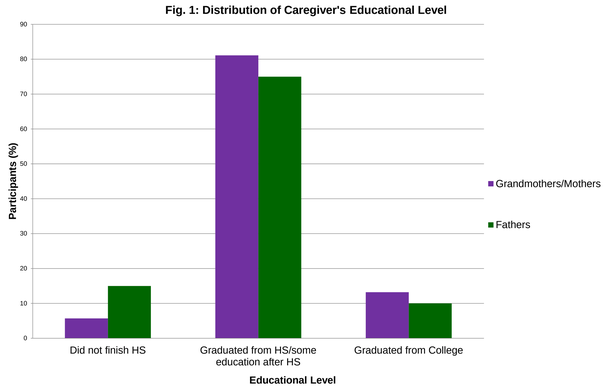
Analysis Plan

- **The main outcome of interest is caregivers' nutritional and physical activity knowledge, which is a continuous variable.**
- **An ANCOVA model was used to assess the association between educational level and nutrition and physical activity knowledge.**
- **Chi-square was used to test the association between education and children's nutrition behavior.**
- **All statistical tests were two tailed and a p-value <.05 was considered statistically significant.**

RESULTS

- **72 participants were enrolled in the FitFamilyJr. program.**
- **77% of the participants were mothers or grandmothers.**
- **The mean age of parents or guardians was 44.8 years.**
- **Figure 1 shows the distribution of the caregivers' educational level.**

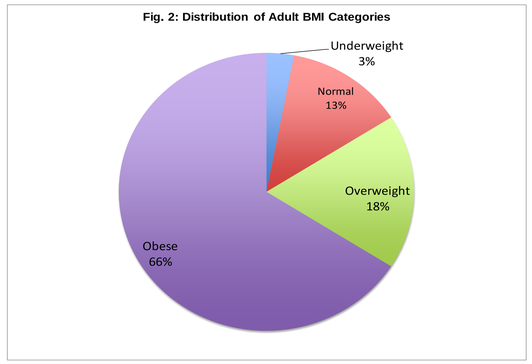
Fig. 1: Distribution of Caregiver's Educational Level



RESULTS

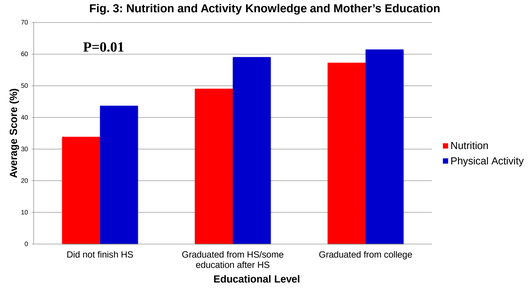
- **The mean BMI was 33 kg/m^2.**
- **84% of the participants were overweight or obese.**
- **Figure 2 shows the distribution of BMI categories of the participants.**

Fig. 2: Distribution of Adult BMI Categories



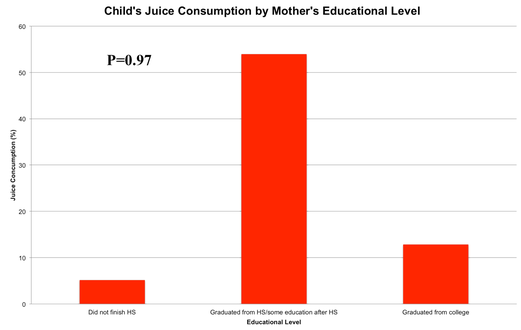
- **The mean scores for nutrition and physical activity knowledge were 41% and 58%, respectively. Figure 3 shows the distribution of knowledge scores by care giver's educational level.**
- **Participants' educational level was significantly associated with their nutrition knowledge (F=5.04 p =.01).**

Fig. 3: Nutrition and Activity Knowledge and Mother's Education



- **51% of the participants' children drink soda or sweetened beverages.**
- **91% of the children eat fried foods.**
- **Participants educational level was not significantly associated with their children's dietary behavior.**

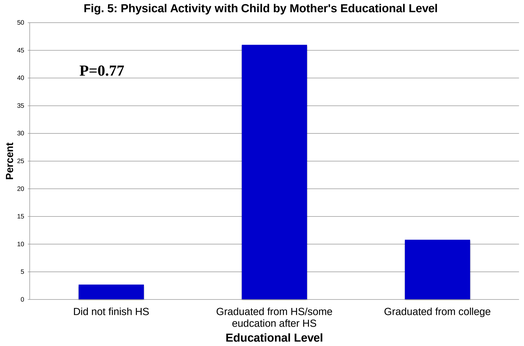
Child's Juice Consumption by Mother's Educational Level



RESULTS

- **89% of the participants reported that their children exercise at least once a week.**
- **82% of the caregivers reported that they do physical activities with their children.**
- **Figure 5 shows the distribution of caregivers that do physical activity with their child by educational level.**
- **Educational level was not significantly associated with physical activity behavior.**

Fig. 5: Physical Activity with Child by Mother's Educational Level



DISCUSSION & CONCLUSIONS

- **Mothers' educational level was significantly associated with nutrition knowledge.**
- **Higher scores on nutrition and activity knowledge did not translate into healthy behaviors for the participants children.**
- **This could be due to confounding factors such as low socio-economic status, lack of access to fresh produce and safe play areas.**
- **A high percentage of the participants were overweight or obese. Unhealthy behaviors among the caregivers may contribute to the high rates of obesity and overweight and in turn might influence the children's nutritional and activity behaviors.**
- **Since the nutrition and physical activity behaviors were self reported, there may have been social desirability bias which may have contributed to homogeneity of the study population.**
- **Larger sample size and longer time evaluation are needed to assess the association and impact of maternal education on parents' knowledge of physical activity and nutrition and their children's behavior.**

ACKNOWLEDGEMENTS

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